

Complete Broadcasting Programmes a Week in Advance

Wireless Weekly 3^d

INCORPORATING "RADIO IN AUSTRALIA & NEW ZEALAND"

VOL. 14, NO. 18

FRIDAY, OCTOBER 25, 1929

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

Wireless Speeds the World's Work

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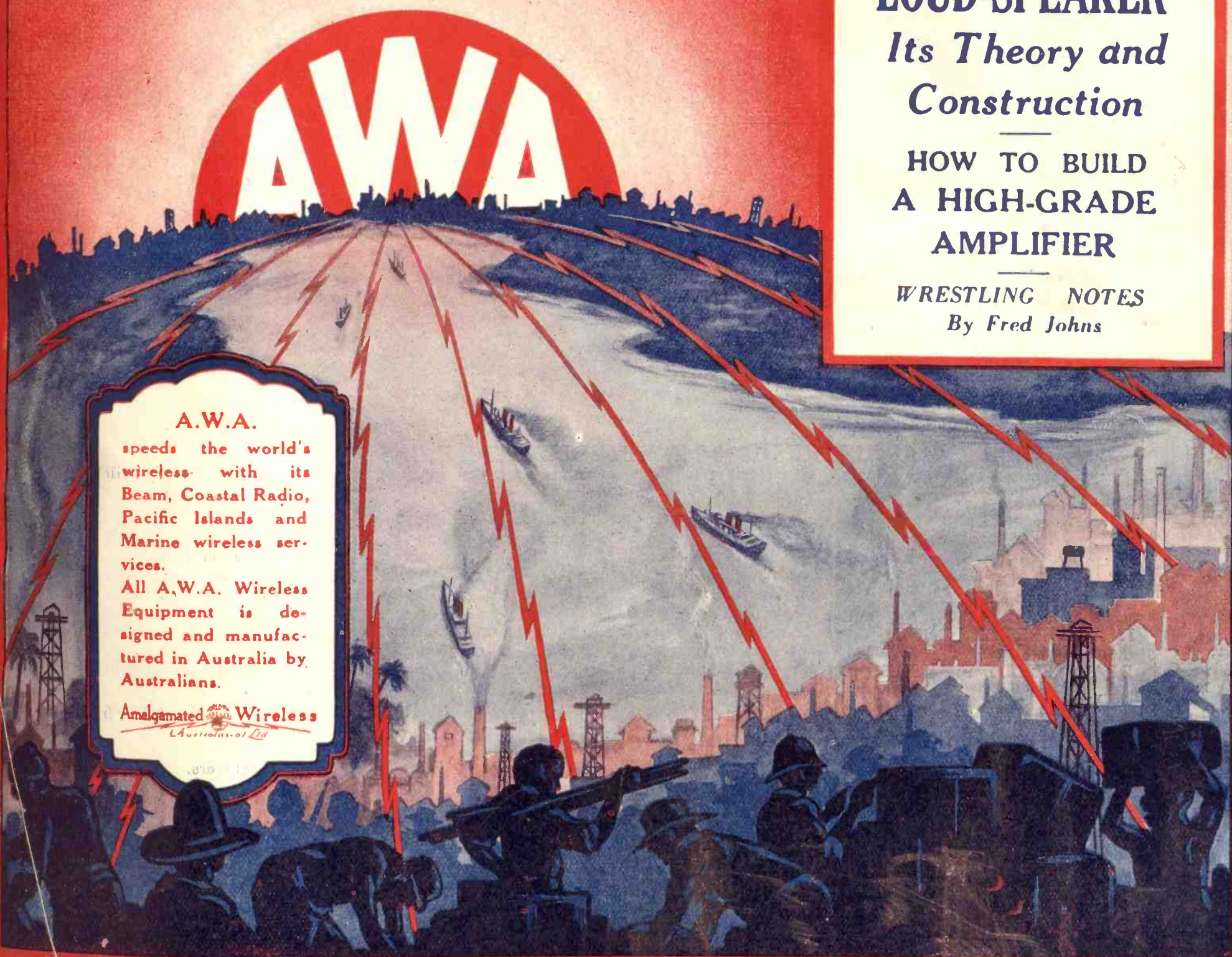
WRESTLING NOTES
By Fred Johns

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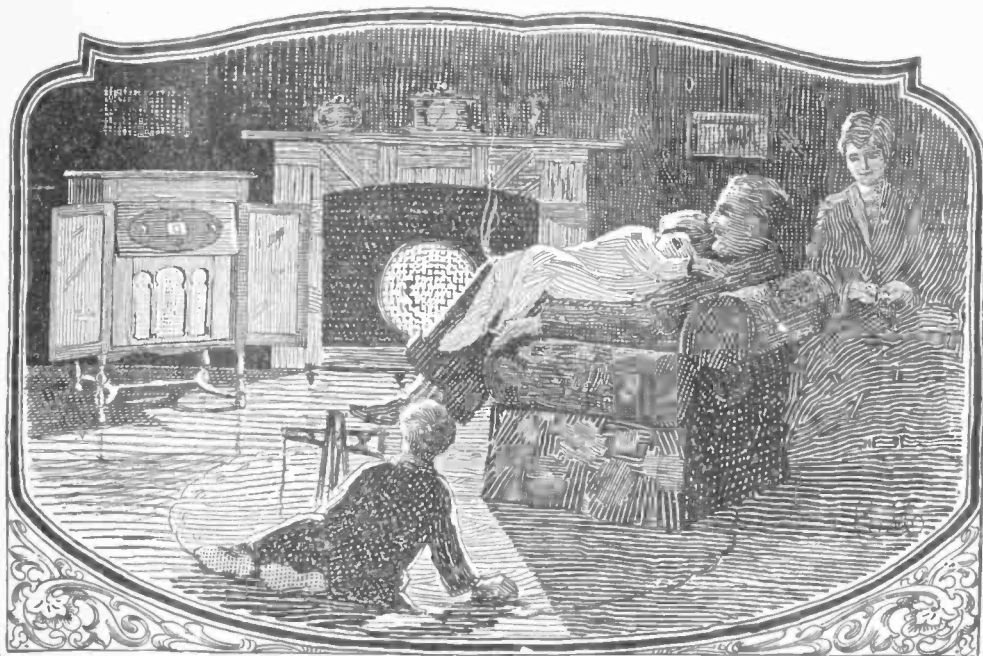
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Unprintable words will not be accepted and will prejudice your chance of winning

BEST LETTER - - £3/3/-
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Entries, which must accompany coupon, are to be in our hands before 19th November—Mark envelope "Competition." Winning letter will be published in this journal on the 29th November.

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Put a cross opposite the Station you consider is giving the best Programmes.

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|--------------------------|-----|--------------------------|-----|
| <input type="checkbox"/> | 2FC | <input type="checkbox"/> | 2UE |
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| <input type="checkbox"/> | 2GB | <input type="checkbox"/> | 2UW |

PRICE'S RADIO SERVICE

WINGELLO HOUSE, ANGEL PLACE,

"PURCHASE A POPPY ON POPPY DAY"

BOX 3326PP.

Vol. 14, No. 18
Friday,
October
25,
1929.

Wireless Weekly

Incorporating "Radio in Australia & New Zealand"

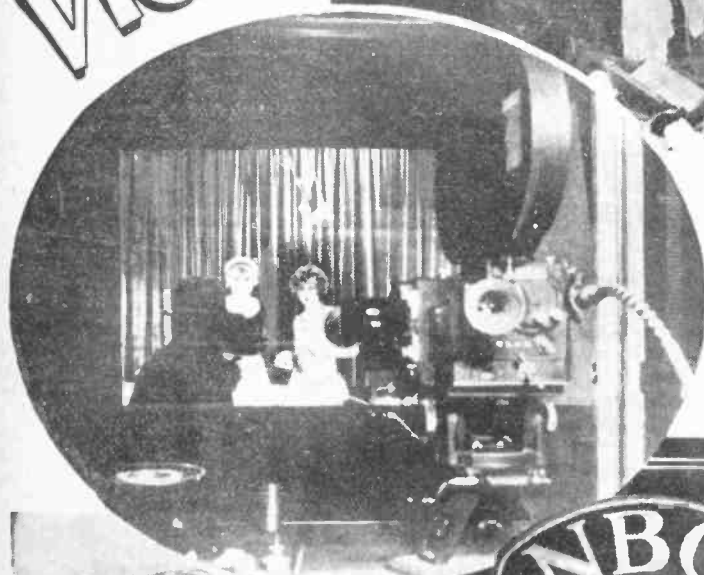
Address
Box
3366 PP
G.P.O.,
Sydney.

Radio News IN Views



How the Talkies Talk.—This picture shows the interior of one of the new movie sound studios, not unlike a radio studio. The camera is enclosed in a special sound-proof movable box immediately behind the director. This cuts out the sound of the camera clicks. The microphone is seen immediately above the heads of the two actresses.

The lower picture shows the same studio as seen from within the camera-box. The microphone can be seen, and the producer's head is in the foreground of the mirror.



This strange arrangement of globes and wires is a German engineer's symbolic conception of radio. It was on view at a recent German exhibition.



Jennings Pierce, chief announcer of the Pacific division of the N.B.C. of America, describing, from another "plane", the arrival of the Graf Zeppelin, after circumnavigating the Globe. Pierce is often heard here, via KGO and KFI.

Between You and Me and the Microphone

WE art really rather an artistic sort of chap. Our artistic nature manifests itself in many ways. While we were yet a child we wrote a poem entitled, "Heaven," and at a very early age our musical knowledge was sufficiently internationalised to enable us to whistle the American "Yankee Doodle"



and the French "Marseillaise," after hearing them repeated only three times. Therefore we were regarded as something of a prodigy, and were taught the piano. We were taught for three years, and in time we might have become a famous pianist but for an unfortunate circumstance—our master was unable to make us learn what he taught us—a deficiency we shall never forgive him.

However, our early training instilled into us a reverence for good music in all its forms. No one is a more earnest defender of good music than we—Beethoven is our particular protege, and the name of Bach is always on our lips.

So, when we heard that Mr. Alfred Hill's "Teora" was to be performed from 2FC we decided to go and hear it, realising that the early products of Australian music should receive the earnest attention of everyone who considers himself a connoisseur in such matters.

We arrived fifteen minutes late, and sat down on the lounge opposite the loud-speaker in the 2FC corridor. The soprano was singing delightfully to a charming orchestral background. We closed our eyes.

Mr. Wilfred Thomas came out to hear how it was going over. We remarked



how beautiful it was. "You should have heard Tollemache in the early part," said Mr. Thomas. "He was fine." We said, "This part is very fine, too." He said, "Yes; but this part is more in the style of comic opera—it has less of the dramatic opportunities . . . etc., etc." Mr. Thomas went into the studio again. We sat back and enjoyed the music till the end, when all the cast and directors tumbled out

Mr. Joseph Post, the producer, was one of the last to go, and while he was waiting at the lift one of the orchestra complimented him on the excellence of the performance. "It was all right," said Mr. Post, "except for that one slip."

Then we saw Mr. Ewart Chapple. Mr. Chapple was obviously highly excited.

"Wonderful, wasn't it?" asked Mr. Chapple. "You ought to write a re-



view of that. I should not go unnoticed."

Just then Mr. Halbert came along. "One of the most polished performances I've heard," said Mr. Halbert.

We said, "Yes; we'll write a review, but we'll need some facts to go on, such as singers and the story of the opera, and so on." "Here you are," said Mr. Chapple. "here's the programme—this will tell you everything." So we came away with the programme, and, while still inspired by what we had heard, we wrote the following review:—

"TEORA"

MR. HILL'S MAORI OPERA

A MOST polished performance of Mr. Alfred Hill's opera, "Teora," was broadcast from 2FC on Monday evening, October 14.

The story is that a Maori chief has killed another Maori chief, and has made a flute from the dead man's arm bone, through which, much to his annoyance, he hears the voice of the dead man. He sends his son to make the dead man's daughter prisoner, but the son falls in love with her, and fights his father, who accuses her of witchcraft. The fight is interrupted; the girl is put through a sorcery test, and fails—as a sorceress; the spirit voice comes out of the flute again, and drives the Maori chief into a frenzy, which kills him.

The music of the opera is delightful. It is well scored, and rises from a com-

paratively turbulent beginning, distinguished by the fine performance of Mr. Harold Tollemache, to a passionate love duet, sung by Mr. Rupert Swallow and Miss Hilda Lane. At about this point the initiated would have noticed a tendency towards comic opera, which, however, was quite in keeping with the motif of the work. The scene where father and son fight was dramatically rendered, and Mr. Wilfred Thomas' interposition as Tohunga was worthy the best grand operatic traditions. From the beginning to the erie end Mr. Emil Sussmilch's interpretation of the Spirit Voice was worthy the highest admiration.

Mr. Joseph Post, who produced the piece, deserves credit

for one of the most finished performances heard in Sydney recently. His handling of the orchestra was evidence of deep study and a perfect control, and the agogic effect of the tout ensemble proved the value of careful rehearsal, even with studio productions. If one desired to be hypercritical, one might mention one small slip; but with the exception of this the production might be termed perfect. Mr. Post is quite a young man, and should go far; but we hope no farther than Sydney, where he is very much needed at this juncture of our musical history.

P.S.—It may be said that the above is not a fair criticism, being merely a statement of other people's opinions (and what will they say to us when they see what we've done!) However, they must think what an honour we do them by subordinating our own intelligence to theirs!

P.P.S.—Besides, there is nothing new under the sun.

N.B.—That is why we took the whole idea of this week's page from Mr. Wallace Nelson's first talk over the air. If he doesn't mind, nor do we.

[NOTE: The P.S., P.P.S., and N.B., as you probably guessed, have been inserted merely to fill up space. This is the fourth call made upon James this afternoon by Mr. Cull, our estimable printer, who threatens dire consequences if copy is not forthcoming. As James, having been paid, and being of a thirsty nature is no longer with us, we write this to save our dear friend—the Sub.]

James

The author examining one of the generators taken on the expedition.



Radio Research at the Bottom of the World

With Byrd at
Antarctica



(By MALCOLM P. HANSON,
Chief Radio Operator, Byrd Antarctic Expedition).

WHILE everything else at Little America lies buried under the snow three sturdy, lofty towers reach up toward the sky, as though probing into the secrets and keeping watch over us. They are symbolic of our communion with distant lands, where dwell our shipmates friends and families, and of our scientific radio investigation. Our daily communication schedules with the expedition's contingent at Dunedin, New Zealand, and with stations in the United States are seldom interrupted.

Weekly special short-wave broadcasts from KDKA and WGY, with features and messages that are much appreciated, show us that those back home have not forgotten us; almost daily other broadcasts pulled in from different corners of the earth are distributed over loud speakers in our three main houses. Ordinary broadcast wavelengths, which at night reach us from New Zealand and Australia, and at times from the States, often bring in delightful music, lulling the camp to sleep long after lights are out.

SPECIAL TESTS UNDER WAY.

On the waves we experience the same gradual and slow fading familiar to all broadcast listeners, but not the rapid, buzzing fading which often lends a harsh and distorted sound to speech or music on the short waves and which we are investigating. Various measurements and observations taken constantly and frequent special tests of various kinds are yielding valuable data, which it is hoped will throw some light on several yet unsolved problems of radio wave travel.

Two or three times daily news bulletins issuing from our radio room give us news as well as navy and other press items. Our Norwegian members are not forgotten, for Petersen keeps them posted daily through press

direct from Norway, and often handles their family messages direct, via the short-wave station at Bergen.

Radio in its various applications is regarded in a matter-of-fact way as part of our every-day life, and after demonstrating their worth, even the tiny portable sets, able to transmit many hundreds of miles using ordinary receiving tubes and batteries, have ceased to be regarded as curiosities. That long, winter night of other explorers has lost a good deal of its solitude, and with it, perhaps, some of its old-time romance, but in its place radio has substituted increased security, good cheer and a businesslike efficiency totally incongruous with the white desolation around us. Anyone seeing Commander Byrd and his assistant, Charlie Lofgren, at their regular office routine, organising and directing all activities of our organisation on three different continents day after day, readily imagines himself back in

civilisation, and for the moment forgets that over 2000 miles separate us from the nearest human habitation.

NEW YORK JUST A FLASH AWAY

Radio places New York within one-twentieth second of our fingertips, and brings the sound waves from many concerts and speeches to our ears, even before they reach a good part of the audience itself. Great, indeed, is our debt to radio development; but its most vital and difficult applications still lie ahead of us in the operations yet to come, and demand additional thorough preparations.

The towers support a double antenna, with transposed lead-in wires for receiving purposes, but by far the best results in reception are obtained with the "Beverage" type of wave antenna. Of these we have several strung over the barrier, the largest one being 1150 feet long and 18 feet high, running in a direction slightly north of east, which is the shortest or greatest course toward the Eastern United States.

Radio Invaluable to Explorers

NO group of men ever appreciated the advantages of radio more than the members of our Antarctic expedition. It has been invaluable. I think it would be fair to say that it would have been impossible to have carried out the operations of an expedition of so many units without radio.

Radio enabled the ships to meet the whaler Larsen at an appointed time so that the City of New York could be towed through the ice pack, thus saving coal and many days in time; radio served as a guide in navigation through ice-clogged waters hidden under a pall of mist when the magnetic compass was all but useless; radio gave information to the Eleanor Bolling of ice conditions before her trip through the pack; radio from the Larsen guided the City of New York through a dangerous ice situation on the stormy trip back to New Zealand; radio played an important part in the rescue of the geological party in the Rockefeller Mountains; radio kept me in touch with the base during flights, and in touch with the surveying planes from the ship; radio has permitted the conduct of the business affairs of the expedition in New York and in New Zealand. And radio has for the first time given to the world information of the activities of an Antarctic expedition during its operations.

It has been a comfort to us during the long night. Through the air have come messages of good cheer from relatives and friends, and entertainment that brought us close to home. It has brought us the news of the world so that we have known what was going on and have escaped that sense of complete social isolation which has been the lot of other Antarctic explorers. Radio has thoroughly proved its value in exploration.

(By Commander RICHARD E. BYRD.)



RECEIVING CONDITIONS IDEAL.

Local radio conditions are almost ideal. There is no lack of space for lengthy antennae in any direction. We are surrounded by nothing but the flat Barrier surface, and, except occasionally when our machine shop has a rush job, every form of man-made static is absent. During blizzards we experience hissing and crackling, "snow static," caused by electric charges accumulating on or discharging from various exposed wires. The highly insulating snow accentuates the trouble, which fortunately is infrequent. Crashing static of the type common in the tropics is heard at times, but is intermittent, and seldom has interfered with operations. Ordinarily receiving conditions are so good that a 20ft. wire laid on the snow will bring in strong signals from all over the world on any of

our short-wave portable receivers. The wavelengths coming through the best vary considerably with the season, and somewhat with the time of day. Thus, during our summer the best communication waves with the United States appeared to be between 30 and 15 metres, while during the darkest months of our winter night wavelengths below 25 metres seldom got through, and waves above 30 and at times up to 80 metres were received best. With the re-appearance of the sun there has been a very rapid change back toward summer conditions and improved communication, for during our winter the longer waves required to penetrate through were badly interfered with by summer static in the northern hemisphere.

WHEN RADIO GOES DEAD

The effect of the frequently observed aurora Australis on radio signals has not been at all definite or regular. At times radio conditions have suddenly "gone dead" just as a bright auroral display came up, and returned to normal as the luminous activities ceased. But again excellent radio conditions have prevailed throughout some of the brightest displays we have had. However, while the shapes of the aurora are often very picturesque, its brilliancy is not nearly as great as in the north polar regions. We are keeping careful record of both aurora and radio conditions, and making general observations and later careful analysis may still disclose some connection between the two.

ECHOES FROM SPACE

Occasionally reception of the long-distance telegraphic signals is made difficult by peculiar echoes following the dots and dashes and filling up the spaces between them. This is due to the signals reaching us successively by the short and the long way around the globe. This is a common observation also in other portions of the world, but appears more frequent here because of our high latitude. In fact, we can hear echo signals almost any time of day on some wavelength and are making oscillographic studies of them to determine to a fractional thousandth of a second their lag behind the direct signals and thus ascertain not only whether the echoes are true great circle echoes, but also the average height above the earth at which they travel.

It has been pretty well proved that short-waves attain their remarkable distances by successive refractions or reflections high above the earth, owing to a more or less permanent but shifting relatively dense layer of electrons called the Kennelly-Heaviside layer. Due to the ionizing action of the insulation

on the rarefied upper atmosphere, an alternate drift upward after sunset, strong effect of the earth's magnetic field, and other influences, the height and relative density of this layer plays the vital part in the travel of short-waves, and study of it is of great importance to the radio engineer. As it also indicates the physical conditions of the uppermost atmosphere and some effects of solar radiation and magnetism it is of equal interest to the physicist, and as a matter of fact knowledge of it will throw important light on several problems of science. In recent years experimental determinations of the height of the Heaviside layer have been

LICENCE INCREASES

THE figures issued for the month ended September 30 show that there were 977 new licences in New South Wales, after allowing for cancellations. This brings the total now to 105,577, an increase in the last three months since the Australian Broadcasting Company, Limited, took over the two A class stations of 4,565 licences.

It is interesting to note that for the twelve months ended September last, licences in the Commonwealth of Australia increased by 19,539. Of this total, New South Wales was responsible for 17,955, over 90 per cent. of the gross total increase in licences for the whole Commonwealth.

Twelve months ago Victoria had 56,000 licences more than New South Wales; to-day the difference has been reduced to 35,000.

New licences in New South Wales are less than half last month's figures. This is explained by 2500 cancellations during September, ascribed to people who took out licences purely to listen in to Eucharistic Congress broadcasts, last year.

Figures for the Commonwealth will be published next week.

made in several places, but the state in the Polar regions has been very uncertain.

IMPORTANT RESEARCH WORK

An important part of our research here is to determine its condition and variation with time of day and season. This is done by sending out very brief spaced impulses from our radio transmitter and recording the resultant received signals five or ten miles out on the barrier with an instrument known as a portable oscillograph. This converts the telephone current of a radio re-

ceiver to tilting motions of a tiny mirror, which reflects a spot of light to form a curved wave on a rapidly rotating photographic film. For each peak sent out several may register on the film in rapid succession, the first one being the direct or "ground" wave, having travelled only a few miles, and any others being caused by the same impulse reflected from the Heaviside layer or other points, and arriving a small fraction of a second late by virtue of their longer paths. By measuring the time intervals from the distance between successive peaks on the oscillograph, the distance of reflecting surface can, therefore, be measured with fair accuracy, for the speed of radio wave travel is constant at approximately 186,000 miles a second, or the same as the speed of light. Thus a time lag of one-thousandth of a second would indicate a layer height slightly above 90 miles.

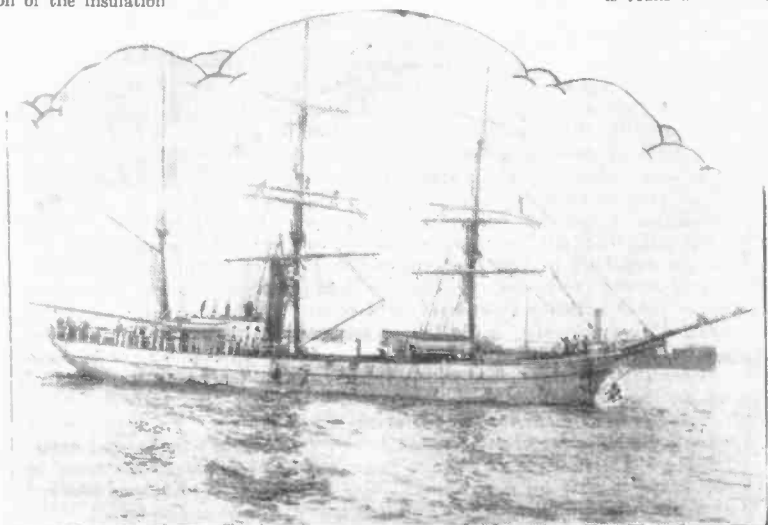
Results so far indicate single and multiple reflections at greatly varying heights, and in general a turbulent variable state of the layer in winter time, but continuation of measurements is showing many consistencies, and valuable data are being accumulated. It is possible that careful examination of the records will indicate strata at far greater heights than had been supposed. In view of the intricate and variable reflection pattern evidenced on many records, it will take months of study and careful interpretation to form a true picture of our Heaviside conditions.

FADING IS RECORDED

Another radio-measuring device which was developed by the United States Bureau of Standards is the fading recorder, with which we are taking simultaneous records both here and in New Zealand. This traces on a long, continuous paper sheet the intensity variations of received signals, and thus records gradual fading as against the high frequency fading measured by the oscillograph. Many interesting vagaries of fading have been noticed, and especially Berkner, in New Zealand, has carried on very extensive studies with this apparatus. When our accurately-timed records are compared, it may be possible to draw valuable conclusions regarding the nature of long-distance fading.

We are co-operating with several agencies, notably the United States Navy, on a number of special tests, which will help to solve some uncertainties of radio-wave travel through the polar zones. In itself the behaviour of radio waves in these latitudes may seem of little practical value, but, when it is realised that a great many of the radio routes in the civilised world on their great-circle course pass near either of the earth's poles, the importance of these observations to the world's long-distance communication becomes apparent.

It is the eager hope of all of us that, when our task is finished and we enjoy the pleasure of returning home, we may have contributed in some measure both to the practical application and the scientific investigation of radio communication which is being so rapidly extended to other parts of the world.



The City of New York, now frozen hard in the ice at Antarctica, and acting as a base for the explorers.

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TWENTY MILLION RECEIVERS

It is reckoned that more than one hundred million people are now equipped with radio receiving facilities. In this article statistics collected by the U.S. Bureau of Standards are published.

FROM a bulletin issued by the Department of Commerce of the United States of America, the Australian Broadcasting Company has been able to compile a list of the receiving sets estimated to be in use in various countries of the world; 129 countries have been listed, from Ethiopia with two sets to U.S.A. with nearly ten million. The leading 25 countries are listed hereunder:—

| | Sets in use. |
|--------------------------|--------------|
| United States of America | 9,640,348 |
| Great Britain | 2,511,736 |
| Germany | 2,350,000 |
| France | 1,250,000 |
| Japan | 550,000 |
| Argentina | 530,500 |
| Sweden | 371,000 |
| Austria | 325,000 |
| AUSTRALIA | 304,000 |
| Brazil | 250,000 |
| Russia | 250,000 |
| Italy | 250,000 |
| Czecho-Slovakia | 250,000 |
| Canada | 230,000 |
| Denmark | 215,000 |
| Netherlands | 150,000 |
| Union of South Africa | 130,000 |
| Finland | 127,000 |
| Switzerland | 75,000 |
| Norway | 70,000 |
| Belgium | 62,500 |
| New Zealand | 55,000 |
| Mexico | 50,000 |
| Chile | 30,000 |
| Irish Free State | 30,000 |

In this table there has been no attempt made to indicate the positions of the various countries on a ratio and population basis. Many countries with fewer receiving sets than Australia have greater populations, and it is very surprising to find that Canada with a population of nine million listeners in close proximity to America and its hundreds of stations, should have no more than 230,000 licences.

Estimated Sets in Use

Quoting from the same authority, it is estimated that one billion people live within constant receiving distance of broadcasting. The world's population is given roughly at 14 billion (750 million people are practically removed from the opportunities of radio reception). There are, it is estimated, twenty million receiving sets in use in the world, practically all being within the areas where reception of at least one station is certain.

With an average of five members to each family, one hundred million people are equipped with receiving facilities, or ten per cent. of the total population of the world, who are in a position to receive radio. The number of receiving sets in the world has increased 33-1-3 in the last two or three years, but the rate of increase will, of course, become slower; each year.

Licence Fees in Other Countries

Listeners who are apt to complain that 24/ a year is too much to be charged for radio broadcasting in Australia will be interested to know that in quite a number of other countries the fee is more than this. For example, we find that listeners in Turkey are asked to pay £2/10/ per annum; in Lithuania, £2/12/6 per annum. Sweden, £2/12/ per annum; while listeners in Italy pay 23/, and those in Germany 24/ per annum. In Canada, the listeners are

charged a nominal fee of 4/ per annum, but like America, the programmes are supplied by means of advertising.

Manufacture of Radio Sets

Australia imported from the United States of America, in 1926, receiving sets to the value of over £53,000. This increased to £80,000 in 1927, but dropped to £70,000 in 1928. New Zealand imported from America in 1926 receiving sets to the value of £63,000. This dropped to £45,000 in 1927 and £25,000 in 1928.

Of countries importing American radio equipment, Australia occupies third place. The United Kingdom lies fourth, with New Zealand thirteenth. Canada is an easy first, with Japan lying second.

Dealing with exports from U.S.A. for radio equipment, it is estimated that over £10,000,000 worth of American radio goods were sent to foreign countries in the past seven years.

The Power of Radio

The official bulletin goes on to deal with the general question of radio as follows:—

FREE 'PLANE RIDE FOR LIMERICK WINNER

What boy and girl is there who wouldn't like a ride in an aeroplane over Mascot, Sydney Harbor, and surrounding beaches?

The A.B.C.'s Younger Set Sessions, presided over by Mr. Norman Lyons for the boys, and Miss Gwen Varley for the girls, and broadcast nightly from 6.45 through 2BL, offer the opportunity of competing for an aeroplane flight over Sydney. Four prizes each will be made available for boys and girls (a total of eight) for the completion of a limerick (a limerick contains five lines), the first line being:—

"A sweet little maid named Jane"

All those members of the A.B.C. Younger Set Sessions with poetic turns of mind have an opportunity of supplying four lines to the limerick. To stimulate interest in the contests, Mr. Lyons and Miss Varley will often, during their particular sessions, read out some of the efforts submitted. The competition, which will be open for some weeks, is for boys and girls under the age of eighteen. Any number of entries may be sent in, although only one prize can be won by any one individual. All intending competitors are asked to address envelopes endorsed:—

"Limerick" Competition.

*Station 2BL,
Bligh Street,
Sydney.*

The judges of the contest will be Mr. Norman Lyons, Miss Gwen Varley, and Miss Enid Baumberg, Publicity Officer of the Australian Broadcasting Company, Limited. The judges' decision will be final.

Following 12 years of laboratory study and intermittent experimental work, radio broadcasting has now had seven years of public development. During this time it has become a part of civilisation exceeded in importance by few other contributors to the advancement of the human race. In almost every respect its field is broad and extensive. The influence on modern life exercised by the press, the pulpit, the school, the stage, and the lecture platform hardly exceeds that of radio. Those institutions are limited to their respective fields, and radio operates successfully in all of them.

Educational Value

This does not mean that radio replaces or even rivals those institutions. Much of the newspaper cannot be broadcast, and the details of news items cannot be given through the microphone. The style and length of the book and of the magazine story are entirely unsuited to broadcasting. The stage and lecture platform can never lose through radiovision; the attraction of a personal appearance is too fundamental to suppose the possibility of radio replacing the school. The pulpit in its capacity of presenting a message to the congregation can be broadcast successfully, but the Church as a place of worship cannot be replaced by the radio. The entire purpose which it can serve in these connections is only as a complement; but as a complement it has proved highly successful and valuable.

Sameness in Programmes

Programmes the world over have a striking similarity. Inquiries made personally of a Hollander, an Argentinian, and an American recently returned from the Far East, all visitors to the electrical division of the Bureau of Foreign and Domestic Commerce, as to the kind of programme material used in those countries elicited a response in each case that the broadcasts were "just the same." In the frantic search for "fresh" material, programme directors in every country are searching the musical effects not already worn threadbare through repetition in numberless preceding programmes. The competition between broadcasters is at a higher pitch because of the fact that results are obscure, making necessary the expenditure of every effort to attain such highly meritorious programmes that no doubt lingers as to their reception.

News bulletins, time signals, market prices, educational programmes, and cooking and agricultural advice take but a small portion of the total broadcasting time of stations, and unless rigidly limited, a much smaller proportion of the total receiving time. Reception of the first two items is usually welcomed because of their value to the listener. The remainder is of interest to distinct minorities. Their broadcasting is attended by more or less permanent loss of the majority of a station's listeners. This is not necessarily true in regions where prices of a single product or conditions in one industry determine the living conditions of the entire population. However, in these places there is the added advantage of few such items to be broadcast and resulting short time required to give the information.

HOW THE ELECTION RESULTS WERE BROADCAST

An Atmospheric Impression of the G.P.O. Tally Room on October 12

YOU go down the lane on the Pitt Street side of the G.P.O., and after showing your credentials you take the lift to the fourth floor, where the tally-room is situated.

Then you go down a corridor—past a horseshoe of telephone switchboards—which you take to be the counting-room; and you reach the tally-room—long and narrow, fronting on Martin Place.

At the end, as you go in, there is an enormous blackboard, on which the printed names of all the New South Wales candidates are pinned. A long, narrow table runs the length of the room, and has telephones placed at intervals all the way down. These are tagged with the names of newspapers. It is a quarter to eight, and the pressmen are strolling in one by one. Casual gentlemen. They begin to test their phones.

But you are not interested in pressmen—you are one (of a sort) yourself. You have come to watch the broadcasting of the election results. Where is the microphone? Where is Mr. Williams?

At the far end of the tally-room a mechanic is testing a telephone which enjoys a table all to itself. You go up to him. "If this the broadcasting table?"

"2GB," he says.

"Where's the 2FC-2BL table?"

He doesn't know. You wander out of the tally-room and look carefully all round the corridors. Just opposite is a door through which girls—presumably telephone operators—come and go. You wonder if this is the place, and make a movement. The door is snut suddenly. "Girls' dressing-room" says a fat gentleman, passing with a leer.

Just then Mr. Williams arrives—tall Mr. Williams. Ponderous Mr. Williams.

"Hullo! Hullo!" says Mr. Williams, and makes straight for the girls' dressing-room.

"Hey," we exclaim, "you can't go in there—it's a girls' dressing-room!"

Mr. Williams takes no notice. He opens the door, goes in, and stays in. Naughty old man. In a minute you follow him.

It IS the broadcasting room after all. It had been a kind of retiring-room. A cane couch, a long table with a microphone mounted on a stand; in one corner the amplifying gear; in the other a small table with a telephone. You make for the couch, sit down, and think things out.

Mr. Pearce begins to tune up his amplifying gear, puts on the headphones, and rings through to 2FC. Mr. Williams looks doubtfully at a seemingly frail leather-bottomed chair, and relaxes into it gradually, on one side of the long table, opposite the microphone. He disapproves the stand, and has it taken away, placing the microphone on top of his suitcase.

Messrs. John Holland and James Hall take out suitcases full of papers—printed, type-written, and plain—and begin to write feverishly and arrange their writings under Mr. Williams' supervising eye.

At the phone on the small table Miss Harris is in touch with La Perouse, which has several sets tuned in to the inter-State stations, so that inter-State results may be

broadcast from Sydney a few minutes after their transmission in other States.

It is about ten past eight. Jim Hall comes in with a slip marked "West Sydney." These are the first results to hand from the counting-rooms. Mr. Williams speaks to Mr. Pearce. Mr. Pearce rings through to 2FC and talks in the unintelligible fashion of control operators; then turns to Mr. Williams. "After the next ring."

The bell tinkles. "Australian Broadcasting Company," begins Mr. Williams, hitching himself together over the microphone. He puts over the first return.

There will be no more announcements till nine o'clock. A few pressmen drop in, and speak ingratiatingly to Mr. Williams, reminding him of "last time." They want to get the inter-State returns as Miss Harris takes them down from La Perouse.

The tally-room begins to babble figures.



Ian Rubini, the popular musical director, and Miss Adel Crane, whose marriage is announced. They are appearing together in the 3EO programmes.

SELECTIONS from the works of Charles Dickens will be given from 3AR on November 2, by members of the Dickens Dramatic Club. For their initial broadcasting performance they have chosen an amusing sketch dealing with "Mrs. Nickelby's Admirers."

The part of the admirer—a garrulous old gentleman who has escaped from an asylum—will be taken by Maurice Latimer, the well-known Dickensian artist, and winner of many championships, while the role of the susceptible Mrs. Nickelby is in the artistic hands of Miss Violet Stone. Miss Alice Whitehead, who has piloted the club to success, will have charge of the production.

The man at the tally board is being kept busy chalking up the returns as they come in, and the newspaper men at their telephones speak the figures one by one as he puts them down. John Holland and Jim Hall have established themselves at a small table in front of the tally board, and write the figures for each electorate on a separate slip of paper. These slips are taken in to Mr. Williams by Harry Someone-or-other, an enthusiastic young man who has bicycled all the way through the rain from Artarmon to be present. One wonders how he is going to get home.

Nine o'clock. Mr. Williams is on the air from 2FC and 2BL, slowly wading through a pile of white papers. As he reads from each electorate he ticks it off on a "Wireless Weekly" form. Miss Harris has a fair batch of inter-State results from La Perouse. Mr. Williams reads them through, while the newspaper men look on hungrily or take notes. In the tally-room Mr. Allars supervises the serving of tea or coffee. Mr. Williams closes down for a few minutes and asks for Harry. "He's having tea," says Miss Harris. "Where's MY tea?" grumbles Mr. Williams. "It's pretty hard when your own boys..."

Quarter to ten. Mr. Williams leans back during another respite. "They're socked to blazes," he says, referring to the Nationalists. A "Sun" man comes in and tells us that Bruce is two thousand behind.

Some switchboard girls come in and take down figures on a "Wireless Weekly" chart. They say they are doing it for their own amusement!

Mr. Williams talks to the "Sun" man in between times. They go back thirty years. They talk with easy familiarity of places all over Australia, places we have never heard of before, and gauge the chances in terms of past performances through almost every election since Federation.

Eleven forty-five. They are beginning to put crosses under electorates on the tally board. This means that there will be no more returns from this electorate to-night. Mr. Williams is announcing more and more inter-State returns, and two newspaper men are taking down his figures as he speaks.

Half-past twelve. The last returns are over, and Mr. Williams sums up. Throughout the night he has been assembling figures and calculating possibilities and chances. Now he takes the public through all the electorates of Australia, making comparisons with the figures of last election. He summarises: It is hard to say for certain, but it looks like 40 Laborites, 31 Nationalist-Country Party, 1 Independent, 3 Independent Nationalists.

Not too bad, in the light of later happenings.

Twelve forty. We pause at the door of the tally-room. The broadcasters' work is over for the night; but the pressmen still babble and typewrite. "They're getting final inter-State results," says Mr. Williams.

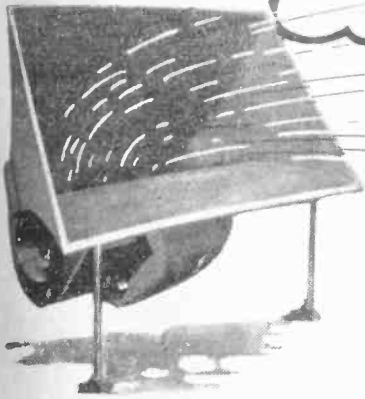
And so home through the rain and to bed, wondering what Mr. Scullin or the Labor Caucus might do "with regard to broadcast-

The

Exponential Horn Explained

Its Theory and Construction

By CALVIN A. WALTERS



THERE is obviously considerable interest regarding the exponential or logarithmic horn. This can be understood, for its use is extensive throughout the world. It has been adapted to a variety of purposes, including the "talkies," various makes of talking machines, and radio reception.

Its advantages place all other classes of horns right out of the field, and it is my intention in this article to give some space to its theory, and to describe how it can be adapted for use with the broadcast receiver.

Most of us have, at some time or other, noticed a serious lack of quality in the reproduction of various loud speakers, and have striven to improve that quality in vain. One has only to make a comparison of the frequencies emanating from the average horn, and the frequencies that a good audio-amplifier is capable of dealing with, to realise that the fault does not always lie in the amplifier.

The best amplifier is capable of reproducing notes uniformly, at practically all frequencies, but unless the loud speaker is also capable of doing the same, then we are far from our goal.

The exponential horn goes a long way towards doing this. The old theory of a horn was that it was a mechanical amplifier of sound waves. This has been found to be incorrect. The true function of a horn is to act as a coupling device between the telephone diaphragm and the atmosphere of the room. One can compare the horn to an aerial of a wireless transmitter, which is a coupling device between the transmitter and the ether.

Without an aerial the transmitting range of the transmitter would be very small. Likewise with a telephone diaphragm. By itself its transmitting range is very small, but coupled with a horn, this range is increased, and considerable amounts of sound power are radiated by the use of a comparatively small telephone unit.

The manner in which the horn is enabled to radiate this comparatively large amount of sound power, is that the horn serves to load the diaphragm, by concentrating a large column of air on to the diaphragm.

In other words, it makes the diaphragm work harder than it would otherwise be enabled to do.

The perfect audio amplifier reproduces uniformly the entire range of frequencies that it is called upon to handle, and the best loud speaker is that which enables this to be achieved.

For all horns of equal length and terminal areas the exponential horn comes nearest to fulfilling these specifications. It is obvious, therefore, that the secret must lie in the manner of tapering.

The exponential horn may be described as one which doubles its cross sectional area at equal intervals throughout its length. It increases its diameter by a constant multiple per unit of length, whereas an ordinary conical horn increases by a constant additive factor.

Now upon the rate of expansion depends the "cut-off" frequency of the horn. By "cut-off" is meant the lowest frequency at which the horn will radiate uniformly.

With an ordinary conical horn, the proportion of power radiated falls off continuously as the frequency is reduced. But with the exponential horn the radiation is uniform until the "cut-off" point occurs, where there is a sudden falling off in radiation efficiency

The actual point where this "cut off" occurs depends on the rate of expansion of the horn. It has been found that a horn whose cross sectional area doubles every foot, cuts off at 64 cycles. One doubling every six inches cuts off at 128 cycles, while one doubling every 2 feet cuts off at 32 cycles.

Thus the contour is determined by the lowest frequency from which it is desired to radiate uniformly. Fig. 1 will make this clear.

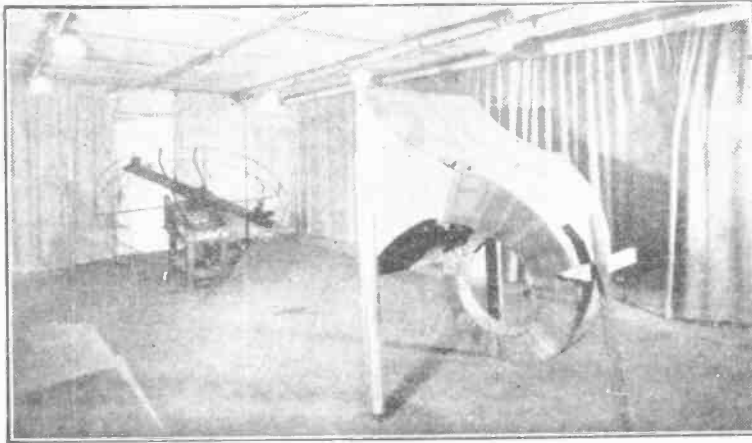
We now wish to know how far to extend the horn before terminating it at the mouth. A good horn should not resonate at all at any frequency. To prevent air-column resonance the mouth should be large enough to transmit the pressures in the horn without reflection.

It has been found that if the diameter of the mouth is made equal to one quarter of the wavelength of the cut off frequency, resonance due to reflection will be reduced to a minimum. The wavelength of any frequency may be determined by dividing the velocity of sound in air, viz., 1120 feet per sec., by the frequency. A round horn should then be extended till the diameter is equal to one-quarter of this wavelength.

One example of an exponential horn built according to instructions in the article. Obviously its dimensions prevent its use in many sitting rooms, but most experimenters will be able to discover a satisfactory location for it.



Construction of Simple but Highly



Experimental investigation with a large exponential horn in the Bell Telephone Laboratories, where this form of horn was developed.

Fig. 2 gives the diameter of the mouth of a round horn for various "cut off" frequencies.

For a square horn the conditions will be met if the area of the mouth is made equal to that of a round horn, with the same rate of expansion.

Now the last requirement is the area of the throat. In practice the dimensions of the throat should be such that it makes a good fit with the actual telephone unit to be used. Small vibrating mechanisms with a diaphragm about 2in. to 2½in. in diameter, are quite suitable. The "Baldwin" concert unit I found to be particularly suitable.

When air is being pumped in and out of the throat of a horn at a frequency greater than the cut off frequency, a pressure is created which reacts back onto the surface of the diaphragm. This is known as the radiation pressure.

As much energy as possible should be used in overcoming this radiation pressure. In order to achieve this the radiation pressure must be high, and thus the area of the throat must be relatively small, for the back pressure of air on the diaphragm will be greater for a horn having a smaller throat owing to the fact that the velocity of air through the throat will be greater. Thus the total force exerted on the diaphragm, which is the product of the pressure, and the area of the diaphragm will be greater.

This will be easier understood if we consider a diaphragm moving 200 cubic inches of air per second into the horn. If the throat area is halved the velocity will be twice as great. Thus the greater the velocity of air moved into the throat the higher will be the radiation pressure.

We have now determined the manner in arriving at the contour of the horn, the size of the mouth, and the area of the throat. We will now go on to the actual construction of a horn.

The construction is by no means as difficult as one may imagine, and we will select, for the purpose of showing the general details of construction, a horn whose cut off frequency is 128 cycles, or the C below middle C on the piano. When I say that it has a cut off of 128 cycles I do not mean that lower notes that this will not be audible. They will be reproduced, but not proportionately to the diaphragm movement, as in the case of notes above 128 cycles.

The fact that the ordinary horn will hardly reproduce notes at their correct intensity,

even as low as 128 cycles, makes the construction of the exponential horn worth while.

Referring to Fig. 1 we find that for a horn with a cut off of 128 cycles, the rate of expansion is every 6in. We therefore double its cross sectional area every 6in. We have now to settle the diameter of the mouth.

The exponential horn will not reproduce frequencies that are not contained in the output of the amplifier. A good amplifier and a real power valve are just as essential as with any other of the better types of speakers.

As mentioned previously, this must be one quarter of the wavelength of the cut off frequency. This can be found by dividing the velocity of sound in air, that is 1120ft., by the cut off frequency (in this case 128), and dividing the product by four. So—

$$\begin{array}{r} 1120 \\ \hline 128 \\ \hline 8.75 \\ \hline 4 \\ \hline \end{array} \quad \begin{array}{l} \text{equals 8.75ft. Therefore} \\ \\ \\ \text{equals 2.2 feet.} \end{array}$$

Therefore, 2.2 feet equals diameter of mouth of a round horn.

Since we wish to construct a square horn, owing to its being much simpler to construct, we must make the area of the mouth equal to that of a round horn. This will be found to be about 4 square feet, so that if we make the sides each 2 feet long, we have the size of the mouth of the horn.

We now must decide on the size of the throat. The size of the average speaker unit is about ¾in. diameter, so that I have made the throat of this horn ¾in. square. As I said before, the size of the throat must be made so that it is a good fit with the particular unit to be used. Each individual constructor must therefore decide this according to his requirements. We therefore find that the size of the mouth is 2 feet by 2 feet. The rate of expansion is every six inches, and the size of the throat is ¾in. by ¾in. Now there are ten intervals between

expansion points. The horn is, therefore, 5 feet long. The table of Fig. 3 gives the area at each expansion point, and the width of the side at each point.

| Area of Cross Section at each Expansion Point. | Width of side at each expansion point. |
|--|--|
| 4 square feet. | 2 feet. |
| 2 square feet. | 1 foot 5 inches. |
| 1 square foot. | 1 foot. |
| 72 square inches. | 8½ inches. |
| 36 " " | 6 " " |
| 18 " " | 4½ " " |
| 9 " " | 3 " " |
| 4½ " " | 2¼ " " |
| 2¼ " " | 1½ " " |
| 1¼ " " | 1 1-16 inches. |
| 9-16 " " | ¾ inch. |

From these measurements one can construct a horn of practically any shape. But as curved horns present several difficulties, I will describe the construction of a straight horn. This will also serve to allow an investigation of the possibilities of the exponential horn, and will also enable the experimenter to gain a little experience in the construction.

It does not matter in the least of what material the horn is made, as the question of sounding-boards does not enter into the subject at all. In fact, to have a material that will resonate is fatal. I found that cardboard about ¼ to 3-16 in. thick the most suitable from the point of view of easiness to work, and it is surprising how strong the finished job is when completed. If cardboard is selected it will probably be found that single pieces of the required length are unobtainable. In that case the sides will have to be cut out in sections, making sure to lay the larger diameter section over the outside of the smaller diameter section, leaving about ¼in. lap to be well glued.

Begin operations by laying out the plan of one side of the horn as in Fig. 3, on a large sheet of brown paper. When this is done, take a piece of string, and carefully lay it along the curvature of the plan, making a mark on the string where each cross section measurement intersects this curve.

If the string is now stretched out tight, you will have the length of each of the sides of the horn.

Now take your cardboard, and draw a pencil line right down the centre, lengthwise. Lay the string carefully along this line, and mark off on the cardboard, corresponding marks with those on the string. These represent the expansion points. Now measure

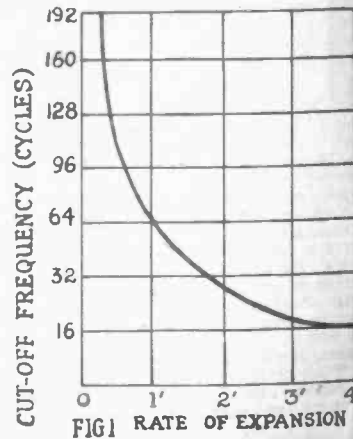


FIG 1 RATE OF EXPANSION

Effective Speaker Described Below

off the respective measurement for each point, and join each one with a gradual curve. You now have the correct shape of each side.

The reason for all this is that the expansion points must be taken from an imaginary line running straight down the centre of the horn. If you were to lay out Fig. 3, and cut it out, you would find on bending the four sides together, that the length of the horn would be only about 4ft. 9in., making the rate of expansion less than 6in. Cutting the sides out, as I have described, makes them 5ft. 3in. long. On bending them together the horn will be found to be 5ft. long overall.

When cutting out the sides, two of them must be made wider than the other two to allow for overlap at the edges. In other words, there must be a margin on both edges of two sides, equal to the thickness of the cardboard.

The cardboard can be cut with a fine fret-saw or by laying it out on a table, and going round the outline with a razor blade. It is well to get permission from your wife before committing sacrilege on the family table, and also to protect the surface of the table against slips of the blade.

The best way of assembling the sides is to make a wooden frame slightly under 2 feet

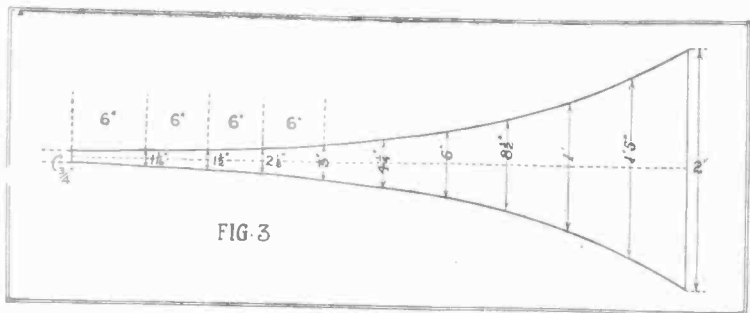


FIG. 3

menter, it is safe to wager that it will be tested before it is dry, in which case it is well to take care of the floor carpet; otherwise another loud-speaker will function sooner than expected, giving forth high, shrill tones.

In making connection with the throat of the horn and the speaker unit, make sure that you have an absolutely airtight fit, by either packing around the outside and into the corners, or making connection by using a short length of rubber hose or tubing. I cannot over-stress the importance of making everything airtight. Now connect up to your amplifier, and note results. If you have been using an ordinary horn type speaker before, the first thing you may hear is distortion. Then don't blame the exponential horn. Rather, give thanks to it, for I may say that it is capable of making apparent all the distortion in your set. The remedy, of course, is obvious.

In passing, I would remind readers that the exponential horn is not a low-note factory. It merely allows the low notes to get through where otherwise they would be choked off. That is, providing your amplifier reproduces them. In any case, you will hear a lot more than you heard before. But, unless your amplifier is good, you cannot expect perfect results from the exponential horn.

One thing will be very noticeable. That is that the volume will be considerably increased, and the results obtainable from

the horn make it worth while. It is considerably less expensive than the best of cone speakers, and in most cases will give results closely parallel with moving-coil speakers, and has the added advantage of being almost free from horn or diaphragm resonance, as well as being considerably less expensive.

In conclusion, I may say that for those readers who would like to save themselves a considerable amount of geometrical work, I have worked out the design of a folded horn with a cut-off of about 128 cycles. This horn takes up considerably less space than a straight one. I have had paper patterns prepared of this horn, which are available to experimenters at a nominal cost of 2s 6d per set, on application to the writer, care of WIRELESS WEEKLY.

I would be glad to hear of experimenters' results with the exponential horn, either by personal letter to the writer, care of WIRELESS WEEKLY, or through the columns of WIRELESS WEEKLY.

Indicator Lamps

IN these days of dull-emitter valves anyone, particularly if rather sleepy after a late vigil at the controls of the receiving set, is liable, in a moment of mental acerration, to leave the batteries switched on. It is so easy—at least the writer has found it so on more than one occasion—to “close down” by turning over the earthing switch and to omit to give the battery switch similar attention. How many readers have not at one time or another been aghast at finding, on the following evening, that the set was still switched on and that the batteries had received a severe if not fatal blow?

By far the best method of safeguarding oneself against the results of such absent-minded moments, says a writer in “World-Radio,” is to fit to the panel of the receiving set a flash-lamp bulb which acts as a tell-tale. Bulbs are obtainable nowadays which consume as little as one-tenth of an ampere. True, this represents the amount taken by the average valve, but it is surely better to add 100 milliamperes to the regular load of the accumulator, where it is of no great moment, than to run the risk of draining heavily the high tension battery.

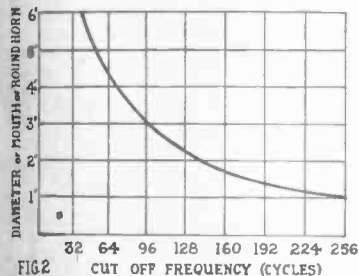
A method which the writer has found satisfactory is to mount behind the panel a flash-lamp holder, drilling in the panel itself a hole big enough to take the bulb. The con-

tacts of the holder are wired in parallel with the low tension busbars. Either a plain or a red bulb may be used. The latter strikes the eye equally well and it has perhaps rather a better appearance. Whenever the set is switched on the bulb glows and continues to glow until the switch is re-

turned to the “off” position. No one, I think, will go to bed leaving a set so furnished switched on. He is bound on leaving the room to turn out the light and as he does so that accusing white or red eye strikes him through the surrounding darkness.

PLATE RESISTANCE.

THE term “internal impedance” is very often used loosely when “plate resistance” is meant. The former expression is open to two objections. In the first place every valve has two internal circuits, (a) from plate to filament, and (b) from grid to filament, and these have very different values. In the second place the nature of the path traversed by the electron stream is a pure resistance, since it has a practically constant value at all frequencies.



square. To the sides of this, the wide ends of the four cut out sections must be tacked. Now make a block of wood about 4 inches long and 2in. square, and bind the narrow ends of the sections around it. Also, at various points along the horn slip some short lengths of tape underneath the sides that have no margin. This will serve as a handle to pull the sides out if they have any tendency to bulge inwards.

If you now bind twine around the horn, starting at the throat, and working towards the mouth, the sides will be gradually brought together where they can be fastened together with metal angle pieces, or, as was done in the writer's case, long pins can be driven into the edges of each side, and gummed brown paper wound round and round the horn. After the paper has dried, the twine can be removed and the wood taken from the throat and mouth.

The best gummed paper for binding the horn is the kind used in place of twine for doing up parcels. It is about 1 inch wide. The best and “gummiest” I know of can be procured from W. E. Smith, Ltd., 310 George Street, Sydney. A reel costs about 2/6 and contains enough to make a dozen horns if necessary.

Now, a most important point to remember is this. The horn must be absolutely airtight from beginning to end, otherwise it will absolutely refuse to function. Here again the gummed paper comes into use. Stick it along the corners of the horn both inside and out, pressing it well into the corners inside. The horn can be now coated with several coats of varnish, and, when dry, can be tested. From my experience of the average experi-

This Week's Programme Personality

OUR EXTRA-SPECIAL INTERVIEW WITH THE JAZZ SPIDER

WE stood in the wings of the Little Theatre. It was midnight, black midnight, and you couldn't see your hand before your face. The Jazz Spider came out from his dressing room and sat down beside us.

"What are you doing here?" he asked in a rasping, vicious, pugilistic, horrible voice.

We explained that we were Mr. Bocargle, and wanted to interview him for "Wireless Weekly."

"I am not used to being interviewed by 'Wireless Weekly,'" said the Jazz Spider. "You know what I do to interviewers?"

"No?"

"I poison interviewers by post! That's what I do to interviewers. I shoot them in dark corners. I wring their necks. Interviewers! Bah!"

"Well, well," we said, writing quickly in the dark. "That's very interesting, Mr.—er—Fang. Very interesting indeed. We suppose you could tell some amusing stories of your experiences—"

"Say, did you hear what I said?"

"Quite so, Joe. Quite effective. But just a little dramatic, don't you think? It's after hours, you know, and—"

"Oh, all right. But don't keep me too long—the wife gets very touchy when I come home late. What do you want?"

"We begin at birth. Where were you born?"

The Jazz Spider thought for a moment "That's going back a long way," he said. Then he leaned towards us confidentially "The fact is, Jazz Spider is only one of my million and forty-nine aliases. That's not for publication, of course. At least, it was a million and forty-nine up till yesterday week; but I don't know how many detective novels and mystery yarns have been written since then." He became still more confidential. "You see, they can't do without me!"

"Who?"

"Why, Edgar Wallace, young Stevenson—dead, poor boy, the mystery man who writes about Nelson Lee, old Shakespeare—you should have seen me as Iago—and my present author, Jim Donnelly. They couldn't do without me I am Inconceivable Danger! I am Unutterable Fear! And the best thing about me is I HAVEN'T GOT ONE REF-DEEMING FEATURE!"

"Disgraceful!"

"Exactly!"

"Utterly preposterous!"

"Quite so."

"You ought to be hanged!"

"That's what they all say."

"You are a menace to the civilised world!"

"Six, you flatter me!"

We turned to Mr. Donnelly, who was brooding sadly in the corner. "Mr. Donnelly how can you associate yourself with such an undesirable character?"

Mr. Donnelly sighed. "He's what the people like. They love thorough villains. They love dissolute rogues, because the more dissolute and thorough they are the more glory such fine chaps as Doug Brown get



from fighting them. Then look at Vernie Vivian. There you have the beautiful lady press reporter—what use would she be if she weren't Menaced by the Clutching Hand of our friend here?"

The Jazz Spider bowed.

"Besides," continued Mr. Donnelly, "he's not such a bad sort of chap. He always works well enough for me. He is never behind time for an appointment. When I want him to come and hold up a train, or take a few pot-shots at Doug Brown, or tie Vernie Vivian up in the Deserted Mill so that she can bite herself free, he always does his work to perfection. I'm really getting to like him—"

"Be careful, Jim!" said the Jazz Spider.

"I am very easily annoyed."

"Oh, shut up, Joe," said Mr. Donnelly.

"You know you're not really as bad as you're painted. Remember that little girl you saved from—"

"Damnation!" exclaimed the Jazz Spider. "I'm not going to remain here to be insulted! Perhaps I may have my weak moments like any other villain; but there is no necessity for you to fing them in my face."

"There, there, Joe," we said soothingly. "Don't be annoyed with Mr. Donnelly. He really didn't mean it. Suppose you tell us how you like being a villain."

The Jazz Spider cleared his throat. "It's really a very nice occupation," he explained. "Few people live as long as a villain. Ordinary people in books are generally done with after the first volume; but villains go on in serials for ever. You never know how long you may be required to live under one name—it all depends on your author. If he's a decent chap he generally manages to let you escape in the last chapter so you can reappear later on. My brother-in-law works for 'Sapper,' who writes the Bulldog Drummond stuff, and he says he's never had a better engagement in his life. Jim Donnelly says he's going to keep me busy for at least three more appearances; and I think it may be more, because I have always been a very popular kind of villain."

"Don't you find the life a little dangerous?"

"Well, there are some people who mightn't like to live as I do; but for people who like the adventurous life there is nothing better than being a villain. Politics isn't in it with true villainy; even newspaper reporting must cede my profession a few points, and the professional detective can't hold a candle to us." His luminous watch glowed for an instant in the darkness. He yawned. "Is there anything more? I'm tired out."

We said that would do; and he was gone.

"Have a cigarette?" we asked Mr. Donnelly, feeling in our pockets. "Lord! We swear we brought a full packet of Cravens with us!"

"Probably you did," answered Mr. Donnelly calmly. "Have one of mine. Joe can never quite forget his art in private life. How did you like the first episode?"

"Fine. Quite thrilling. What's going to happen next?"

"That," said Mr. Donnelly, "is a secret."

"Then how did you get your effects?"

"That, also, is a secret."

"Well, how do you like writing the 'Jazz Spider'?"

"I think it's the kind of thing the public likes—thrills and adventure. But I'm much happier when I'm writing character parts—the conflict of personalities and so on." He sighed. "It's about time we went home."

"One more question—Where is this Little Theatre? We came here in a closed car with the blinds drawn down, and—"

"You're going back in a closed car with the blinds drawn."

"Very melodramatic, Mr. Donnelly!"

For the last time that night, Mr. Donnelly sighed deeply. Then he tied a black handkerchief over our eyes and led us out to the waiting car.

TO the women who are feverishly dieting in an effort to become slim, a note of warning is sounded by Dr. Cecile Greil, of New York, who on November 7, from 3AR, will discuss "The Fallacy of Slimness."

MICHAEL BOLLOTEN and Ida Stockman, two English artists who are to make their debut before the microphone at 3LO on October 28, are versatile entertainers, and gave many surprises in the way of original "jazz" and "blue" numbers.

AN interesting programme of song and story will be given by Mr. George Cowley from 3LO on October 29. Mr. Cowley completed his musical education abroad, giving particular attention to the history of music and composers, afterwards giving recitals through England, Fiji, and Australia.

During Mr. Cowley's visit to Melbourne he will give song lecture-recitals at the principal colleges, and for his broadcasting programme will preface each song with a little talk, outlining the history, period, and method of work adopted by the particular composer.

LISTENERS' CHOICE

The week's programme attractions—Recital of Irish Songs—Symphonic Syncopations—"Music and the Man"—"Eugene Onegin."

PROFESSOR RANDAL WOODHOUSE. late

Senior Professor of Singing of the Royal Irish Academy of Music, and who has taught many of the winners of the Irish Feish Coeil Competitions, will sing some favorite Irish songs, including "The Lark in the Clear Air," "The Foggy Dew," "The Snowy Breasted Pearl," "My Dark Rosaleen," and "My Lagan Love" during the programme of Irish music arranged by Father McNally to be broadcast through 2FC at 6 p.m. on Sunday, October 27. An historical account of these songs will be given by Father McNally, the well known rector of St. Patrick's, Parramatta.

MISS LEILA WADDELL, the violinist, who will appear from 2FC on Friday, October 25. She is a pupil of Professor Leopold



Miss Leila Waddell.

Auer, the Master of Zimbalist, Hefetz, Elman, and others

"When I played before Professor Auer to see if he would take me as a pupil," said Miss Waddell, "I chose a slow melody, and he stopped me three times to tell me I was playing out of tune, and made me extremely nervous. The fourth time he said 'We will try once more,' and he stopped me in the wrong key, and so that established a bond of friendship between us."

NEXT Sunday, at 5.7 from 2BL, Mr. C. N. Baeyertz will continue his series of talks on *Voltaire under his "Modern Philosophy"* session. He will read from Voltaire's "Candide," which he considers the best short story in any language.

BEGINNING at 8.30 next Sunday evening.

Mr. Keats will present a concert, in association with the Wireless Singers. An interesting feature will be the 1812 overture, by Tchaikovsky, which will be prefaced by Robert Ingersoll's oration on Napoleon, spoken by Mr. C. N. Baeyertz.

Robert Ingersoll was an American orator and pamphleteer. His oration begins: "A little while ago I stood by the grave of the old Napoleon, a magnificent tomb of gilt and gold, fit almost for a deity

A NEW artist on the air is Miss Neil Gale, to be introduced to listeners-in on the 24th of this month. She is to give a recital at the Sydney Conservatorium on the following evening. Miss Gale is a pupil of Laurence Godfrey Smith, and gained her teacher's diploma at the Conservatorium last year.



ANNOUNCING MR. SCULLIN'S CABINET

Mr. Scullin, the new Prime Minister, announces the formation of the new Federal Cabinet on Wednesday, October 23. This will be broadcast from 2FC at 8 p.m., lasting approximately fifteen minutes, and taken from Canberra. It will also be relayed through 3LO, 4QG, 5CL, and the Australian Broadcasting Company, Limited, are trying to arrange for a pick-up for GWF, Perth. 7ZL will probably pick it up from 3LO, Melbourne.

NEXT Saturday night, October 26, Cec. Morrison will present his Symphonic

Syncopations, to the arrangement of which he has given much time and thought. Mr. Morrison wishes to make it plain to the public, through this programme, that jazz is not simply something to dance to; but a style of playing to which even the "classics" should not be afraid of condescending.

The A.B.C. Dance Band, therefore, will play several "classics" as "straight" numbers and will then give them in the new form, symphonically syncopated. "And I am sure we can make people like the novelty," says Mr. Morrison.

Foremost numbers in the recital are: An Oriental Fantasy, which includes portions from "Scheherazade," by Rimsky Korsakov. "Dance Arabe," "Orientale," by Caesar Cui, and "Marche Slave," by Tchaikovsky; A Faust medley; A Wagner medley; Cec. Morrison's own arrangement of "Was It a Dream?"; Memories of the Masters—Mas-senet's "Elegie"; Godard's Berceuse, "My Heart at Thy Sweet Voice" by Saint-Saens out of Samson and Delilah, Le Mare's Andantino. Rubenstein's "Melody in F"; "The Song of the Volga Boatmen," Valse "Bleue, Cribiribin by Pestelozza, concluding with "Love's Old Sweet Song."

The "straight" playing will be done by a trio, cello, violin, and piano; and each number will be prefaced by a short talk.

MAX SAUNDERS studied harmony, composition, and orchestration at the Auckland University and won a first prize and gold medal for composition at the Auckland Composition Society. He came to Sydney eighteen months ago and was appointed musical director of the King's Cross Theatre. Now he is the violinist of the A.B.C. Orchestra, but his main work is the arrangement of orchestral accompaniments.

All the accompaniments are written for the piano alone, and it is Max Saunders' task to write in the parts for the rest of the orchestra. On October 27 Max Saunders will conduct a suite he has written for the orchestra, and will also feature his arrangement of "Nazareth" and several hymns.

(ONE of the leading musical authorities in

England, and now visiting Australia, is Dr. Charles Edgar Ford, Doctor of Music of the University of Oxford. He holds several other Academical distinctions, including F.R.C.O., T.T.C.L. Dr. Ford will be the Feature Speaker from 2FC on Sunday, October 27, from 6.30 till 7 p.m. on "Music and Man."

Dr. Ford is an organist and pianist, and has just completed a comprehensive tour of Africa. Dr. Ford has held various appointments in London. At present he is visiting Australia in the interests of the Trinity College of Music. He is the author of several orchestral and choral works, songs, part songs, and organ and piano solos.

(ON November 3 listeners will be introduced

to Horace Sheldon, noted English conductor-composer, who is now directing the Capitol Theatre (Sydney) Orchestra. For fourteen years Horace Sheldon directed the orchestra at the London Palladium.

MISS ENID HYNES

has given two successful recitals in Sydney and has several times played at Government House. On October 31 she will broadcast a group of Schumann numbers with Madame Emily Marks, who is already well-known to listeners.



Miss Enid Hynes.

"I HEARD my own voice over the air recently when a record recital was broadcast," said Des Tooley, "the girl with the unusual voice." "It was the queerest sensation imaginable." Quite so.

Many records have been made of Des Tooley's remarkable voice, which has been heard quite often at Sydney concerts. She sings baritone, and specialises in popular songs. She will broadcast some selections from popular music from 2BL on October 25.



Mr. J. Haddock.

ALTHOUGH John Haddock is only just twenty-one years of age he has had a very varied career, having tackled the stage, the screen, and sheep farming. He comes from a family of actors, his father being very well known in English theatrical circles.

MISS LORNA KING, a brilliant young pianist, has been playing for the last twelve months at the Caves House, Jenolan Caves, and will entertain listeners of 2FC on Monday, October 28, with some piano novelties.

THE fate of Dr. Leichhardt and his party, who set out from Moreton Bay to Port Essington, 1847, on a two years' exploring expedition, will be one of the features dealt with in Mr. Price Conigrave's talk from 2BL on Wednesday, October 30, on "Australian Explorers."

He will also describe Leichhardt's earlier expedition from Moreton Bay to Port Essington. It was during this trip that John Gilbert, the bird collector and assistant to the famous ornithologist, John Gould, was murdered by the blacks.

ON October 25, through 2FC, a novel broadcast will take place. Mr. Vern Barnett, from the Aeolian Hall, will play an organ solo, and Mr. Horace Keats, conducting the orchestra from 2FC, will hear the transmission from the Aeolian Hall by wearing headphones.

Mr. Vern Barnett will also wear headphones and there will be a simultaneous transmission from both the Aeolian Hall and the 2FC Studio. The organist and the orchestra will play the 5th Nocturne, by Lybach. The public will hear the combined musical effect!

MISS NEA HALLETT, the popular young vocalist, will be favoring old-time favorite melodies for her appearance from 2BL on Wednesday afternoon, October 30.

MR. FRED GOOCH, entertainer, comes from musical stock. His grandfather was an organist and organ-builder in London, his uncle, Mr. H. Gordon Gooch, A.R.A.M., well known basso, and another uncle is I. R. Edeson, organist of Scot's Church and Town Hall, Melbourne.

Fred Gooch's talents ran to solo dance music and dates back long before jazz bands and hotel ballrooms. He will be heard from 2BL on October 30.

WHEN Will Cotterill, the manager and tenor of "The Famous Four," first came to Australia he was under contract for three months, but he has now been here seven years. "The Famous Four" will be heard over the air in a sixty-minute entertainment called "A Nautical Night" on October 26 from 2BL.

This will be a novelty, made up of sea songs, quartettes, and a plentiful supply of humor. The number "See Road" will be one of the features of the evening, and will be sung by Mr. Desmond the baritone of "The Famous Four." The quartette will be supported by Mr. Les Coney.

HOW old are you? In other words, do you believe "That Youth is now Supreme?" Members of the Y.M.C.A. Debating Society will argue the question next Thursday evening, from 2BL.

BETWEEN 8 and 9 p.m. from 2BL next Wednesday, there will be a relayed description from the N.S. Bridge works of Dorman, Long, and Co. Dr. Bradfield and Messrs C. R. Hall and Norman Lyons will take part.

NEXT Monday, the Victorian Liedertafel will be relayed from 3LO through 2FC. Professor Heinze will conduct the Melbourne University Symphony Orchestra.

A VERY interesting broadcast will take place on November 13 through 2FC of the first performance in Australia of Tschalkowsky's "Eugene Onegin," the opera composed by the great Russian poet, Pushkin. This will be performed by the well-known Russian baritone, Vladimir Elin, with a chorus, orchestra, and soloists.

Mr. Elin has sung the part of "Eugene Onegin" in Russia and in many other opera houses of western Europe. The opera will be given in English, and in costume, and will take place from the Adyar Hall, Sydney, from whence 2BL will broadcast it.

MISS ALDER has done a good deal of professional singing in Brisbane, Melbourne, Newcastle, and Sydney. She will sing duets with Alfred Wilmore on her next appearance before the microphone on October 26 through 2BL.

THE first girls' band in Australia was formed by Anne Henderson, who created quite a furore when she took it to play on board H.M.A.S. Platypus. On October 25, from 2FC, Miss Henderson will play the violin in a combined programme with Arthur Wendling, whose instrument is the mello-accordion.

PAUL JEACLE'S Band is not a jazz band, but a combination of musicians specially selected for the production of syncopated dance music and harmonised numbers, so much the vogue in England and America.

Their success at 3LO was instantaneous. Coming at a time when the services were being reorganised, they became a distinct feature in the programmes by providing something entirely different in the way of radio entertainment.

Paul Jeacle is a leader of remarkable personality and resource. With extensive vaudeville experience to help him, he knows just what the public wants in the way of music and novelties, and he never fails to get them over the air.

The appearance of Paul Jeacle and his Band at Community Singing at the Town Hall last week caused quite a furore, and 3LO has arranged that instead of playing for only 20 minutes they will present stage attractions at intervals right through the midday community singing sessions at the Town Hall in future.

"I am going to give listeners some very novel programmes," said Paul Jeacle in a recent interview. "My boys are very keen, and I have made an extensive study of radio requirements, both here and abroad. Music for broadcasting must be entirely different from that for the dance-room, and by the judicious placing of the band many remarkable effects can be obtained from various combinations of even the most orthodox instruments, and harmonising can be broadcast to perfection when judiciously produced before the microphone."

ON her return to Australia Charlotte Robinson, pianist, gave a very successful recital and has since done a great deal of concert work. She will return to Europe in a few month's time. Miss Robinson will broadcast from 2BL on October 26.

MINA HESELEVA, the distinguished Continental soprano, will be on the air from 3LO on November 1, in association with the National Broadcasting Orchestra. Madame Heseleva is a past graduate of Petrograd, and has a considerable reputation in the South of Russia as a brilliant operatic artist. She has given successful recitals in New Zealand and throughout Australia, and has broadcast from all the leading stations.

VERONICA COX, whose musical soprano has made her deservedly popular with listeners to all the leading broadcasting stations of the Commonwealth, will be heard from 3AR on October 31, in some favorite numbers.

LISTEN for the next instalment of "The Jazz Spider" on Wednesday evening, from 2FC.

REAR-ADMIRAL EVANS' special series of feature talks entitled "The Dover Patrol" will be broadcast from 3LO, commencing on Sunday, October 27, at 7.40 p.m.

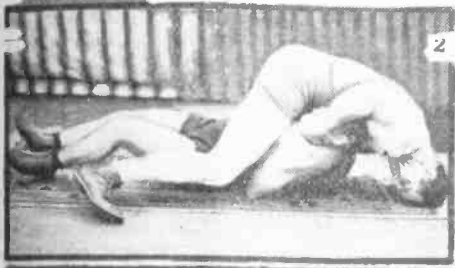


Roy's caricature of Mr. Laurence Halbert, announcer and producer for 2FC and 2BL.

AD. SANTEL—WRESTLER

The official wrestling announcer for the A.B.C. here describes a champion who is likely to become a favorite with Sydney crowds.

By FRED JOHNS



Santel is an established favorite in Melbourne, and many hoped that he would prove a good match against Pesek, and lower that wonderful wrestler's laurels; but they were doomed to disappointment. Pesek won once by his notorious back slam, making himself unpopular with some of the crowd.

When Santel arrived in Australia he went to Melbourne, and caused great consternation by asserting that he was the legitimate light-heavyweight champion of the world. He put up a huge sum of money as a token of good faith, and offered to wrestle anyone in Australia in a title bout, provided that they covered his side wager and that the proceeds of the gate should go to charity.

Ted Thye had wrestled here in Australia as the champion for three years, and under that title he had made a huge sum of money. Naturally Santel felt that he, being the title man, should have some of those matches while the people of Melbourne were appreciating the wrestling boom. Both men persisted in their claims, but the leading lights of the wrestling world stated that Santel could not make 12st. 7lb., as he had not wrestled at that weight for close on seven years. Still, in that year, Stadiums, Ltd., had a good team of men here, and would not sanction the match between Thye and

Santel, although Thye was prepared to have a go. Next year Santel was engaged by Stadiums, Ltd., under contract, and we were all of the opinion that we should be able to see Thye and Santel in a match. During the year Clarence Ecklund and Santel were matched at 12st. 7lb. The latter made the weight, but it proved his undoing. He was easily beaten.

EUSTACE AND PARTNER.

The following holds are illustrated this week for the benefit of listeners and amateur wrestlers by Eustace and his partner.

(1) Forward chancery and arm bar. This hold is one that is used many times in matches at the Stadium. It is obtained from the referee hold by pulling smartly at the back of your opponent's neck into the position as shown. The right arm is secured around the face or chin, and the left arm placed under the arm pit. In this case Allan Eustace has also secured a hammer lock by pulling the opponent's left arm up the back. This is a very painful combination.

(2) Using your left arm as a lever, and kicking your opponent's left leg from underneath him, roll to your right and spin on top of him, retaining a firm grip with the left hand and arm.

(3) To pin him, straddle your legs wide and let the whole of your weight fall on your opponent's chest, keeping the hold with the left hand and arm. Should your opponent's shoulder be in the air still, force it down by pressing on the chin. This latter movement gives great leverage.

AFTER having seen Ad. Santel wrestle Joe Zigmund and John Pesek at the Sydney Stadium recently, one is apt to wonder why we have not seen more of him than we have. He has been in Australia three years, and we have seen him in only four matches.

Born in Germany, he commenced wrestling as a lad in America in 1907 under his right name, which is Adolph Ernst. Travelling the whole of the States, he beat all-comers, with the result that he found it hard to obtain new opponents in the light heavyweight class of 12st. 7lb. and under. So, in 1915, he changed his name to Ad Santel, and started wrestling again. He had wonderful success, being beaten only four times prior to coming to Australia. The men who have beaten him are: Joe Stetcher, recognized as one of the greatest wrestlers the world has known (Browning has also wrestled a draw with Stetcher); Dick Daviscourt, whom he beat later in his career; Dr. Roller; and the Greek Jimmy London. He was injured in this match, and later beat the Greek three times.

Among Santel's victims are such famous wrestlers as Bill Demettrall, Jim Asbell, Chief Montom (the best Indian wrestler that America has seen), the Greek, Gus Kavaros, the Japanese jiu-jitsu Professor Ito, and a draw with Joe Stetcher. He has had 14 matches in Australia, and has been beaten four times—three by Pesek and once by Clarence Ecklund. His dimensions are: Neck, 17½in.; normal chest, 42in.; expanded, 46in.; biceps, 15½in.; forearm, 14in.; waist, 34in.; thigh, 23in.; calf, 16in.; reach, 74in.; height, 5ft. 9in.; weight, 13st. 3lb.

sanction

The Week's Talks

DAY SESSIONS.

FRIDAY, OCTOBER 25.—2BL: 1.15, Mrs. Meredith Atkinson, "Six Weeks on a Liner"; 2.30, Major Sanford Morgan, "Urmi—in Persia—the Great Salt Lake"; 2.45, V. C. Bell.

2FC: 12.0, Francis Jackson, "Shakespeare History Plays"; 2.2, Redgum, "Gardening".

SATURDAY.—2BL: 10.10, G. W. Cooper, Gardening.

SUNDAY.—2BL: C. N. Baeyeritz, "Modern Philosophers—Voltaire's 'Candide'"; 5.7.

MONDAY.—2BL: 1.15, Miss Proctor, "Color Healing"; 2.30, C. R. Hall, "Made in Australia Exhibition"; 2.45, Rev. H. Piper.

2FC: 12.0, V. C. Bell, "The Public Forum"; 2.2, W. S. Reay, "Literary Personalities"; 4.0, A. S. Cochrane, A Reading.

TUESDAY.—2BL: 1.15, Clair Byrne; 2.30, Fred Arlington-Burke, "Historical Travesties"; 2.45, Tom Gurr, "Maharatta Country."

2FC: 12.0, Illustrated Music Lecture, William Dalison; 2.2, Museum; 4.0, Louise Homfrey, "Impressions of a Wanderer."

WEDNESDAY.—2BL: 1.15, Goodie Reeve, "Aids to Personality"; 2.30, Dr. Harold Norrie, "Lachlan Macquarie"; 2.45, The Storyteller, "Heroic Tales of the Sea—Hawkins."

2FC: 12.0, General Antill, "Evacuation of Gallipoli, with circumstantial details."

THURSDAY.—2BL: 1.15, Mildred Muscato, "The Age of Marriage"; 2.30, Brunton Gibb, "Random Remarks"; 2.45, F. H. Raward, "Edinburgh—the Pride of Scotland."

2FC: 12.0, A. S. Cochrane; 2.2, O. N. Baeyeritz, "Spoken English"; 4.0, Rose Antill de Warren, "Australian Stories."

EVENING SESSIONS.

FRIDAY.—2BL: 7.5, Claude Corbett; 9.30, Wallace Nelson, "How I got into Parliament—and out of it; a seasonable discourse."

2FC: 9.15, W. A. Oldfield, "Cricket Chances."



Dr. Ford, who will deliver the feature talk from 2FC next Sunday.

SUNDAY.—2FC: 6.40, Dr. Edgar Ford, "Music and Man."

MONDAY.—2FC: 10.0, F. H. Raward, "Boston—the American Athens."

TUESDAY.—2BL: 9.30, George Black, M.L.C. "In my Anecdote."

WEDNESDAY.—2BL: 7.5, Graham Kent, "Bridge Playing."

2FC: 8.20, O. N. Baeyeritz, "Dialect Stories."

THURSDAY.—2FC: 8.20, O. R. Hall.

Wireless Weekly

Incorporating "Radio in Australia and New Zealand"

FRIDAY, OCTOBER 25, 1929.

IS THERE TOO MUCH MUSIC ON THE AIR?

IT would have been foolish to ask this question three years ago. Music has always been recognised as the staple diet of the listener-in; and wireless broadcasting was hailed at its inception as a new force towards the spreading of musical appreciation.

Even until recently, when the A.B.C. took charge of the national broadcasting, the catch cry, "Music on the air all day from one station or the other," was accepted by most listeners-in as a sound principle. It would have been a sound principle if the music on the air all day were uniformly good.

As many gramophone records are played now as ever before; and although there is a flesh-and-blood lunch orchestra, dinner orchestra, and a small symphony orchestra, to say nothing of a trio, playing at one time or other during the day, the result of their combined effort is the effect of a musical tap turned on simply to fill up the gaping troughs of time.

The distinction between the performance of a composition and the mere playing of its notes is patent to anyone who has heard an embryo pianist or violinist practising a sonata he has never seen before. The true, interpretative performance of a major work is something to be talked of for weeks afterwards, because it is a realisation of a unified artistic creation, just as a statue or a painting or a poem, once seen, becomes a new natural phenomenon and part of our existence. The other way of putting music on the air is only a groping in the dark—it is a statue without symmetry, a painting without balance, a poem without significance, and does more injury to the cause of music by its presence than would the total absence of music from broadcasting programmes.

There is too much week-day, any-old-how, slapdash music on the air—lifeless, uninspiring, untrue to the ideas of its composers.

It has been ingenuously urged that people are using wireless more and more as a "background to their daily and nightly pleasures," but this is not a cause—it is an effect. If listeners begin to think wireless music has no more possibilities than of a background for "their daily and nightly pleasures," it will be because they have forgotten what a musical performance can be.

If the stations could arrange only one capable performance of a good composition a day, this would be of more value than twenty daily performances in the present lackadaisical style.

Melbourne Race Carnival Broadcasts

IT might well be said that "in the spring-time man's fancy (and woman's, too), speculatively turns to the Cup." To say that the Melbourne Cup is on everyone's mind only conveys a vague idea of the widespread interest in Australia's big annual racing event. For many weeks before the first Tuesday in November in each year the eyes of Australia—so to speak—are focussed upon Melbourne, and the fingers of both hands fail to reckon the anticipated winnings of enthusiastic punters, many of whom only try their luck once a year.

Interest is not limited to the big event, however, for there are other racing fixtures in the Spring Carnival, which begins with the Caulfield Cup on October 19. There will be the Moonee Valley Gold Cup on October 26, the Victoria Derby on November 2, the Melbourne Cup on November 5, the Oaks at Flemington on November 7, the Steeplechase at Flemington on November 9, and the Williamstown Cup on November 11.

Rather, we should say, it is Eric Welch's season, for he will be easily the most listened to man over the air during the big Spring racing carnival in Melbourne. Not only will his task be to describe every race for broadcasting by 3LO, but he will have to keep in touch with the performances of every horse and prepare his race-eve talks and anticipations, which assume tremendous importance with many folk.

In view of the doubt that exists as to where Eric Welch will describe the big events for broadcasting by 3LO, it is indeed interesting that the Australian Broadcasting Company definitely announces that the descriptions will be transmitted from specially selected vantage points within the course enclosures, where the best possible view of each race is obtainable. The practice of previous years will be followed with extended services, including comments by other describers with Mr. Welch of various aspects of the race gatherings.

The special seasonal talks by Eric Welch on "The Racehorse and its Origin," which are being broadcast by 3LO, are creating considerable interest. During these talks Mr. Welch is quoting much valuable information from authoritative sources, and many interesting facts, gleaned from his wide racing experience, are being told for the first time. These talks are broadcast every Thursday evening at 6.40.

GEORGE MCNEILLY, Scottish tenor, will be singing from 2FC on Friday, October 25. Every Christmas, Mr. McNeilly and a Concert Party tour the Western Districts, and are looked forward to each year by the residents of Orange, his native town. For his appearance on October 25 he will be singing modern and old English ballads.

SECRETS OF THE RADIO INDUSTRY-1



SHORTENING LONG-WAVES, USED IN THE MANUFACTURE OF SHORT-WAVE LENGTHS.

The Safety Valve

Readers are urged to express their opinions on matters pertaining to broadcasting. If you have some grievance, if you have some constructive criticism to offer, here is your chance 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.

Too Many Classics And Too Much Jazz!

Classical Item
Dear Sir,—In the "Safety Valve" we often see criticisms of the programmes of the A.B.C.

Why call them programmes? They are more like a couple of handfuls of classical items thrown into a hat and picked out at random—kind of musical stew. There is no order, no personality, no popularity in them. For instance, how many set owners are there who never listen to more than the gramophone records from the small stations?

From a rough estimate of the many radio friends I have, I should say about eight out of ten do not listen to 2FC or 2BL.

The reason is this: They lack popular appeal.

Walk into any music store and ask which musical numbers sell the better—the classic or the "popular." The answer will be obvious.

The A.B.C. caters almost exclusively to the classic music lovers—which is undoubtedly the minority of listeners. It is plainly their job to cater for the majority, if licences are not to fall off. If popular music is not better liked by the mass, why, then, is it called "popular"? I would suggest that they reverse their programmes—giving us mostly popular numbers (which would include popular classics), and a small percentage of the little-known classic music—for the small percentage of listeners who like that stuff. Even those listeners do not adore classical music to the extent that they wish to be positively drowned in it—as is being done.

I have heard excuses made that the A.B.C. wish to educate the masses to better music. In the first place, do the masses wish to be educated? If not, will they stand having these things crammed in their ears? You can lead a horse to water, but you can't make him drink. Then, who appointed the A.B.C. as music masters for the multitude? When one pays to be amused one is hardly seeking education, which, like medicine, may do one good, but has a nasty taste.

Another excuse is that the stations wish to maintain the dignity of being the A stations. Is there dignity in amusement concerns? Does J. C. Williamson refuse to put on musical comedy or revue at Her Majesty's just because grand opera has appeared there? The A.B.C. certainly give a percentage of popular music—from 10.30 p.m. onwards—when the working man must needs go to bed to be fit for his work the next day. I would suggest that occasionally full nights be given over to popular numbers, and that they represent the bulk of all programmes.

The programme staff of A.B.C. are evidently classic music lovers, and imagine everyone else is the same; but until they get rid of this narrow-minded idea and properly balance their programmes, I, and a few thousand others, will continue to listen to the gramophone records of the B stations.

A few other things I would like to see changed—the automaton announcing, and the lack of popular music from all stations on Sunday. Why is this latter? Surely popular music is no grievous crime? All those who love popular music—and they are most of us—must leave the radio silent on the only day of the week they have to really listen-in.

Will it be against the law soon to play a



jazz number on our gramophones and pianolas on a Sunday? Let us not let the "wowsers" get us down, and let us be broadminded, and for goodness' sake let the stations cater for the bulk of the people—the common herd, who, nevertheless, pay the greater amount in the total of licence fees.

You pay your money and you take—some-one else's choice.

Here's to popular music! Who's with me?
Yours, etc.,
D. ANGUS.

Penshurst.
* * *

"Jazz, Jazz, Jazz."
Dear Sir—When the new A.B.C. took charge of the "A" stations, Mr. Stuart F. Doyle promised a lot of things to improve the service. He said that no more gramophones or tinned music would be broadcast, etc. Now the change has come, and the service is worse.

When the old company was playing gramophones, at least they were us & good records with music in them. Instead, the new A.B.C. not only is giving us again gramophones, which were supposed to be "taboo," but bad records with hideous noises instead of music are served.

The jazz mania of this new company is something phenomenal, and I wonder if the musical director of the 2BL was educated in the nigger conservatorium of Virginia or in the Arab town of Timbuctoo. When the 2BL is switched on in the morning, all that you can hear is jazz. Jazz in the morning, jazz at dinner time, and jazz at night. When there is no jazz, you can hear a silly story which interests nobody.

The 2FC is not much better, and, if anything, it's the worst station for transmission. If it was not for the existence of the "B" stations, the majority of listeners could throw their wireless sets overboard. At any rate, mine is another licence which will not be renewed if a better service is not coming.

The old company may have been poor and using a lot of gramophones, but their records were far better than all the rubbish served presently, including dinner and dance orchestras. There is enough musical talent in Australia to select a musical director and not a jazz maniac. A referendum between licence holders will show that I am right.—Yours, etc.
V. T. BOERO.

Hamilton.
* * *

[There is no 2BL Musical Director.—Ed.]

Time Wanted
Dear Sir,—I would be very pleased to know why 2FC does not now broadcast the time after every item during the evening programme. I am sure many country listeners like myself find it very inconvenient to have to wait so long for the time signals, and would welcome a return to the old system.—Yours, etc.,
H. S. CURTIS.

Llangothlin.

2FC's Transmission at Moss Vale

Dear Sir,—It seems that I must take up the pen again in answer to "George Ross" ("W.W.," 11/10/29). In my letter ("W.W.," 20/9/29) re 2FC transmission I referred to hum, whistle, distortion; studio noises due to traffic, etc., and am not particular if your readers really appreciate it or not, the fact remains that whilst other inter-State stations come in well, including New Zealand, Hobart, and Japs, 2FC is nothing short of horrible, on which statement I can secure dozens of signatures of set owners. George Ross is only one of a large number who have been interested in radio since its inception, and I wonder why so old a fan includes such drivel in his article as make of set, voltage used, etc. Very uninteresting, indeed, seeing the great variety of efficient receivers in use at the present time.

However, 2FC still continues to hum, whistle, and distort, so its evidently a case of "As it was in the beginning, and so forth."
—Yours, etc.,
J. L. LONG.

Moss Vale.
* * *

More News Less Jazz

Dear Sir,—I have been listening in for six years, and would like to say the present programme is the worst I have heard. Except a few items now and then, which you are compelled to listen to, or go to bed. I fully agree with Mr. Len Brown, and think the same, that if we want news we will have to go to New Zealand for it. The only reason I can see why the A.B.C. don't give us poor country listeners, who see a paper once a week, any news is that they will not spend one penny on a daily paper. I will promise the A.B.C. the following offer:—That if they promise to give us every bit of news and more church services, and cut out that rubbishy jazz, I will pay for their penny paper every day in the year.

If I don't get more news I won't get another licence.—Yours, etc.,
DISAPPOINTED.

* * *

Garden Island

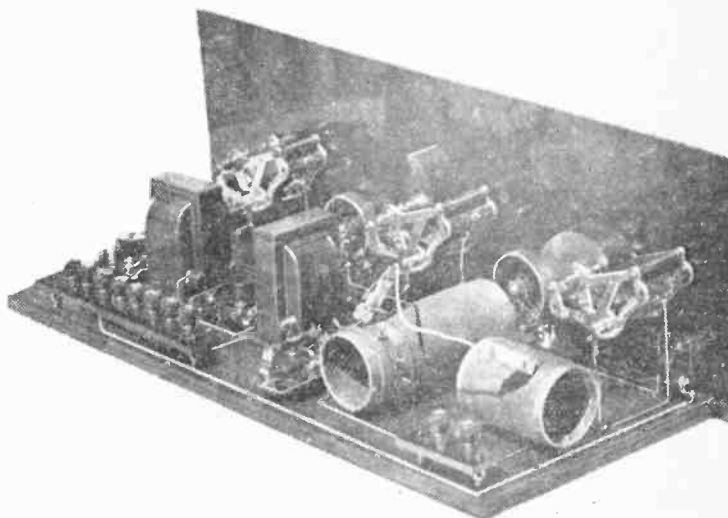
Dear Sir,—Trying to tune in 4QG for election returns last Saturday and in middle of broadcast, Blip—Blip—Blurr, and Garden Island comes in with a tiresome and quite useless call for tests. What a junk station. Can't keep off the broadcast band. Not even in these days of crystal control. Its raspy raspy, broad note ruins all reception on the Harbour-side.

Perhaps our esteemed and funny little Navy is suffering from an inferiority complex in these days of disarmament conferences and feels it must let the world know it exists.—Yours etc.,
J.S.K.

Cremorne.

YOU CANNOT AFFORD TO IGNORE THESE PROOFS

Build the
Famous
Renown
and You
Build
Satisfaction



Get the
Utmost in
Selectivity ---
Distance ---
Tone ---
Volume and
Dependability

ASK US FOR THE IMPROVED RENOWN CIRCUIT—BATTERY OR
ALL ELECTRIC

3LO AS GOOD AS 2BL

(Extract from Letter.)

Cremorne, N.S.W.,
24/8/'29.

Economic Radio Stores,

126A Pitt Street, Sydney.

Dear Sirs,—I wish to congratulate you on the "RENOwn
THREE," which is simple to build and simple to operate.

The results are, as you say, equal to a five-valve set.

3LO, Melbourne, can be tuned in to give as good volume
quite as 2BL, Sydney.

My aerial is not good, only 40ft., and very close to the
roof. As far as clarity is concerned, we cannot wish for any-
thing better.

Yours faithfully,

C.K.P.

WHAT DO YOU THINK OF THIS PERFORMANCE ?

Toongabbie, N.S.W.,
24/7/'29.

Economic Radio Stores,

Dear Sirs,—What do you think of this performance on
one of your "3 VALVE RENOWN SETS."

I have got the following stations, and have brought them
all in on our "OPERADIO SPEAKER."

N.S.W., 2FC, 2BL, 2GB, 2UE, 2KY, 2UW, 2AD, 2AR,
2ZN, 2JO, 2AY, 2JR. Victoria: 3LO, 3AR, 3BY, 3MI, 3FR,
3KX. Queensland: 4QG. New Zealand: 2YA. South Aus-
tralia: 5CL. Tasmania: 7ZL.

Yours truly,

C.G.W.

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WE WILL HELP YOU WITH PLEASURE
REGARDLESS OF WHERE YOU BUY

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THE ECONOMIC RADIO STORES

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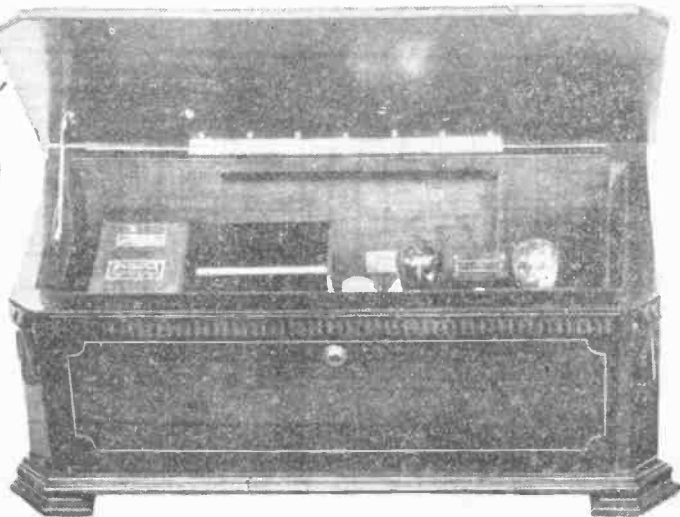
CORNER CHURCH &
MACQUARIE STS.,
PARRAMATTA.
PHONE, UW9601.

25 ROYAL ARCADE.
SYDNEY.
(near Palace Theatre)
PHONE, M6138.

A High Grade Electrical Amplifier

By
G. A.
THOMSON

The amplifier is housed in a handsome cabinet, which tones with the furnishings of the drawing-room.



FOR some twenty years I have been an enthusiastic student of the reproduction of music with the gramophone. I have been interested not in any way commercially, but simply as an amateur keen to possess apparatus which would provide me with the most nearly perfect reproduction of all manner of recorded music. All the machines I have owned were, in my opinion, the most desirable of those available at the time, but it was continually evident to me that with the possible exception of some types of voices they were providing at best only a passable imitation of the music from which the records were made.

The first electrical reproduction of electrically recorded music which I heard—that was in 1926—impressed me very greatly, and I immediately decided that I would embark on a study of the technicalities of the necessary apparatus with a view to simplifying the process of selecting for myself an amplifier which would fulfil my very severe demands on it. And so, during the last three years, I have followed the descriptions of reproducing apparatus in the technical magazines from overseas and studied closely the developments that have taken place. In addition, I have managed to hear most of the commercial electrical reproducers that have reached this country, and in many cases to make comparisons between them. Aside from this, I have been an ardent collector of apparatus with which to experiment. The interchanging of pick-ups, transformers, valves, and speakers during experimental work has enabled me to select that combination of components which, to my way of thinking, provide the very best performance. It is my present assembly that I plan to describe in this article.

At first glance it would appear that the amplifier is just a collection of any apparatus that happened to be available. This is not so, however. The more important components in it, such as transformers and valves, have been changed and compared a great many times. Almost every item in the amplifier and its associate apparatus is there for a more important reason than that it just happened to be readily available.

Though the amplifier is just as suited for radio reception as for gramophone work, it is almost exclusively used for the latter. In this case it is used with a Webster pick-up and a Magnavox speaker. Neither the pick-up nor the speaker is used quite in the

normal manner and the slight differences will be discussed later.

The amplifier unit comprises a high voltage, bias and filament voltage supply, and a three-valve amplifier, in which no freakish circuits are used. It has been realised that it is not the circuit that does the work, but the components in it and their suitability relative to each other. A standard type of circuit has therefore been employed, and the experimental work has been chiefly con-

WE are pleased to be able to present the details of a truly excellent amplifier—an amplifier which can provide a more brilliantly realistic performance than any other we have yet heard. There is nothing freakish about the apparatus and unnecessarily complicated circuit convolutions have been strictly avoided. The extraordinarily high standard of performance is simply the result of unusual care taken in the selection and combination of apparatus and in its adjustment. We have heard Mr. Thomson's amplifier on several occasions, and always we have been deeply impressed. Our own estimate of its worth and the views of others make us confident in recommending its duplication to any enthusiast seeking high-grade reproduction from gramophone records or from the output of a detector valve.

cerned with the combinations of apparatus.

The power supply transformer, to be seen at the left side of the baseboard, is one built by Emmco. It has a centre-tapped high voltage winding delivering 650 volts on each side of the centre-tap and several filament windings. These include a supply for 1.5, 2.5, and 7.5 volt amplifier valves, and also a supply for the 7.5 volt rectifier valves. The transformer was a special job, but I believe that it closely resembles a standard type of Emmco transformer now on the market. The 650 volt rating of the high voltage supply may sound unnecessarily high, but this would not appear to be so in practice. The actual plate voltage on the output amplifier valves is well over 500 volts, which is higher than the rating of the valves. Very clearly, however, it does the valves no harm to be operated at this voltage, providing care is taken with the bias voltage. It does permit

the undistorted output rating to be increased, and this, of course, is a decided advantage.

The filter unit (type 527A) is one made by General Radio. It is entirely self-contained, having just two input and two output leads. Aside from this, the only other filter apparatus is a one microfarad condenser connected across the bias resistor of the first amplifier. Critics could say that additional condensers are desirable in many other places on the circuit, but at least they could not make any complaint about the actual operation of the amplifier in regard to output hum. The hum from the set when it is running without a record on the machine is very much less than on any commercially-made electrical reproducer I have yet heard.

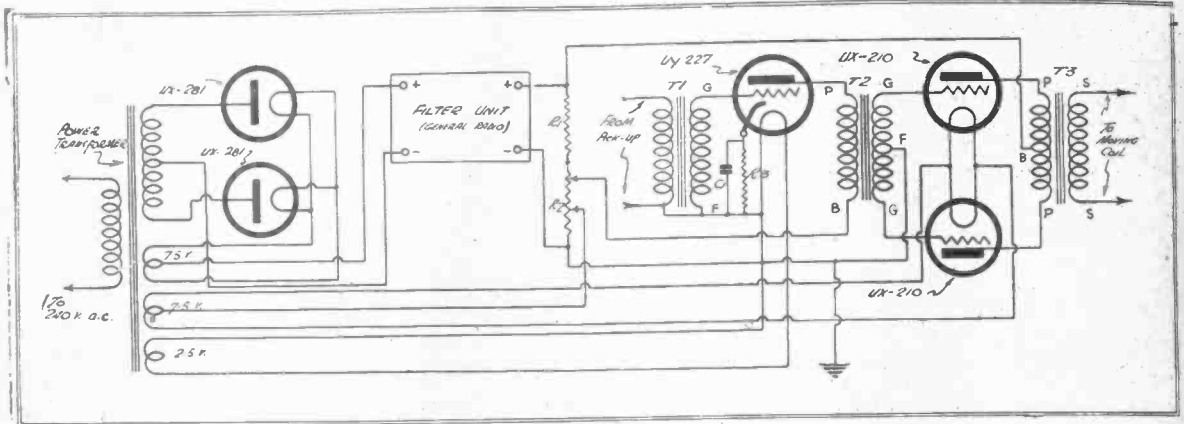
The rectifier system contains a pair of UX-281 valves. These are able to supply the demands of the amplifier with very little effort, even when UX-250 valves are used in the output stage.

Across the output of the filter unit are two General Radio voltage dividers connected in series. A section of one of these is used to give the bias voltage for the output valves, while a second tapping provides the plate voltage for the first amplifier. The bias for the first amplifier is obtained from a resistor connected between the cathode and the negative high voltage lead.

In the amplifier a transformer is used between the pick-up and the first valve. This is a Ferranti AF5. Two sockets are provided for this first amplifier valve in order that neither a UY-227 or a Philips E424 could be used at will. The grid and plate terminals of the two sockets are connected in parallel, while the filament terminals run to a suitable filament supply. The 227 is fed from the 2.5 volt winding, while the 424 is supplied from the 2.5 volt, and the 1.5 volt windings in series. Care is necessary to see that these two windings are not connected in opposition when they are put in series. This duplication of the first amplifier is not, of course, necessary, and is not shown on the diagram. The output of the first amplifier feeds into a Sangamo input push-pull transformer. The connections are quite standard and perfectly straightforward. The secondary of this transformer feeds the grids of the two push-pull output valves, which are UX-210's.

Anyone familiar with valve ratings will realise that the UX-210 normally has the same output at 425 volts as the UX-245 has at 250 volts. It may be wondered why the

AN AMPLIFIER DESIGNED FOR THE REPRODUCTION OF MUSIC



high voltages of this amplifier were considered necessary. In the first place, it was desired to be able to use the UX-250 valves in this amplifier for occasions when particularly terrific volume was necessary. For these valves, of course, the high voltages were essential. Then, it was considered that the UX-210 was actually a more useful valve than the UX-245 under some conditions. Though it only has the same normal output rating, it would seem clear that this rating is much more conservative than that of the UX-245. The 210 is a valve that was originally used for amateur transmission, and, as a matter of fact, is still used the world over

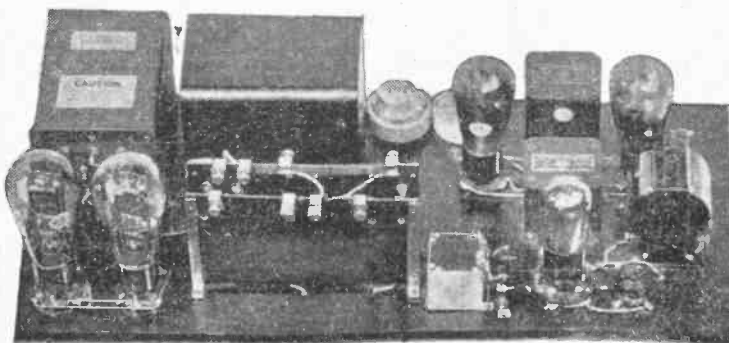
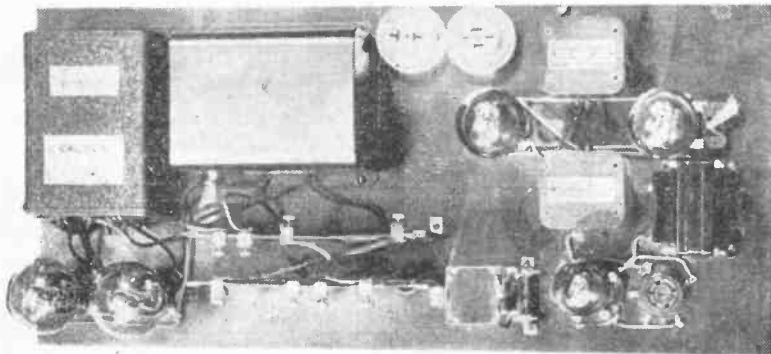
for that work. Its rating has always been considered particularly conservative, and, unlike most other valves, it has for years shown an ability to operate at twice its normal rating in transmitter circuits without any apparent influence on its life. The UX-245, though a very splendid valve, was designed especially for amplifier work, and, it would seem, is given a rating which is much more nearly that of its actual capabilities. In short, it would seem that the UX-210 can be operated with complete satisfaction at 500 or 550 volts to give an output of 6 or 7 watts, whereas the UX-245 would be prone to object to operation at the same

output. The 210 also has the advantage of a higher amplification factor, which makes it possible to obtain an output with two stages, which could only be duplicated with valves of lower amplification factors if a third stage was added.

The output transformer is probably the most difficult problem at the present time, when so little is known of the characteristics of moving coils and of output transformer secondaries. The one used is a Sangamo type, GX-210, designed for use between UX-210's and a moving coil speaker. From the very splendid manner in which this transformer operates it would seem that its secondary was designed for use with a moving-coil of the characteristics of that contained in the Magnavox.

Little need be said concerning the mounting of the apparatus. All of it is screwed to a five-ply baseboard fitted with rubber feet to keep it half an inch or so off the bottom of the cabinet in which it is housed. The wiring is all carried out with rubber covered flexible, and most of the leads run under the base. Two power plug sockets are provided. Into one of these the lighting mains are plugged, while the other serves to supply the transformer in the speaker, which feeds the field winding through the rectifier. The two sockets are connected in parallel to make this possible. On the front of the cabinet a pilot light is mounted. This is connected to the valve filament supply, and serves to show when the amplifier is switched on.

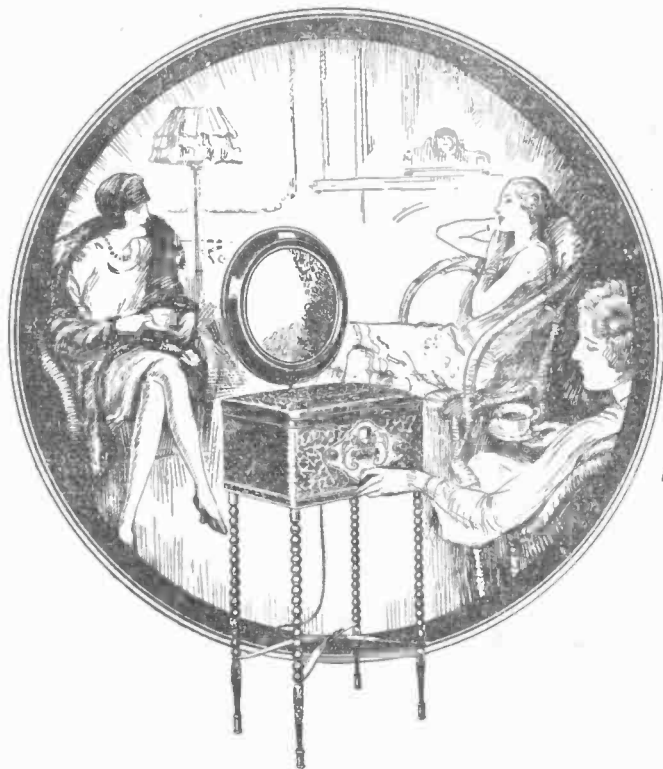
The pick-up, as I have said, is a Webster, which has a splendid frequency characteristic. It is used almost exclusively with fibre needles, despite the fact the makers do not recommend them. These needles greatly reduce the output of the pick-up, but, even so, they serve to run the output valves to more than ample capacity on the average record—thanks largely to the excellent output of the Webster. Fibre needles also possess the incalculable advantage of negligible record wear. The only change made in the pick-up unit was in the joint between the pick-up head and the tone arm. At this point there was a slight slackness, which resulted in a curious rattle on some fre-



Two views of the amplifier.

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Emeco power transformer, with windings for 650 volts on each side of centre-tap; also filament windings for 7.5 volts, 7.5 volts, 2.5 volts, and 1.5 volts. General Radio Filter Unit Type 527A. R1 two General Radio voltage dividers. R3 Pilot, 1200 ohm bias resistor. C1 one 1 mfd. Hydra condenser. Ferranti AF5 audio transformer. Sangamo type BX input push-pull transformer. Sangamo type GX210 push-pull output transformer. Four UX type Pilot valve sockets. One UY type Pilot valve socket. Two UX-281 rectifier valves. Two UX-510 amplifier valves. One UY-227 first amplifier valve. The complete set-up also includes a Webster pick-up and Magnavox speaker.

quencies. It was some time before the source of this rattle was tracked down to the tone-arm, but attention to this slackness in the joint eliminated the trouble at once.

In the connection of the speaker, the input transformer in the speaker itself was of course, disconnected in order that the Sangamo transformer could feed the moving-coil directly. This arrangement also eliminated the filter condenser used normally in the speaker to reduce the high frequency response and to avoid a species of valve distortion on high frequencies which would otherwise be found when the speaker was operated from a fairly low-powered amplifier. No filter of any kind was used in its place since I am certain that it is a disadvantage when an amplifier of sufficient power output is used. Its only effect then is to reduce the response to the high frequencies, which in turn destroys the brilliance of the reproduction and the characteristic timbre of many of the instruments.

Though I do not want to make any big claims for the equipment, I must say that it gives me a tremendous amount of satisfaction. I have not had the equipment necessary to measure its actual frequency characteristic, but it appears to me to pro-

Exciting Travel Talks from 3LO

THE programmes broadcast from 3LO every Sunday night are now listened to more widely than, perhaps, any other section of the broadcasting programmes. Every week hundreds of letters reach Bob McQueen and Stanley Porter, the directors of the two big orchestras engaged regularly in these programmes, from almost every part of Australia and New Zealand, as well as from distant Tonga and Fiji, expressing appreciation of the programmes.

DESCRIPTIONS of the Combined Public School Sports to be held at the Melbourne Cricket Ground will be broadcast by 3AR on Friday afternoon, October 25.

ADAPTED from the Grand Guignol Series, "Grensal Green," a dramatic play in one act, as played in London by Sybil Thorndike, will be produced by J. Beresford Fowler for broadcasting by 3LO on Saturday evening, October 26.

BESIDES the one-act dramatic play "Grensal Green," to be produced by J. Beresford Fowler, the Saturday night programme will include the Brunswick City Brass Band; J. Howard King, the well-known baritone; Molly Mackay, the popular young soprano; the National Broadcasting Orchestra; an atmospheric production, "Half an Hour in a Maori Pah!" and, as an interlude, a "special" programme will be presented at 8.45.

A PROGRAMME will be relayed from Bendigo and broadcast by 3AR on Tuesday evening, October 22.

vide not only a splendid high end and a magnificently robust low end, but a surprising freedom from peaks between the extremes.

ONE of the most romantic and thrilling talkers on the air from 3LO Melbourne is Mr. H. J. G. Esmonde, who has lived and travelled in many strange lands, acquiring during his many journeys the habits and languages of the people with whom he has mingled.

During his travels he has learned no fewer than 73 distinct languages and dialects. What a fund of knowledge he has with which to charm and thrill his listeners! Talks on the customs of the Kutchin-Indians in the far north Arctic Circle, where he was brought up by an Eskimo "medicine man" after his parents had been killed, and thrilling discourses on his travels in Northern Siberia, Manchuria, China, Tibet, Lhassa, India, Borneo, Java, the Aleutian Islands, between Alaska and Asia, Central America—including the Spanish Main, Peru, Brazil, Argentine, Patagonia, Darkest Africa, and other remote parts of the civilised and uncivilised world.

Withal Mr. Esmonde is quiet and extremely modest, and has a broadcasting style just as individual as, although distinct from, Captain Donald MacLean, who is so well known to listeners. Mr. Esmonde is programmed at 3LO for the following talks in the near future:—

Saturday, October 26, 7.45 p.m., "2000 Miles by Dog Team." Saturday, Nov. 2, 7.45 p.m.: "Rhodésia." Saturday, Nov. 9, 7.45 p.m.: "Nigeria." Saturday, Nov. 16, 7.45 p.m.: "Madagascar." Saturday, Nov. 23, 7.45 p.m.: "The Colored Republic."

To be followed by a series of four talks on "Mexico and The Spanish Main."

FIBROUS ROOTED BEGONIAS

By G. W. COOPER.

Who speaks from 23L every Saturday Morning at 10.10

READERS who wish to grow flowers for a messed effect in the garden, with a minimum of labour, during the growing season—late spring, summer, and autumn—should grow Fibrous Rooted Begonias, botanically known as "Begonia semperflorens." They have nice foliage, crowned with waxy-like flowers in profusion for eight months of the year. Severe frosts are fatal to them, so that in the colder parts of the State they require the warmer part of the garden to grow in, and to be planted with fresh young plants the following spring, when frosts are over. In the coastal districts and Sydney, where the frosts are light, they can be left in the ground all winter; and in spring lifted, divided, and replanted, or cut back and grown on again—it all depends on the locality where they are grown.

Where frosts are too severe in winter, the plants can be lifted before the first frost and placed in boxes of light sandy soil and leaf mould, on a verandah, facing north; given just sufficient water to keep them from shrivelling till planting time comes round again in spring, when they can be planted out in the garden for summer decoration.

In the warm parts of the State, cuttings three inches long will strike readily in sandy soil in spring and summer time. New plants are available in spring from the leading nurserymen each year. If seed is saved in summer and autumn this may be sown in

mustard box of sandy soil. Just sow the seed (which is very fine) on the surface, and lightly press the surface soil, to firm the seed; place a piece of glass over the box and shade from all sunshine and away from wind, until the seed germinates. Gradually give more light and air as the seedlings grow.

When fit to handle, plant them out in the garden and put a piece of twig on the north side to shade them from hot sun, removing this when they are established. Once they take a hold of the soil they revel in sunshine, though they will grow well in a position where they get half a day's sun only. They are suitable for window boxes as well, and if grown in pots make a wonderful show for very little trouble. Slugs and snails do not trouble them.

In the open garden, when grown in the same position year after year, the one-year-old plants can be divided in spring (just as growth commences). Lift the plants, and if possible bring fresh soil from another part of the garden that has not grown these begonias previously, and take out the old soil, and replace with the fresh soil where the begonias are to be grown and put the old soil where the fresh soil was taken from—a fair exchange, as it were. If some bone-dust is added, so much the better. As soon as the weather is warm enough, mulch the



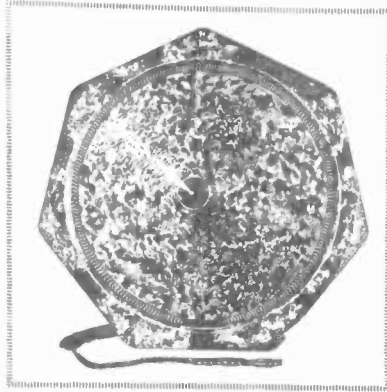
The photograph is of the water lily lake of the Melbourne Botanic Gardens in 1917. On the right is Mr. Cooper's father, then foreman of these gardens. At his feet is a massed border of fibrous-rooted begonias, grown in a position facing north. As the Sydney climate is warmer than the Melbourne climate, Mr. Cooper says, it suits begonias admirably, and he advises owners of cottage and villa gardens to grow the fibrous-rooted begonia, of which he speaks in the nearby article.

surface with animal manure. This is very essential in hot weather.

The best varieties are Begonia Gracilis—Bonfire: the flowers are lustrous—carmine, scarlet; the foliage, metallic brown. Plant nine inches apart.

Begonia Gracilis—Prima Donna—has handsome metallic brown foliage, covered with rose coloured flowers. Plant six inches apart. Being dwarf—six inches high—this variety should be planted on the edge of the bed or border, nearest the eye. Another dwarf variety, six inches high, is Begonia Semperflorens Mana Compacta. This has several shades of colour, from white to rose and red shades. Plant six inches apart.

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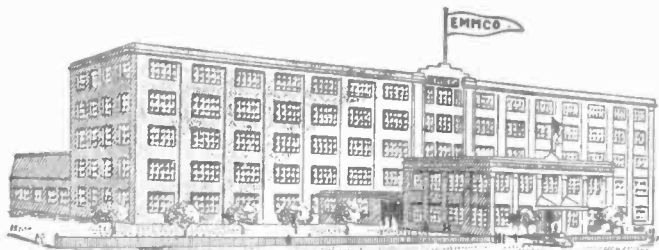
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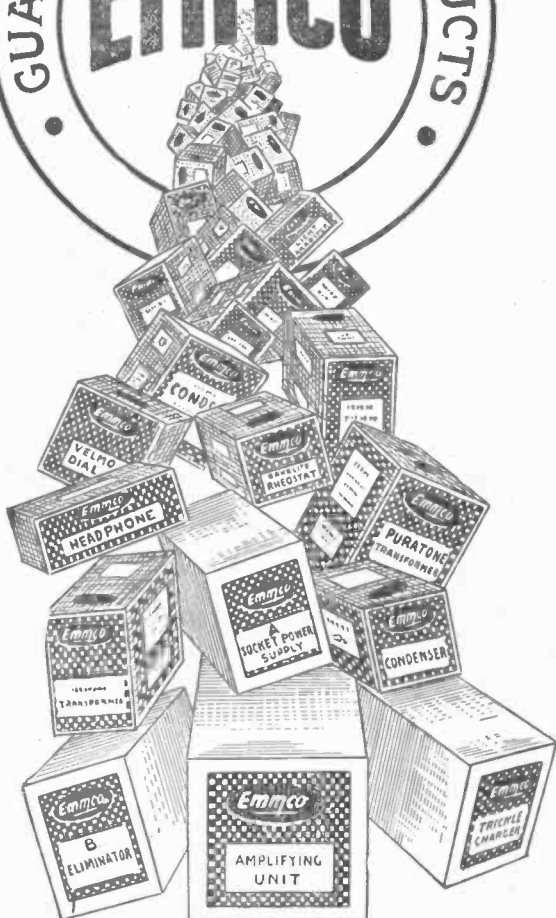
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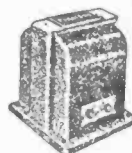
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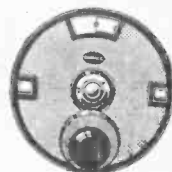
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of articles for the
A.O.P.C. course

THE first apparatus to be built for an amateur experimental station should be a receiving set. Fortunately, the short-wave receiver is not a complicated affair like the broadcast receiver. Even a one-valve short-wave receiver can receive signals over long distances.

The regeneration control is very important, since it is necessary to be able to control reaction very smoothly, otherwise reception of telephony will be well-nigh impossible, and the performance on telegraph signals poor.

Some of the methods of regeneration brought into use during the past few years are well worth consideration, because they allow us to adjust reaction without de-tuning the receiver. As short wave tuning is generally sharp, this is an important factor.

The use of a variable resistor, 25,000 to 50,000 ohms resistance, placed in the detector plate lead, gives the desirable features, but, unless a good resistor is used, regeneration adjustment may be noisy. A 1mf. (or higher) fixed condenser placed across the resistor will usually reduce this trouble.

Another method is to use a variable reaction coil. This coil is made variable with respect to the secondary. The closer the reaction coil to the secondary the greater will be the transfer of energy. In this method it is advisable to make the reaction coil of much smaller diameter than the secondary. In order to reduce the tuning effect of the regeneration control. The reaction (or tickler) coil should be mounted at the filament end of the secondary coil.

Sometimes a carbon pile rheostat, such as a Bradleyohm (0-100 ohms), is used as a regeneration control. This control is used in place of the filament rheostat, and the reaction coil is fixed in relation to the secondary.

LAY-OUT

Lay-out (which means the best placement of components, ready for wiring) is also very important. The parts should be placed on the baseboard in such a manner that all leads shall be as short as possible without cramping components. It is not always possible to adhere to diagrams, since some makes of apparatus have their terminals differently arranged, but the constructor should use his own common sense in such cases as these.

The coil should be placed close to its tuning condenser, and the grid terminal of the valve should be placed close to the coil and the fixed plates of the condenser, leaving enough room for the grid condenser and lead to be attached to the grid terminal of the valve socket. It is important, however, that the coil should be so placed that it is not too near any metal parts of large dimensions.

WIRING

Use fairly heavy gauge wire, as this has less resistance. Sixteen or eighteen gauge wire is excellent for the purpose, and it is very rigid. All wiring should be perfectly rigid, as signals are liable to "waver" when the wiring vibrates.

It is not so important that the audio wiring be of bus-bar, and flexible wire may be used here.

In all cases it is desirable to use soldering lugs. Solder all joints, and use little or no resin, as this may cause poor connection. Where the constructor decides against the use of soldering lugs, the end of the wire should be

twisted round the terminal to which it is to be fastened in a clockwise manner, as otherwise, when the holding screw is mounted, the wire will be screwed off.

Where metal bases, shields, etc., are used, leads that are taken through holes should be encased in spaghetti. If this is not done, the rubber or insulation round the wire is liable to become worn, and cause a short, since the metal is earthed, and sometimes connected to one side of the filament.

CHECKING WIRING

It is a mistake to test out a receiver without checking over wiring. The quickest way to do this is to connect up the "A" battery first, and see if the valves all light. If the valves are of a type whose filaments do not visibly glow, a voltmeter should be placed across the filament terminals of each valve socket in order to see that each valve is being supplied with the necessary filament voltage.

If everything is in order, the two audio valves (and the r.f. valves, if these are being used) should be removed, and the "B" and "C" voltages applied. There will only be one valve in the set, so that this can be tried in each socket. Naturally, a cheap valve, or one whose emission is practically useless, can be used for the test. If the valve continues to behave normally, then the other valves can be plugged in, and the aerial and earth attached.

If the receiver does not function properly place the aerial to the grid coil of the detector stage. If reception is now O.K., you will know that the trouble is in the r.f. stage. If reception is still "off," connect the 'phone terminals to the plate terminal of the first audio valve socket, and to B plus 90 volts. If reception is O.K., the trouble is in the last audio stage, but if reception is still poor, connect the 'phone terminals across the primary of the first audio transformer. If reception is O.K., then the trouble is in the first audio stage. If still no signals are heard, or the signals are poor, the trouble

is in the detector stage itself. In this way every stage of the receiver is tested.

It is a good idea to use a torch bulb in series with the B negative lead, as then any short or wrong connection that would ordinarily burn out the filaments of the valves will merely blow the torch bulb.

In order to test the B plus connections of the amplifier, the 'phones or speaker should be plugged in. A loud click should be heard each time this is done, and a similar or louder click should be heard when any of the B plus voltages are adjusted.

TUNING

The receiver should be made to oscillate feebly (not a whistle, but a hiss) by adjusting the regeneration control. Static noises and such will be heard very loudly (when they are present), whilst the set is in oscillation, because the receiver is working at maximum sensitivity point. If there is doubt as to whether the set is oscillating or not, the grid terminal of the detector valve can be touched with a wet finger. If the set is oscillating, it will either start to squeal when the finger is placed on or near the grid terminal, or a loud "plonk" will be heard when contact is made, and another when contact is broken. Another way is to place the wet finger on the aerial terminal. A click is heard when the finger touches the terminal, and another click when the finger is taken away (if the set is in oscillation).

If the set refuses to oscillate try increasing the detector plate voltage, and try another detector valve. A .001 fixed condenser placed across the plate and B plus terminals of the first audio transformer (or across the telephones if only one valve is being used) will usually assist greatly in obtaining regeneration.

If it is found that the set will oscillate only on certain dial settings it will be necessary to increase the distance between the aerial coil and the secondary, or place a fixed condenser in series with the aerial in order to remove these dead spots. A change in the number of tickler turns is sometimes effective.

HAND CAPACITY

If hand capacity is troublesome, it may be through reversing the connections to the variable condensers, or through leaving off the earth lead, or perhaps some connection is poor.

However, hand capacity is sometimes troublesome on a set that is otherwise perfect, and in such cases it is advisable to use a metal panel, from which the components should be insulated. The panel should be connected to the earth terminal.

The only trouble one encounters in using aluminium panels is that the panel soon gets a greasy appearance, and the slightest touch of one's finger is enough to mar the appearance. This can be overcome, however, by first stripping the aluminium in a strong solution of washing-soda, then giving the panel a coat of clear Duco.

NEXT WEEK

Reference is made often enough these days to the screen-grid valve. However, relatively few enthusiasts know exactly how it differs from the ordinary valve, and why it permits such high amplification. Next week's "Wireless Weekly" will contain an excellent story of the screen-grid valve in which the simple theory and the manner of getting best results will be described.

STROMBERG-CARLSON

Wish to announce the appointment as distributors of Stromberg-Carlson parts to the radio trade of New South Wales

of

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This new line of parts will be of exceptionally high class, although the prices will be low enough to make these parts available to all. The line will include Audio Frequency Transformers, Gang Condensers, Matched Tuning Coils, Power Packs, etc., and new designs in matched units mounted on chassis to make assembling and wiring an easy matter.

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Straight Talking About the Screen- grid Valve

A GREAT deal of talking has been done during the last year or so about the wonders of the screen-grid valve and the enormous advances in reception which it should be able to provide. As a result, the not-very-technical enthusiast has come to think that the new valve holds the solution to all his reception problems—that by its use he will be able to accomplish feats of long-distance receiving that were previously inconceivable.

From a technical standpoint the screen-grid valve does represent a splendid advance and does allow amplification above that previously possible. At the same time its use introduces problems which are deserving of careful study. So much has been printed in the world's radio magazines concerning the marvels of the new valve that it is in the nature of a relief to come across some straight talking, in which the difficulties introduced by the valve are given consideration. We are reprinting some comment from "Radio Retailing" on this particular subject. Speaking of the screen-grid receiver, H. W. Bukat, in that magazine, says:—

Do We Expect Too Much?

"If the receiver is actually more sensitive than his old set, he is satisfied, but if it is not up to expectation the service man appears upon the scene. The receiver is not performing in normal manner, is the complaint. Now what is the criterion for normal manner? What is the basis to show normal or subnormal operation? The public as a whole expects too much from a radio receiver; never attempts to realise that the average sensitivity of a radio receiver is definitely limited by one factor which he himself is producing, man-made static. The extensive exploitation of the screen-grid tube, in commercial and experimental radio receivers has led many to believe that phenomenal and astounding results are to be expected with screen-grid receivers. Now we are not gainsaying the fact that additional amplification is available with the screen-grid tube, but the paramount item is satisfaction on the part of the customer. It is dangerous to herald astonishing results, if only because receiving conditions differ in localities.

Economy Should Be Slogan

"The use of the screen-grid tube permits fewer tubes to accomplish a certain sensitivity level. The use of fewer tubes means more economical operation, and the slogan should be altered to read accordingly. Many manufacturers are producing radio receivers with the screen-grid tube which employ the same number of tubes as were used in the previous year's model. Marvellous sensitivity is claimed for the receiver. It is true that the receiver is more sensitive than the previous model, but the service man will be called in to explain why 5000 and 6000 mile reception is not being accomplished.

"It is only human when we possess a sensitive receiver to adjust it to maximum sensitivity, just to see what it will do. It performs best by permitting reception of every form of electrical disturbance present in the neighborhood, and even in adjacent neighborhoods. The result is a call for the service man to eliminate 'clicks and sputtering sounds which I never heard with my other receiver. The tubes must be defective, or this receiver is not performing in normal

Curves Ahead

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

manner"—ad infinitum. Complaints relative to electrical disturbances will be increased because of the use of screen-grid tubes and greater amplification."

YET ANOTHER DEVELOPMENT.

[N a recent issue we discussed the problems that had arisen in modern highly sensi-



100 KILOWATTS OUTPUT! High Power!

Some idea of the size of the 100 k.w. water-cooled valves, frequently seen in American broadcasting stations, can be gained from this illustration. This particular valve is one of the two output amplifiers in the new transmitter at WTIC in Hartford, Connecticut. The normal output of the station is 50 k.w., and 100 per cent. modulation of this power is possible on heavy passages. This represents at least one hundred times the effective speech output of the average Australian station.

tive receivers from the modulating of distant carriers by near-by stations. We mentioned the trend of receiver design in which a highly selective input circuit was the feature, provided to avoid any such trouble. Already, in the American receivers, a very selective input is being widely adopted. In at least one receiver the selectivity of the whole set is dependent entirely upon a series of tuned circuits ahead of the first radio frequency amplifier. Five r.f. stages follow this selector unit, all of them coupled by "untuned" transformers. In describing this unique but highly satisfactory receiver "Radio" says:—

"All tuning is accomplished in the selector unit which precedes the first tube. This unit consists of four tuned circuits and is controlled by a four-gang condenser and an antenna trimmer. The four circuits are conductively coupled by a small section of the third winding, operating on the theory of the band pass selector. Trimmers are located on each section of the condenser gang and each circuit is properly balanced before leaving the factory.

Untuned Amplifier

"The r.f. amplifier unit is untuned, even to the detector. The full responsibility for selectivity depends upon the selector allowing the amplifier to be operated so that maximum gain may be obtained without affecting the frequency of the selected signal. The idea is not new, but is very interesting in the way it has been worked out.

"All r.f. stages are coupled by r.f. chokes, as shown in the circuit diagram. The "feeder" choke in the plate circuit of the first tube is wound single with a reversal of direction in the middle, and a resistor is included in series with it in order to equalise the reactance of the parallel winding. The latter is the primary of another choke, which is wound like a radio frequency transformer, the primary and secondary being coupled as tightly as two coils can be coupled. In fact, just as the diagram indicates, each turn of the primary and secondary lies side by side. This system, of course, is designed for maximum gain, and can only be employed when selectivity in the r.f. amplifier is of no consequence.

Counting of Stages

"The coupling between the second and third stages is accomplished by another parallel pair of chokes, although in this case the windings have not been reversed in the middle. The following two stages are similar to the first, except that no "feeder" circuit has been supplied the d.c. flowing direct through the primary. The coupling between the last r.f. stage and the detector, is accomplished by means of a pair of parallel chokes in which four reversals are made, plus an added choke, also reversed, in series with the secondary.

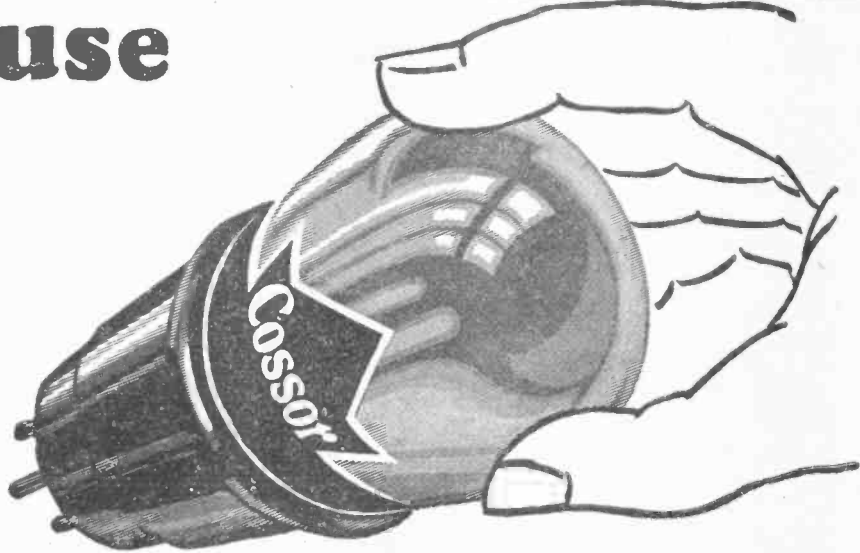
"Plate detection is used, the grid being biased by means of a 20,000-ohm resistor in the power supply."

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FOR COSSOR MELODY MAKER.



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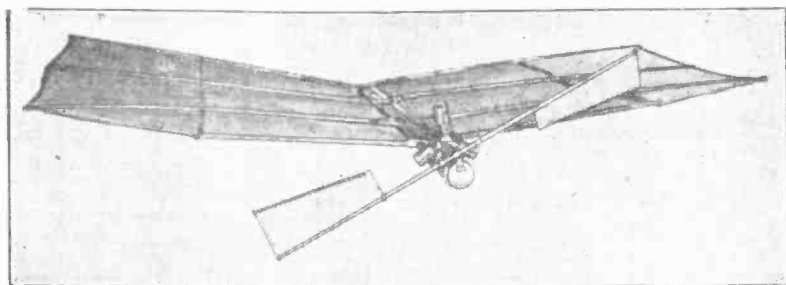
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Lawrence Hargrave

A pioneer in model aircraft building.

By NORMAN LYONS



Compressed air, bow screw machine driven by a three-cylinder stationary engine—designed and now by Hargrave about 1886.

THE following is intended to convey a brief and accurate account of Hargrave's experiments from their inception in 1884 till 1909, when his last published work on aviation appeared. The whole of the information is taken from the proceedings of the Royal Society of New South Wales, to which Hargrave communicated his discoveries, freely and openly, as soon as they were made.

Had he patented the whole of his inventions, there is little doubt that he would have died a wealthy man. This he ever refused to do, in spite of the continued exhortations of his friends. He was possessed of sufficient means to keep him in such comfort as he desired, and the love of his work was more to him and brought him greater real enjoyment than all the wealth in the world. Hargrave's attitude of mind is expressed in a statement he made in 1890. "The writer thinks the act of invention to be a sort of inspiration, and a pleasure that the individual does not seek to be rewarded for undergoing; it is followed by greedy sensation or wish to obtain money from others without giving an equivalent. Inventors will always invent; they cannot help it, and you cannot stop them; and a patentee is nothing but a legal robber."

T.C. Roughley, of the Technological Museum, writing in the "Technical Gazette," vol. 13, part 2, 1923, says:—"The majority of Australians have probably never heard of Lawrence Hargrave. Of those who have, many possess but a vague idea of the man and his work. There are some who will say that he invented the aeroplane; others, that he was a crank obsessed with the idea that he had solved the problem of flight; whilst there are others, again, who endeavor to discount his work entirely. Few, indeed, are possessed of an accurate knowledge of Hargrave's real position in the history of aviation."

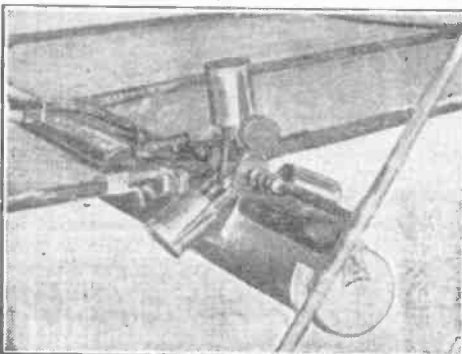
It may be stated at once that Hargrave did not invent the aeroplane; he was not a crank, but he probably did more to bring about the accomplishment of dynamic flight than any other single individual. He did the pioneer work. Groping at first in absolute darkness, he, by indomitable will and perseverance, gradually saw the light. Hargrave having let in the light, others were enabled to see.

Like most great discoveries, the evolution of the aeroplane was a gradual one. No single individual can be said to have invented

Society, he experimented with nearly fifty models with such success that he stated, "Experimenting with nearly fifty models has resulted in these that I hope to show you supporting themselves and moving horizontally in such a way that if the motion is not that used by birds, it is, at all events, very like it." Clockwork, which had previously provided the motive power, was now discarded in favor of rubber bands, which, in proportion to their weight, were found to transmit more power.

In this paper also Hargrave exhibited diagrams demonstrating how air, compressed into spherical or spindle-shaped steel vessels, could be made to drive a direct-acting single-cylinder oscillating engine for the purpose of flapping the wings. He, however, persevered with rubber bands for some considerable time afterwards.

At this time Hargrave was experimenting with rubber band driven machines. A model exhibited in December, 1885, had a wing-spread of 7 feet 2 inches; the length of the body and head was 6 feet 1 1/2 inches; the total weight was 1.47lb., and it had an area of 840 square inches per lb. weight. The strut formed the backbone of the model; it was about 1 1/2 inches square, made of clear pine, and was hollowed out to about the thickness of cardboard. It tapered slightly towards the tail. The twenty-four elastic bands weighed 5 ounces, and each was stretched with a force of 12.6lb. to 30 1/2 inches.



Enlarged view of the model illustrated, showing details of three-cylinder engine.

It. The Wright Brothers in America were the first to fly, but the machine in which they flew embodied the ideas of many workers before them. It was the work of such men as Hargrave, Lilienthal, Pilcher, Chanute, and others which made this flight possible.

Between August, 1884, and June, 1885, when Hargrave's second paper, entitled "Notes on Flying Machines," was read before the Royal

The distance this machine flew was 120 feet; it was stopped by a fence, on the top of which it caught, 8 feet below the starting point; the trajectory was slightly ascending at first, but very little.

The years 1888 and 1889 saw more marked improvements in Hargrave's models than during any period hitherto. Particular attention was paid to the motive power. In this connection Hargrave states:—"Great efforts have been made to get a reliable motor; a single-cylinder vertical engine absorbed much time and labor, but want of skill in construction involved such an amount of unnecessary weight that if it is ever completed it will nearly all have to be re-made."

Next, a three-cylinder trunk engine was made to be driven by compressed air. This was found to work very smoothly, and carried 120lb. of air pressure. It combined lightness with accessibility, and simplicity of construction and adjustment in an eminent degree. The weight was but 19oz. This engine was made in about 120 hours at a cost for material of 12s.

Having successfully constructed this engine, Hargrave at once set about improving on it. The result was the discovery of the principle of the rotary engine. This was one of the greatest inventions of Hargrave's career, and in itself was sufficient to have stamped him as an engineer of exceptional resource and ingenuity. To quote Hargrave's own words, "The idea was conceived that a three-cylinder screw engine could be made by turning the boss of the propeller into an engine, thus allowing the cylinders to revolve on the crank-shaft, the shaft and crank-pin being stationary, and the thrust coming direct on

JOIN THE M.A.C.A.

Aeroplane model building and flying is the best way to become air-minded. "Wireless Weekly" has arranged with the Model Aeroplane Club of Australia to enrol boys with below and send it to the M.A.C.A. c/o "Wireless Weekly," Phillip Street, Sydney. Send the coupon in will be forwarded for 1/- post free.

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Readers who are interested in the series of Model Aeroplane articles which have been appearing in these pages in conjunction with the sessions conducted by Mr. Norman Lyons are invited to enrol as members of the above club.

the valve face. Of course, the idea was put into execution with all speed." The resulting engine weighed 11b., and was found to work so satisfactorily that further experiments were conducted with it. These resulted in the production of an engine weighing only 7½oz., with revolutions at the rate of 456 per minute, the receiver pressure falling from 150lb. to about 120lb. The cylinders were .88 inches diameter, the stroke was 1.3 inches, and the valve cut off at .75 of the stroke. The screw blades were set at an angle of 20 degrees, the diameter of the screw was 3/16 inches, and the area of each blade was 32.7 square inches.

This engine is illustrated, which is reproduced from the photograph taken of Hargrave's original model in 1889. It is worthy of note that 35 years later engines were constructed on this principle, probably the best known being the celebrated French "Gnome." Yet how many people are aware that this was invented in Sydney by Lawrence Hargrave?

It is apparent that at this time there were many who were doubtful whether any practical result could accrue from Hargrave's experiments. To such sceptics Hargrave addressed himself as follows:—"It may be said that it is a waste of time to make machines of such small capabilities, and that no practical good can come of them. But we must not try too hard at first; we must remember that all our inventions are but mere developments of crude ideas; that a commercially successful result in a practically unexplored field cannot possibly be got without an enormous amount of unremunerative work. It is the piled-up and recorded experience of many busy brains that produces the luxurious travelling conveniences of to-day, that in no way astonish us, and there is no reason for supposing that we shall always be content to keep on the agitated surface of the sea and air, when it is possible to travel in a superior or inferior plane, unimpeded by frictional disturbances."

"It does not follow that because the machines described in these pages are of small weight and large area, the insignificant performances of such larger ones of similar proportions are to be scouted. For instance, 400lb. weight of tin tubing, silk and steel wire would serve to carry one man 500 yards at 17 miles per hour; and such a result, though of no commercial utility, would mark an epoch in the art at least as hopeful as the earliest attempts at marine steam propulsion."

(Next week you will learn how to make a compressed air engine.)

THE MONARCH TOGGLE SWITCH.

Here is an excellent little switch that would be a very desirable addition to any receiver. The switch is a well finished and highly compact unit rated at 3 amperes and 125 volts. Provision is made for single hole mounting and a small indicator plate marked with "on" and "off" is provided to be clamped under the mounting nut. The internals of the switch itself are enclosed in a miniature bakelite case through which the two connecting lugs project. It is one of the neatest switches we have seen.

THE Pioneer Amateur Film Producers (Australia), who are preparing to film "Greasepaint," a part-talkie, are calling radio to their aid for their talkie sequences. This club is wholly amateur, no person receiving payment, and is the up-to-date style of amateur theatricals, Mr. J. W. Heming, "Cotemond," Thomas Street, Strathfield, would be pleased to hear from any radio fan interested in the club.



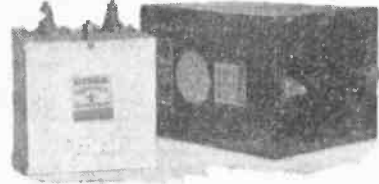
The late Mr. H. J. Hargrove, of Manufacturers' Products, Pty., Ltd.

New Apparatus Tested & Approved



Hydra Condensers

IN broadcast stations and amateur experimental transmitters there is a very definite need for high voltage filter condensers—a much greater need than is generally realised. For this reason, a welcome addition to the condenser field is the line of Hydra high voltage condensers especially built for transmitter work. We have had the opportunity of testing some of these condensers on transmitter plate supplies as high as 3000 volts, and it is apparent at once that unlike many high voltage condensers they are conservatively and sanely rated. Of the several types available two are illustrated. The large black unit has a capacity of 4 microfarads and is rated at 4000 volts



d.c. The smaller unit has the same capacity but a 2000 volt d.c. rating. Both of them are splendidly built and well finished. The larger of the two has a container of some composition material, the terminals being in the form of lugs projecting through an insulating end piece on the container. At the opposite end two mounting bolts are provided. The smaller unit has a metal container, the terminal rods entering it through heavy hard rubber bushings. A terminal is also provided to facilitate the grounding of the metal box.

The Monarch Type 100 Transformer.

We have had the opportunity of examining the Type 100 audio transformer—a handsome unit fitted in a pressed metal case finished in Duco. The usual terminals with insulating bushings are provided and in addition "ground" terminals connecting with the case. The transformer is quite a largely proportioned one with a large core and windings. Not having a curve of its frequency characteristics nor the equipment necessary to plot one, we are unable to say anything definite about its performance.

Pollock Radio Components

MESSRS. FOX AND MACGILLYCUDDY.

59 York Street, advise they have been made sole wholesale distributors for Pollock coil kits and R.F. chokes. The line comprises a full range of Reinarts tuners for 1, 2, and 3 valve sets. Reinarts tuners, plug-in type, wave-trap coils, space wound, inductively coupled, and direct coupled, rotor coil units, with erinold spindle, spider 3-coil couplers. For 4-valve sets, Browning-Drake type coil kits, and Marco 4, all types. For 5-valve sets, "Polloidyne 5" coil kits of three units. R.F. chokes of substantial impedance, low interturn capacity, and small ohmic resistance. Slot wound type, with pressed Bakelite top.

All Pollock coil kits and R.F. chokes are provided with circuit diagrams and explanatory directions, and are wound with blue, red, or green double silk covered wire on highly glossed celluloid formers, provided with base mounting strips. The coils are specially treated to withstand climatic changes without loss in efficiency and sensitivity.

Messrs. Fox and Macgillycuddy are also distributors for Magnavox speakers and units.

REVIEWING THE KING NEUTRODYNE MODEL J

WE have had the opportunity of making a careful examination and test of the King Model J receiver, supplied to us by Messrs. David Jones, Ltd. We find it to be quite an outstanding receiver on several counts.

Essentially, the receiver is a self-contained a.c. operated seven-valve set, with an eighth valve serving as rectifier in the power supply unit. Three stages of radio frequency amplification are used, directly heated a.c. valves doing service. The input circuit to the first r.f. valve is tuned by one of the four ganged condensers, and compensation for the detuning of the aerial and its coupling coil is obtained by a trimmer control. The detector is an indirectly heated valve, but the first audio valve and the two push-pull output valves are all directly heated.

MECHANICAL AND ELECTRICAL DESIGN.

The entire apparatus is assembled on a pressed metal chassis. The left-hand portion is occupied by the radio frequency amplifier and detector, the audio amplifier and power supply equipment extending across the right-hand section of the chassis. A single drum dial drives the four ganged condensers, which are arranged in compartments of the gang trough. Throughout this unit the construction is as solid and substantial as we like to see it. Heavy condenser plates and wide plate separation make it almost impossible for the gang to get out of adjustment under normal conditions.

The audio section of the receiver comprises a directly heated first stage, feeding a pair of UX-171's in push-pull. The undistorted output rating of the last stage is, therefore, of the order of about two watts.

Provision is made in the compact power supply unit for operation from 200, 220, 240, or 250 volts, by the incorporation of a well accessible and clearly marked multi-point switch and knob. Terminals are provided for the feeding of a



d.c. field type moving-coil speaker—a feature that is well worth while.

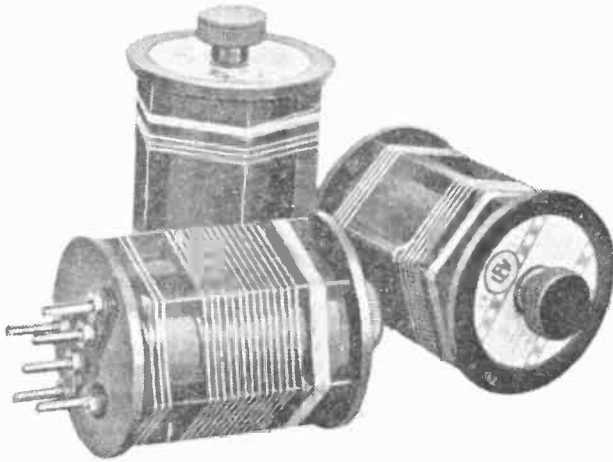
EXTERIOR APPEARANCE.

Being contained in a "baked" finish metal can, the receiver has a similar appearance to dozens of other outfits on the market at the moment. Its chief distinction is a pleasing escutcheon on which the three controls are effectively grouped. The surprising compactness of the receiver, together with its performing abilities, make one reflect on the sort of massive and disjointed equipment that an old-time eight-valve receiver used to constitute. One cannot help being impressed with the enormous advance that full a.c. operation has made possible.

OPERATION.

We must say that this King Model J has greater radio frequency gain than any receiver we have ever handled in which the same number of three element radio frequency valves were used. Very clearly there is some sound design behind this section of the set. Then we must add that for a receiver with only one indirectly heated valve, it has less output hum than we have ever run across before. We cannot be quite as enthusiastic over the audio frequency characteristics, however.

For the listener who desires very splendid selectivity, extraordinary sensitivity, and quiet operation, the King Model J, we are convinced, should certainly give him excellent service.



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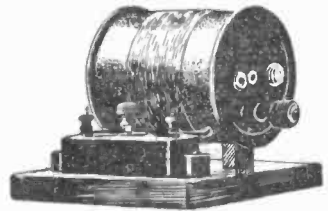
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Local Programmes, Friday, October 25

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 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: Price Dunlavy, at the Grand Organ.
11.0: Household Helps—Cooking, by Miss Ruth Furst.
11.10: Cables (copyright), "Sun"—"Herald" and A.P.A. news service.
11.15: Morning devotion.
11.30: Austradio musical reproduction.
11.53: British official wireless press.
12.0: "Big Ben"; Stock Exchange and metal quotations.
12.5: Francis Jackson—"William Charles Wentworth."
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-hour music.
2.0: Stock Exchange, second call.
2.2: A glance at the afternoon "Sun" and "News."
2.7: Popular Education—Captain L. Roberts will speak on "Little Known Basutoland."
2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.
2.30: The 2FC Instrumental Trio.
2.42: Florence Yates, contralto—
(a) "You'll Get Heaps o' Licken's" (Coningsby Clark).
(b) "O, Western Wind" (Brahe).
(c) "Good Morning, Brother Sunshine" (Lehmann).
2.49: Leila Waddell, violinist—
(a) "Les Cherubins" (Couperin).
(b) "Slumber Song" (Wood).
2.56: The 2FC Instrumental Trio.
3.8: George McNelly, tenor—
(a) "I Seek For Thee in Every Flower" (Ganz).
(b) "Curtain Falls" (Hardelot).
(c) "Duna" (McGill).
3.15: The 2FC Instrumental Trio.
3.22: Leila Waddell, violinist—
(a) "Scherzo" (Dittersdorf-Kreisler).
(b) "Berceuse" (Aulin).
3.30: The 2FC Instrumental Trio.
3.40: Florence Yates, contralto—
(a) "Annie Laurie" (arr. Lehmann).
(b) "Homing" (Del Riego).
3.47: The 2FC Instrumental Trio.
3.54: George McNelly, tenor—
(a) "Song of Sleep" (Somerset).
(b) "Look Down, Dear Eyes" (Fisher).
(c) "Sylvia" (Speaks).
4.0: "Redgum" will speak on "Gardening."
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: Children's "Goodnight" stories, told by the "Hello Man," assisted by the "Farmyard Five."
6.45: Dinner-hour 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.
To-night W. A. Oldfield continues his series of talks, "My Impressions of English Cricket While Abroad," at 9 o'clock. In ad-

dition there is an organ recital—an unusual musical combination, mellow piano and violin, and at 9.15 we cross to 3LO, Melbourne, for the relay. Through 2BL service, well-known songs, popular selections by the National Broadcasting Orchestra, and an interesting pianoforte recital by Lily Price, with foreword by C. N. Baeyertz. At 9.15 Wallace Nelson continues his series of talks, "Humor of Parliament." His subject to-night is, "How I Got Into Parliament—And Out of It."

8.0: From the Aeolian Hall—Organ recital arranged by G. Vern Barnett.
8.15: From the Studio—Frank Botham, baritone—

(a) "Figaro's Song" (Rossini), by request.
(b) "Tears, Idle Tears" (Sullivan).

8.22: From the Aeolian Hall—Organ recital, arranged by G. Vern Barnett.

8.34: From the Studio—Anne Henderson and Arthur Wendling, melo accordeon and violin—

(a) "That's What Puts the Sweet in Home, Sweet Home" (Lowry).
(b) "My Song of the Nile" (Akst).

(c) "Pals Together" (Hoffman).

8.41: Frank Botham, baritone—
(a) "Friend" (Davies).
(b) "The Roast Beef of Old England" (Leveridge).

8.48: Anne Henderson and Arthur Wendling, melo accordeon and violin—

(a) "Mean to Me" (Tuk).
(b) "Mighty Like a Rose" (Niven).

(c) "Please Let Me Dream in Your Arms" (Lombardo).

8.56: The Countryman's weather session—
(a) New South Wales forecasts.
(b) Inter-State weather synopsis.

Yachtsman's and Fisherman's forecast.

8.58: W. A. Oldfield in "My Impressions of English Cricket While Abroad."

9.15: Relay from 3LO, Melbourne.

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

10.15: From the Studio—Announcements; late official weather forecast.

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

10.30: Close. National Anthem.

2BL

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

OPENING SESSION—8.15 to 11 a.m.
8.15: G.P.O. Chimes and Announcements.
8.16: Music for Every Mood.
8.40: Meteorological Data for the Country.
8.45: Mails and Shipping Information.
8.50: Memory Melodies.
9.0: This Morning's Story.
9.30: A Musical Interlude.
9.40: British official wireless press.
9.45: New Music.
10.5: News from the "Sydney Morning Herald."
10.10: Austradio Musical Reproduction.
10.40: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
11.0: G.P.O. Chimes.
Close down.

MIDDAY SESSION—12 noon to 2.30 p.m.
12.0: G.P.O. Chimes.
Announcements.
12.2: The Lunch-hour Music.
1.0: Afternoon News from the "Sun" and "News."
1.5: Studio Music.
1.15: Women's Interest Talk. Mrs. Meredith-Atkinson, "Six Weeks on a Liner."
1.30: Austradio Musical Reproduction.
2.0: J. Knight Barnett at the Wurlitzer.
2.12: Studio Music.

AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.
2.30: Major Sanford-Morgan will talk on "Urmi-in-Persia."
2.45: Talk by Claire Byrne.
3.0: From the Ballroom of the Oriental. Sydney Simpson's Syncopaters in dance music.

3.12: From the Studio. Basil Rye (baritone)—

(a) "The Barber of Turne" (Russell).
(b) "The Dawn of a Greater Day" (Ivey).

3.19: Modern Music.

3.22: From the Ballroom of the Oriental. Sydney Simpson's Syncopaters in Dance Music.

3.32: Sim Solomons (violinist)—

(a) "Caprice, No. 13" (Paganini).
(b) "Polichinelle Serenade" (Kreisler).

3.39: Songs of To-day.

3.42: From the Ballroom of the Oriental. Sydney Simpson's Syncopaters in Dance Music.

3.52: Margaret Hunt (soprano)—

(a) "Carmena" (Lane Wilson).
(b) "When the Yellow Kowhai Blooms" (A Maori Love Song), (James).

4.0: From the Ballroom of the Oriental. Sydney Simpson's Syncopaters in Dance Music.

4.12: Basil Rye (baritone)—

(a) "The Deathless Army" (Trotter).
(b) "Cider" (Mullivar).

4.19: Sim Solomons (violinist)—

(a) "Gipsy Airs" (Sarasate).
(b) "Gavotte" (Gossec).

4.26: Margaret Hunt (soprano)—

(a) "Ogni Sabato Avrette il Lume Acceso" (Old Italian Song), (Gordigian).
(b) "A Night Idyl" (Raymond).

(c) "Marie Antoinette" (A.L.).

4.33: From the Ballroom of the Oriental. Sydney Simpson's Syncopaters in Dance Music.

4.45: From the Studio: The Trade Hour. Demonstration music.

5.45: Weather information. Close down.

THE DINNER HOUR—6.15 to 7.55 p.m.

6.15: Dinner Music.

6.45: The Younger Set Session, Boy Scouts, conducted by Mr. Norman Lyons.

7.5: Claude Corbett will give a General Sporting Talk.

7.20: The Country Man's Market Session. Wool, Wheat, Stock, Farm Produce, Fruit and Vegetable Markets.

7.30: Austradio Musical Reproduction.

7.55: What's on the air to-night?

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

Our programme to-night offers song groups and well-known orchestral items, a pianoforte recital of unusual interest, with foreword by C. N. Baeyertz, and at 9.15 Wallace Nelson continuing his series, "Humor of Parliament," will relate, "How I got into Parliament and out of it," to the amusement of his many listeners. Through 2FC Service there is organ music, unusual novel instrumental numbers, "My Impressions on English Cricket While Abroad," by W. A. Oldfield, and the relay from 3LO, Melbourne, commences at 9.15.

8.0: Alfred Wilmore and Camille Alder (vocal duets)—

(a) "Oh, that We Two were Maying" (Smith).

(b) "A Night in Venice" (Lucantoni).

8.10: Lily Price, pianoforte recital, with foreword by C. N. Baeyertz—

(a) "Funeral March," from Pianoforte Sonata (Chopin).

(b) "Toccata" (Paradies).

8.22: Clifford Lathleen (Basso)—

Selected. With Orchestral Accompaniment.

8.29: Dulcie Blair (violinist)—

(a) "Orientale" (Cui).
(b) "Bolero" (Bohm).

8.36: Margaret James (soprano)—

(a) "Love's Echo" (Newton).
(b) "Break o' Day" (Wilfred Sanderson).
(With Orchestral Accompaniment).

8.48: Alfred Wilmore and Camille Alder (vocal duets)—

(a) "Dear Love of Mine" (Goring Thomas).

(b) "O, Lovely Night" (Landon Ronald).

9.2: Lily Price, pianoforte recital, with foreword by C. N. Baeyertz—

(a) "Little Shepherd" (Debussy).
(b) "Waltz in A Flat" (Brahms).

(c) "Waltz in B Flat" (Brahms).

(d) "Impromptu in F Sharp Major" (Chopin).

9.14: Wallace Nelson continues his series of talks, "Humor of Parliament," and his subject to-night is, "How I got into Parliament and out of it."
 9.29: Weather Forecast for the Man on the Land.
 9.31: The National Broadcasting Orchestra.
 9.43: Clifford Lathleen (basso)—
 (a) "Serenade" (Mozart).
 (b) "Fair House of Joy" (Quilter).
 (c) "Rolling Down to Rio" (German).
 9.50: Dulcie Blair (violinist)—
 (a) "Romance" (Wieniawski).
 (b) "Serenade" (Drdia).
 9.57: The National Broadcasting Orchestra.
 10.5: Margaret James (soprano)—
 (a) "Somewhere a Voice is Calling" (Arthur Tate).
 (b) "Daffodil Time" (Eric Gritton).
 (c) "It Was the Time of Lilac" (Jane Hathaway).
 (With Orchestral Accompaniment.)
 10.12: The National Broadcasting Orchestra.
 10.25: Late news from "Sun" and "News." Late Weather.
 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 Mrs. W. J. Stelzer. 11.15: Address by Mrs. Jordan. 11.30: Music. 11.45: Close down. 1.30: Speeches from the Musical Club. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Address by Miss Mary Rivett. 3.15: Music. 3.30: Close down. 5.15: Children's session by Uncle George. 7.0: Music. 7.45: Feature story. 8.0: Miss Maesmore Morris, contralto. 8.15: Madame Betts-Vincent in an illustrated talk on music. 8.30: Mr. Tom Harrison, baritone. 8.38: Mr. Jack Win and Mr. Heath Burdock, humor. 8.43: Cello solos. 8.50: Miss Gwen Selva, soprano. 9.0: Weather report. 9.3: Address. 9.15: Miss Maesmore Morris, contralto. 9.25: Symphony Orchestra. 9.30: Mr. Tom Harrison, baritone. 9.40: Mr. Jack Win and Mr. Heath Burdock, humor. 9.45: Cello solo.

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9.50: Miss Gwen Selva, soprano. 10.0: Instrumental music. 10.30: God Save the King.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St., Sydney (Wavelength, 267 Metres).
 MIDDAY SESSION.
 12.30: Request numbers. 1.0: Chimes. Music. 1.15: Talk on Homecraft, by Pandora. 1.40: Music and request numbers. 2.30: Close. 4.30: Musical programme.

EVENING SESSION.
 5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Chimes. Request numbers. 8.0: Popular music. 9.0: Chimes. Comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

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. 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 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. 7.5: Birthday calls. 7.15: Sporting feature, turf topics, review of candidates and their prospects for to-morrow, by Mr. Geo. A. Davis. 7.40: Request numbers. 8.0: Hawaiian steel guitar selections. 8.15: Women's information service, Mrs. Gray. 8.30: Music and vocal items from the studio. 9.10: Sporting feature, from ringside of McHugh's Leichhardt Stadium, full description of main 15-round event. 10.0: Closing announcements.

2UE

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

MIDDAY SESSION.
 11.30: Orchestral and vocal old-time music. 12.30: Announcements. Close.

AFTERNOON SESSION.
 1.0: Orchestral selections. 1.45: Organ recital. 2.0: Selections. 2.30: Close.

EVENING SESSION.
 7.15: Dinner music. 7.59: Announcements. 8.0: Chimes. 8.1: Overture, "Bohemian Girl." 8.11: Vocal and instrumental selections. 10.15: Close.

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Interstate Programmes, Friday, October 25

3LO

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

EARLY MORNING SESSION

7.0: Melbourne Observatory time signal. 7.1: Shipping news. 7.3: Physical exercises to music. 7.20: Reproduced music. 7.40: Mail notices. 7.42: What's on to-day. 7.45: Market reports. 7.53: Weather forecast. 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: Musical reproduction. 11.30: Morning sales, Melbourne Stock Exchange; metal prices. 12.0: Melbourne Observatory time signal. 12.1: Musical reproduction. 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; rainfall data. 1.30: Comments on the day's news. 1.30: Musical interlude.

EDUCATIONAL SESSION

2.0: Strange people of strange countries, Mr. H. J. G. Esmond. 2.15: Musical interlude. 2.20: Gen's of English Literature, Macaulay's History of England, Professor G. H. Cowling, M.A. 2.35: Musical interlude. 2.40: A talk in German, Mr. G. E. Green, M.A., Dip. Ed. 2.55: Musical interlude. 3.0: Melbourne Observatory time signal.

THE RADIO MATINEE

3.0: The Studio Light Orchestra—Fantasia, "A Day in Naples" (Byrg). 3.8: Albert Schobel, tenor—"By Whom Were We Wed?" (Strauss), "Lolita" (Buzzi-Peccola). 3.16: George Findlay—a recital from the works of Grieg. 3.25: Rita Hilton, entertainer—songs at the piano. 3.32: Tasma Tiernan, "cello"—"Le Cygne" (Saint-Saens). 3.37: A comedy sketch, produced by Frank Pearson. Characters: Florence Hall, an art student, Yety Landau; Rosa Langley, a student, Hazel Ransome; Geoffrey Byrnes, a critic, Frank Pearson. Scene: Florence's studio at the Art School. Time: The present (afternoon). 3.52: The Studio Light Orchestra—Three dances from "Tom Jones" (German), "Serenade" (Herbert). 4.0: Albert Schobel, tenor—"Sullie Horner," "You on the Lonely Earth" (Verdi). 4.7: Frank Lee—piano novelties. 4.12: Rita Hilton entertainer—songs at the piano. 4.19: Studio Light Orchestra—selection from "Rio Rita" (Tiernan). 4.30: Close down.

THE CHILDREN'S CORNER

5.45: "Plain Peter" and "Rolling Rita."

EVENING SESSION

6.35: Musical interlude. 6.40: Shipwrecks, Mr. G. E. Leggett. 6.55: Musical interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's session—Stock Exchange information; Corn Exchange report; Associated Stock and Station Agents' official report; mines and metals; fish and rabbit prices; farm and dairy produce prices 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, "Rose Culture," by Mr. James Allen. 7.40: News service. 7.45: To-morrow night's events at the Stadium, Cecil H. J. Williams; 8.0: Melbourne Observatory time signal.

NIGHT SESSION

8.0: Half an hour of old French music, arranged by Mary Campbell. 1. Song, "Amour que veux-tu de Moi?" (Lully), "Bols d'epais" (Lully), Dawn Harding. 2. Piano, "Gavotte" (Lully), Ida Scott. 3. Aria, Day and Evening Concert, "You Are Love," 10.0: Jean Goldkette's Orchestra, "Sweethearts on Parade," 10.45: Flotsam and Jetsam, "When I Grow Old," 10.30: News. 11.0: Close.

8.0: Half an hour of old French music, arranged by Mary Campbell. 1. Song, "Amour que veux-tu de Moi?" (Lully), "Bols d'epais" (Lully), Dawn Harding. 2. Piano, "Gavotte" (Lully), Ida Scott. 3. Aria, Day and Evening Concert, "You Are Love," 10.0: Jean Goldkette's Orchestra, "Sweethearts on Parade," 10.45: Flotsam and Jetsam, "When I Grow Old," 10.30: News. 11.0: Close.

8.30: Collingwood Citizens' Band (conductor, F. C. Johnston)—Novelty number, "Slidin' Thro' the Rye." 8.38: The Radio Redskins present a burlesque sketch, "The Big Chief's Pow Wow," assisted by numerous braves, squaws, squaws, totem-poles, monoples, and wireless poles. 9.8: Collingwood Citizens' Band—Fantasia, "A Day on a Farm." 9.14: John Hopkins—"Quo Vadis?" 9.24: Allan Adcock, entertainer, at the piano. 9.26: Hawaiian songs (in the native tongue). Hawaiian instruments, some facts about the islands. Some soft and soothing harmony. 9.50: Mabel White, soprano—"Il Bacio" (Arditi), "Land of Hope and Glory" (Eigar). Accompanied by Collingwood Citizens' Band. 10.0: Eric Welch will speak on to-morrow's races at Moonee Valley. 10.10: Collingwood Citizens' Band—selection from musical comedy. 10.20: Allan Adcock, entertainer, at the piano. 10.30: Meteorological information; British official wireless news; items of interest. 10.40: "The Rex" Dance Band. 11.40: God Save the King.

3AR

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

MORNING SESSION

8.15: Musical reproduction. 8.45: Weather. 9.0: Chimes. 9.1: News. 9.5: Musical reproduction. 10.0: Chimes. 10.1: British official wireless news. 10.10: Announcements. 10.28: Arnold Coleman at the Wur-litzer. 10.50: The daily broadcast service. 11.0: Close down.

MIDDAY SESSION

12.0: Chimes. 12.1: Famous women—Margaret Paston, a 15th century housewife—Miss J. M. Webb, M.A. 12.15: Fifteen minutes' synopsis. 12.30: Luncheon music, supplied by Paul Jeacle and his band. 3.0: G.P.O. chimes.

AFTERNOON SESSION

2.1: Quartette, Lener String Quartette. 2.8: Bartone, Harold Williams. 2.12: Band, Mandolinistic Band. 2.16: Soprano, Edna Thomas. 2.20: Handbells, Barnardo Boys' Handbell Rings. 2.24: Quartette, Kedroff Male Quartette. 2.38: Band music, Band of His Majesty's Grenadier Guards. 2.32: Bartone, Harold Williams. 2.36: Piano, Harry Shipman and Adam Carroll. 2.45: From the Melbourne Cricket Ground, description of Combined Public Schools' sports. 3.20: A chat by a prominent woman. 3.35: Musical interlude. 3.40: Home management, "Cleanliness in Storing Food," Miss Kathleen Benningfield. 3.55: Musical interlude. 4.0: A woman's wanderings through the Empire. Mem-Sahib. 4.15: From the Melbourne Cricket Ground, description of Combined Public Schools' sports. 4.50: Musical reproduction. 5.0: G.P.O. chimes. 5.1: Musical reproduction. 6.30: Weather. 5.45: Close down.

EVENING SESSION

6.15: Dinner music, supplied by Paul Jeacle and his band. 7.30: What's on the air to-night. 7.32: Sporting results. 7.35: Latest musical releases. 8.0: Chimes.

NIGHT SESSION

8.1: Australian problems in economics, "Migration in Relation to National Wealth," Mr. E. J. Mulvaney.

COMMUNITY SINGING.

8.15: Community singing, transmitted from the Malvern Town Hall, conductor, Frank Hatherley. 10.20: Weather; news. 10.30: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne (253 Metres).

MORNING SESSION

11.0: Band of the Royal Air Force, "Colonel Bogey." 11.30: "La Vogue," "The World's Fashions and Follies." 11.35: Rosa Ponselle and Martinelli (duet), "Misses' Trio Trotatore." 12.0: Hubert Eisdell, "Columbine's Garden." 12.30: Market reports, John McNamara and Co. Pty. Ltd. 12.32: George Olsen and his Music. "Til Never Ask for More." 1.0: Edith Day, "Dance Away." 1.30: Jesse Crawford, "When Summer is Gone." 1.45: Close.

AFTERNOON SESSION

2.15: J. H. M. Squire Celeste Octet, "Classical Selection." 2.30: Margherita d'Alvarez, "On the Ramparts." 3.0: Sponsored programme. 4.0: Close down.

EARLY EVENING SESSION

5.0: Sponsored session. 5.30: Orchestra de Symphonique Paris, "Carnival of the Animals," Part 1. 6.0: Lauri Kennedy (cello), "Songs My Mother Taught Me." 6.30: Columbia Symphony Orchestra, "Barcarolle" (Otenbach). 7.0: Alfred O'Shea, "Boat Song." 7.15: Market reports.

EVENING SESSION

8.0: New Mayfair Orchestra, "The Egg Song." 8.30: J. G. Griffiths, "Where Der You Work?" 9.0: Jascha Heifetz, "Rondo" (Schubert). 9.30: Edith Day and Howard Carter, "You Are Love." 10.0: Jean Goldkette's Orchestra, "Sweethearts on Parade," 10.45: Flotsam and Jetsam, "When I Grow Old," 10.30: News. 11.0: Close.

4QG

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

EARLY MORNING SESSION

7.30: News. 7.58: Time Signals. 8.0: Electric records. 8.15: News. 8.30: Close.

MORNING SESSION

11.0: Music. 11.5: Social news. 11.15: Lecturette, Cookery Talk, by "The Etiquette Girl." 11.30: Music. 12.0: Close.

MIDDAY SESSION

1.0: Market reports. Weather information. 1.15: An entertainment. 1.58: Time Signals. 2.0: Close.

AFTERNOON SESSION

3.0: A programme of electrically-reproduced records. 3.30: Mail train running times. 3.31: An organ recital by Mr. George Sampson (City Organist), 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, Stock Exchange, metal quotations, market reports, Fenwick's stock report, weather, announcements, time signals. 7.45: To-morrow's sporting fixtures review.

NIGHT SESSION

8.0: The Auchenflower Bowling Club's smoke concert (arranged by Mr. Stanley Tamblin) will be relayed from the Auchenflower Bow House. 10.0: Road information for motorists. News. Weather. 10.20: Dance Music. 11.0: Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 460 Metres).

MORNING SESSION.—11.15: Chimes. 11.16: Recordings. 11.45: Kitchen craft and menu talk. 12.0: Chimes. 12.1: Recordings. 12.15: News. 12.40: Recordings. 12.52: Railway, Stock Exchange, and meteorological information. 1.0: Chimes. 1.1: Player-piano session. 1.59: Meteorological information. 2.0: Close down.

AFTERNOON SESSION.—3.0: Chimes. 3.1: Programme review and announcements. 3.4: Recordings. 3.30: Jean Finlay, pianist. 3.40: Recordings. 4.0: Player-piano session. 4.15: An education talk. 4.25: Stock Exchange. 4.30: Close down.

EVENING SESSION.—5.30: Chimes. 5.31: 5CL Vocal Championship. 6.0: Birthday greetings. 6.15: Children's request numbers. 6.30: Dinner session. 7.0: Chimes. 7.1: Senior Birthday League greetings; selections for to-morrow's races at Murray Bridge and Moonee Valley; Stock Exchange; general market reports. 7.20: Dr. Jethro Brown will speak on "The War and Industry." 7.35: Sir David Gordon will give a talk of interest to everybody. 7.45: From the Victoria Hall—opening of the Hobby Exhibition by His Excellency the Governor, Sir Alexander Hore-Ruthven, and Mr. G. W. T. Goodman.

NIGHT SESSION.—8.0: Chimes. 8.1: 6CL Vocal Championship. 8.30: An evening of French operas, in which the following artists will give part—Marcelle Berardi, Dino Pelardi, Gwen Collet, Malcolm Jones, Bert Woolley, Fred Guster. 9.0: Chimes. 9.1: Meteorological information. 9.2: Overseas grain report. 9.3: Announcements. 9.5: League of France; selections for to-morrow's races at Murray Bridge and Moonee Valley. 10.30: Dance recordings. 11.0: Close.

6WF

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

EARLY MORNING SESSION.—7.30: Chimes; weather. 7.35: Early rising music. 7.55: Mails and shipping intelligence. 8.5: Market reports. 8.10: Musical reproduction. 8.30: Close.

MORNING SESSION.—10.0: Chimes. 10.1: Reproduced music. 10.15: Women's interest talk, by Dorothy Graham. 10.30: Organ recital. 11.0: Close.

MIDDAY SESSION.—12.30: Chimes. 12.31: Reproduced music. 12.45: Items of interest. 12.50: News. 1.0: Chimes. 1.1: Luncheon music by the National Broadcasting Orchestra. 2.30: Close.

THE RADIO MATINEE.—3.30: Chimes. 3.31: Reproduced music. 3.45: Talk of interest to women. 4.0: Chimes. 4.1: Concert broadcast from Nicholson's Studio. 4.15: Features of this evening's presentation. 5.0: Close.

EARLY EVENING SESSION.—5.45: Chimes. 5.46: Children's good-night stories, by Uncle Bas and Auntie Maxine. 6.15: A.D.C. Younger Set Session, "Things Strange but True." 6.30: Dinner music by the National Broadcasting Orchestra. 7.30: Weather. 7.31: News. 7.35: Market reports. 7.40: Stock Exchange. 7.42: Review of to-morrow's sporting fixtures. 7.57: Features of to-night's programme.

EVENING SESSION.—8.0: Chimes. 8.1: Weather. 8.2: Walkie Duo. 8.9: A.B.C. Racing Observer. 8.24: Walkie Duo. 8.30: James Conarty, gardening hints. 8.54: McLennan Lewis, Scotch comedian. 9.0: Chimes. 9.1: Weather. 9.2: Walkie Duo. 9.37: Rainfall description of wrestling contest, broadcast from Perth Stadium. 10.0: Chimes. 10.1: What's on the air to-morrow? 10.3: Temple Court Dance Band, conducted by Merv Lyons. 11.0: Chimes; close.

7ZL

Tasmanian Broadcasters Pty., Brewery Bldg., Elizabeth Street, Hobart (Wavelength, 516 Metres).

11.30: Recording. 11.34: Weather forecast. 12.1: Shipping; mail notices; housewives' guide. 12.8: Recital. 12.30: News service. 12.40: Recital. 1.5: British official wireless news; railway auction sales. 1.10: Recital. 1.30: Close. 3.1: Recital. 3.4: Weather. 3.5: Recital. 4.15: Readings. 4.30: Close down. 6.15: Children's hour with "Uncle David." 7.10: Record recital. 7.30: 7ZL/B studio concert, by 7ZL artists. 7.37: Rene Dyer, contralto, "The Dawn" (D'Hardelot), "The Silver Ring" (Chaminade). 7.44: Record recital. 7.54: Fred Heraud, baritone. "So Fair a Flower." "By the Old Keyside." 8.1: Record recital. 8.11: Rene Dyer, contralto, "Popples for Forgetting." "As I Went A-roaming" (Brahm). 8.18: Record recital. 8.28: Fred Heraud, baritone. "The History and Development of Music." 9.45: News session. 10.0: Close.

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Local Programmes, Saturday, October 26

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 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: Malls 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 AND AFTERNOON SESSION.

- 10.30: Announcements.
- 10.32: A.B.C. Racing Observer.
- 10.45: Price Duniavy at the Grand Organ.
- 11.0: Household Helps—Week-end suggestions, by Miss Ruth Furst.
- 11.10: Cables (copyright), "Sun"—"Herald" and A.P.A. news service.
- 11.15: Morning devotion.
- 11.30: Austradio musical reproduction.
- 11.53: British official wireless press.
- 12.0: "Big Ben"; Stock Exchange and metal quotations.
- 12.5: Studio music.
- 12.20: Midday weather forecast and weather synopsis.
- 12.30: Studio music.
- 12.50: From Moorefield—Description of the races in the running. During the afternoon results of the pony races at Ascot will be transmitted as received. Note: From the Moonee Valley, Victoria, description of the W. S. Cox Plate and the Moonee Valley Gold Cup. During intervals between races musical items will be given from the Studio.
- 4.35: From the Studio—Complete sporting results.
- 4.45: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Children's "Goodnight" stories, told by the "Hello Man," assisted by Aunt Willa and Cousin Gwen.
- 6.45: Dinner-hour music.
- 7.25: 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 p.m.

The feature of 2FC's programme to-night is Cec. Morrison's Australian Broadcasting Dance Orchestra, in a night of Symphonic Syncopations. 2BL offers entertainment on popular lines, sketches, unusual songs, and a feature nautical hour, by Will Cotterill. Exciting descriptions from the Speedway will provide a good evening's entertainment.

8.0: Cec. Morrison presents the Australian Broadcasting Dance Orchestra in a night of Symphonic Syncopations. These nights are being arranged to try and give listeners who do not dance, yet appreciate bright music, an idea of the efforts of modern dance arrangers in endeavoring to uplift ordinary dance tunes from the rush and noise that once stood for the name of jazz. The whole presentation will be in the form of a recital, interspersed with vocal items with orchestral accompaniment by popular artists, solos by members of the bands, and gems from the operas arranged for the modern dance orchestra.

Note.—At 9 o'clock the countryman's weather session—

- (a) New South Wales forecasts.
- (b) Inter-State weather synopsis.
- (c) Yachtsman's and Fisherman's forecast.
- 10.15: Announcements; late official weather forecast.
- 10.20: The Australian Broadcasting Dance Orchestra, conducted by Cec. Morrison.
- 11.30: Close. National Anthem.

2BL

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

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G.P.O. Chimes and announcements.
- 8.18: Music for every mood.
- 8.40: Meteorological data for the country.
- 8.45: Malls and shipping information.
- 8.50: Memory melodies.
- 9.0: This morning's story.
- 9.30: A musical interlude.
- 9.40: British Official Wireless Press.
- 9.45: New music.
- 10.5: News from "Sydney Morning Herald."
- 10.10: Austradio musical reproduction.
- 10.40: A talk on "Gardening," by Mr. G. Cooper.
- 11.0: G.P.O. chimes; close down.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes; announcements.
- 12.2: Lunch hour music.
- 1.0: Afternoon news from the "Sun" and "News."
- 1.5: Austradio musical reproduction.
- 2.0: J. Knight Barnett at the "Wurlitzer."
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT—2.30 to 5.15 p.m.

During the afternoon a description will be relayed from Moonee Valley, Victoria, of the Cox Plate and Moonee Valley Gold Plate.

- 2.30: 2BL Instrumental Trio.
- 2.42: Eva Newbury, Contralto—
- (a) "The Songs my Mother Sang" (Grimshaw).
- (b) "Tis June" (Landon Ronald).
- 2.49: Charlotte Robinson, Pianist—
- (a) "Study in F" (Chopin).
- (b) "Nocturne" (Grieg).
- (c) "March of the Dwarfs" (Grieg).
- 2.56: 2BL Instrumental Trio.
- 3.6: Dismal Desmond, Comedian—
- A "Dame" impression: "Mrs. Cooper" (M.S.S.).
- 3.13: Kathleen Horne, Soprano—
- (a) "Mammy's Lullaby" (Thompson).
- (b) "Just a Night for Meditation" (Young and Pollack).
- 3.20: 2BL Instrumental Trio.
- 3.30: Eva Newbury, Contralto—
- (a) "The World is Waiting for the Sunrise" (Seltz).
- (b) "My Treasure" (Trevalsa).
- 3.37: Charlotte Robinson, Pianist—
- (a) "Murmur of the Wind" (Emil Sauer)
- (b) "Prelude G Minor" (Rachmaninoff).
- 3.44: 2BL Instrumental Trio.
- 3.54: Kathleen Horne, Soprano—
- (a) "June and You" (Law).
- (b) "The Song I Love" (Brown).
- 4.1: 2BL Instrumental Trio.
- 4.11: Dismal Desmond, Comedian—
- "The Furniture Remover" (Cuthbert and Clark).
- 4.18: 2BL Instrumental Trio.
- 4.30: Austradio musical reproduction.
- 5.0: Complete sporting and racing resume.
- 5.15: G.P.O. chimes; close down.
- THE DINNER HOUR—6.15 to 7.55 p.m.
- 6.15: Dinner music.
- 6.45: The Younger Set session—
- "The Captain" to his Comrades.
- 7.5: A.B.C. sporting service.
- 7.17: Studio music.
- 7.30: Austradio musical reproduction.
- 7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION—8 to 12. Popular entertainment prevails through 2BL Service on Saturday night. Our programme opens with "A Nautical Hour," arranged by Will Cotterill. There are unusual vocal numbers, new radio sketches, popular piano novelties, and a thrilling description of the races from the Speedway Royal. Through 2FC Service, contrast is provided in the programme, by symphonic

dance music arranged by Cec. Morrison's Dance Orchestra. These nights are being arranged to give listeners who do not dance, and yet appreciate bright music, an idea of the efforts of modern dance arrangers in the presentation of dance music—so far removed from the unmelodious sound which once stood for the name of "jazz."

8.0: "A Nautical Hour," arranged by Will Cotterill, featuring old sea salt songs and stories of white sails and a stiffening breeze.

- (a) "Off to the Southward we go" (Yale Glee Club).
 - (b) "Song of the Jolly Roger and Off we go to Sea" (Candish).
 - (c) "Down in the Depths" (Karl Linders)
 - (d) "Rocked in the Cradle of the Deep" (Knight).
 - (e) "A Hundred Fathoms Deep" (Shattuck).
 - (f) "Four Jolly Sea Dogs Bold are We."
 - (g) "Anchored" (Watson).
- With patter and gags.
- 9.0: From the Speedway Royal—Description of the races by the A.B.C. sporting expert.
 - 9.15: From the Studio—
 - Carlton Fay, Novelty Pianist—
 - (a) "Monkey Bismez" (Johnson).
 - (b) "Fashionette" (King).
 - 9.22: Des Tooley, the girl with the unusual voice—
 - (a) "Walking with Susie" (Mitchell and Götter).
 - (b) "Since You Whispered I Love You" (Mills and Carroll).
 - 9.29: Weather information for the man on the land.
 - 9.32: Lew James and Lynwood Roberts—In an unusual radio sketch.
 - 9.49: Carlton Fay, Novelty Pianist—
 - (a) "Scrambles" (Reinherz).
 - (b) "Dolly Dimples" (Alter).
 - 9.56: From the Speedway Royal—Description of the races.
 - 10.17: From the Studio—Des Tooley, the girl with the unusual voice—
 - (a) "All the Luck in the World" (Cavanagh-Washington).
 - (b) "Hiding in the Corner of Your Smile" (Pollack).
 - 10.25: Late weather report.
 - Late news from the "Sun" and "News."
 - 10.30: From The Oriental—Sydney Simpson's Syncopaters.
 - 12.0: National Anthem; close.

2GB

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

- 3.0: Musical session. 5.15: Children's session by Uncle George. 7.0: Request hour. 8.0: Sutton's musical session. 10.30: Close down.

2UW

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

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

2KY

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

- CHILDREN'S SESSION
- 6.0: Birthday calls, request numbers, and kiddies' entertainment, by Aunt Jemima and Uncle Bert.

- EVENING SESSION
- 7.0: Musical interlude. 7.5: Birthday calls.
- 7.15: Sporting feature, turf topics, how they ran to-day. 7.50: Request numbers. 10.0: Closing announcements.

2UE

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

- EARLY MORNING SESSION
- 7.15: Breakfast music. 8.0: Chimes. 8.1: Music. 8.30: Weather. Close.
- EVENING SESSION.
- 7.15: Dinner music. 7.59: Announcements. 8.0: Overture "Barber of Seville." 8.10: Orchestral music. 10.30: Close.

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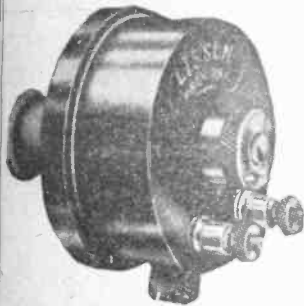
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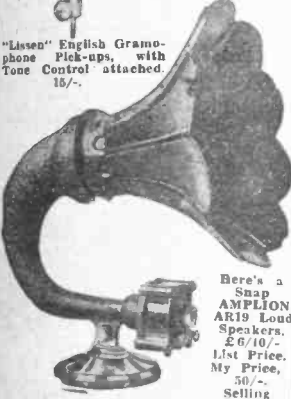
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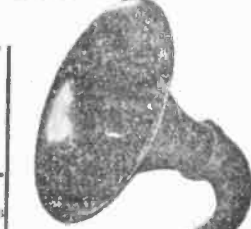
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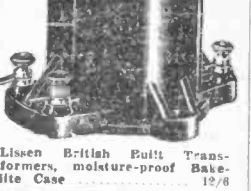
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Interstate Programmes, Saturday, October 26

3LO

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

EARLY MORNING SESSION.

7.0 to 8.15: See Friday.

MORNING SESSION.

11.30 to 12.30: See Friday.

MIDDAY SESSION.

1.0 to 1.30: See Friday. 1.43: Description of Mia Mia Hurdle Race, two miles, Moonee Valley races, by Eric Welch. 1.50: Melody broadcast. 2.0: Time signal.

AFTERNOON SESSION.

2.1: Melbourne's great aquatic carnival, described by our special representative. 2.13: Description of St. Albans heat for colts and geldings, four furlongs, Moonee Valley Gold Cup meeting, by Eric Welch. 2.20: Henley description, continued. 2.43: Description of W. S. Cox Plate, 9 1/2 furlongs, Moonee Valley Gold Cup meeting, by Eric Welch. 2.50: Henley description, continued. 3.18: Description of Moonee Valley Gold Cup, 1 mile 3/4 furlongs, Moonee Valley Gold Cup meeting, by Eric Welch. 3.28: Henley description, continued. 3.47: Description of Broadmeadows Steeplechase, two miles and eight chains, Moonee Valley Gold Cup meeting, by Eric Welch. 3.55: Henley description, continued. 4.23: Description of St. Albans heat for fillies, four furlongs, Moonee Valley Gold Cup meeting, by Eric Welch. 4.35: Henley description, continued. 4.58: Description of Dundonald heat, six furlongs, Moonee Valley Gold Cup meeting, by Eric Welch. 5.5: Henley description, continued. 5.15: Sporting results: Close down.

THE CHILDREN'S CORNER.

5.45: "Little Miss Kookaburra." 6.20: "Nick and Neck" are having a special session to-night. 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, Mt. Lyell, Dr. Loftus Hills, D.Sc. 7.40: "Herald" news service. 7.45: Come with us round the world—"Two Thousand Miles by Dog Team," Mr. H. J. G. Esmonde. 8.0: Melbourne Observatory time signal.

NIGHT SESSION.

8.0: Brunswick City Band, conductor, Hugh Niven—Overture, "The Barber of Seville" (Rossini). 8.8: J. Howard King, bass-baritone—"In Sheltered Vale" (D'Alquien), "To-morrow" (Keel). "GRENSLAND GREEN." 8.15: (From the Grand Guignol Series.) Played in London by Sybil Thornndike, produced by J. Beresford Fowler. Cast: Lorna Latchmere, Thora Coxhead, Cheviot Chase, Douglas Caddy, Anthony Moore, J. Beresford Fowler. 8.30: Brunswick City Band—Selection, "Bobby Burns" (Tune). 8.38: Molly Mackay, soprano—"The Rose and the Musk" (Kalkotley), selected. 8.45: A special programme has been arranged. 9.1: National Broadcasting Orchestra—"Dance of the Hours" (Ponchielli). 10.0: Half an hour in a Maori pah. An atmospheric impression of the native songs and music of New Zealand. 10.30: British official wireless news; items of information; meteorological information; sporting results. 10.40: Brunswick City Band—"The Miserer" from "Il Trovatore" (Verdi). 10.50: Molly Mackay, soprano—"Before the Crucifix" (La Forge), "Love and Sleep" with viola obbligato by Dorothy Roushugh (Gambogi). 10.57: Brunswick City Band—Cornet solo, "Oro pro Nobis." 11.0: The A.B.C. String Quartette—Movement from Sonata (Handel). 11.10: J. Howard King, bass-baritone—"Tom Browne" (Squire), "Five Eyes" (Armstrong Gibbs). 11.17: National Broadcasting Orchestra—Selection, "The Chocolate Soldier" (Strauss). 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 to 2.0: See Friday. 2.1: The Idyls of the King, "The Marriage of Geraint," Rev. W. Bottomley. 2.15: Musical Interlude. 2.20: Products of the Jungle, Mr. A. A. Downs. 2.35: Musical Interlude. 2.40: Personal adventures while exploring, Lieut. Colonel Alfred Pottinger, D.S.O., F.R.G.S. 2.55: Musical Interlude. 3.0: G.P.O. chimes.

THE RADIO MATINEE

3.1: Paul Jeacle and his band—"Susianna" (Williams), "Steam Boat" (Robson). 3.6: Tom Semple, tenor—"The Song of the Palanquin Bearers," selected. 3.13: Paul and Claude Jeacle and George Bodley—Trio, selected. 3.18: The Two Wags—mirth and melody. 3.24: Paul Jeacle and his band—"Fresse Out" (Waller), "Shout Hallelujah" (Dixon). 3.30: Violet Semple, contralto, and Tom Semple, tenor—Duets, "Home to Our Mountains" (Verdi), "In Spring-time" (3.36: George Bodley—saxophone solo, selected. 3.39: Freda Treweek, mezzo-soprano—"My Ship" (Berratt), "Lie Tiers" (McGunn). 3.46: Comedy sketch, "The Fuchsia." Characters: Jim, Charles R. Bryson; Sarah, Mrs. Maurice Dudley. Scene: Sarah's kitchen. 4.0: Paul Jeacle and his band—"He Hadn't Up Till Yesterday" (Trucker), "Walking with Susie." 4.6: Violet Semple, contralto—"When the Swallows Homeward Fly" (White), "The

Melbourne Race Carnival



ERIC WELCH, who will describe all the important races, including the Cup, taking place in Melbourne this and next month. This afternoon he will be heard from Moonee Valley.

Silver Ring" (Chaminade). 4.13: Bob Libbes—trombone solo. 4.18: "The Two Wags"—more mirth and melody. 4.24: Paul Jeacle and his band—"Gypsy Love" (Brayan), "Come West, Little Girl" (Kahn), 4.30: Freda Treweek, mezzo—"The String of Pearls" (Phillips), "Lackaday" (Crampton). 4.37: Synoposed pianisms by an absent artist. 4.45: Claude Jeacle—song, "Come to the Fair." 4.50: Paul Jeacle and his band—dance numbers. 5.0: G.P.O. chimes. 5.1: Musical reproduction. 5.30: Weather. 5.35: Musical reproduction. 5.45: Close down.

EVENING SESSION

6.15: Dinner music—Studio Light Orchestra. 7.30: What's on the air to-night. 7.32: Sporting results. 7.40: Latest musical releases. 8.0: Chimes.

NIGHT SESSION

8.1: The original We Four Male Quartette—"Lindy Lou" (Strickland), "They Kissed" (Hawley). 8.6: Mabel Nelson, piano recital—"Etude O Sharp Minor" (Chopin), "Little Birds" (Grigs), "Andante and Rondo Capriccioso" (Mendelssohn). 8.18: Lotte Daniell, soprano—"Forgi Amor" (Mozart), "The Lotus Flower" (Schumann). 8.25: Herbert Millard, monologues—"The Girl on the Stairs." 8.33: National Broadcasting Orchestra—"Spanish Caprice" (Korsakov). 8.43: The original We Four Male Quartette—baritone solo, "An Epitaph" (Besley), "Music When Soft Voices Die" (Besley); quartette, "De Ringtail Coon" (Scott Gatty). 8.50: Hedley and Bartlett—musical novelties. 8.58: One-act play—"His Sainted Grandmother" (Lord Dunsany) (Produced by Terence Crisp.) Characters: Phyllis Traversa, Elza Stenning; her father, Terence Crisp; Lucy, Ruby May; Annie, Hilary Blake. Scene: An old room with a four-poster bed in the middle. On the wall is a large portrait of a saintly-looking lady in a crinoline. 9.13: Austin Anderson, entertainer—"The Railway Tragedy"—The 11.59 Express." 9.21: The original We Four Male Quartette—"Sally in Our Alley" (own arrangement), "Kentucky Babe" (Fownall). 9.27: Alfred Ackland, violin—"La Precluse" (Couperin-Kriesler). 9.32: Lotte Daniell, soprano—"Damon" (Strange), "To You" (Speaks). 9.38: Hedley and Bartlett—musical novelties. 9.47: Herbert Millard, monologues—"Breaking It Gently," other stories. 9.56: Austin Anderson—humorous sketch, "Murders." 10.4: Weather information and "Herald" news. 10.14: Tasma Thernan, cellist—"Ebanera" (Ravel). 10.20: The original We Four Male Quartette—"Off in the Silly Night" (own arrangement), "When I Got to Heaven" (own arrangement). 10.26: Rex Dance Band. 12.0: God Save the King.

4QG

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

EARLY MORNING SESSION

7.30 to 8.30: See Friday.

AFTERNOON SESSION

3.0 to 4.30: See Friday.

EARLY EVENING SESSION

6.0: Bi-weekly News Service. 6.30: Bedtime stories. 7.0: To-day's race results in detail. 7.20: General sporting notes. 7.30: Balling notes by Mr. Fred Smith.

NIGHT SESSION

8.0: The Studio Orchestra, "Snacks in Bars" (by request). A Thought for To-night (Will H. Lister)—"The Work of a Day." Harry Humphreys, a Dame Sketch, "Mrs. Odson and Mrs. Ackett have a Friendly Chat Across the Back Fence." The Studio Orchestra, Ten Minutes' Dance Music Jack Lord (tenor), "Nirvana" (Stephen Adams), Merna Gillies (pianiste), "Nocturne" (Ronald), Harry Collins (entertainer).

9.0: Weather forecast. 9.1: The Studio Orchestra. Selection, "Belle of New York" (Kerhlie). Jack Lord (tenor), "Mountain Lovers" (Squire), Merna Gillies (pianiste), "Melody in F" (Rubinstein). Harry Collins, Mers Fun. The Studio Orchestra. Dance Music. Note: At suitable times during the evening the two semi-finals and the final of the main trophy race will be described direct from the Davies Park Speedway. 10.0: News supplied by the Metropolitan Dailies; Weather Information; close down.

5CL

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

AFTERNOON SESSION—12.0: Special late selections for Moonee Valley races. 12.3: Probable starters and selections for races at Murray Bridge. 12.15: News; announcements. 12.45: Musical Interlude. 1.15: Murray Bridge, riders and positions for Handicap Hurdle Race, two miles and 13 chains. 1.20: Recordings. 1.30: Running description of Handicap Hurdle Race. 1.38: Recordings. 1.55: Riders and positions for Novice Race, five furlongs. 2.0: Resume of Moonee Valley race results. 2.1: Recordings. 2.10: Running description of Novice Race. 2.15: Recordings. 2.35: Riders and positions for Flying Handicap, six furlongs. 2.40: Recordings. 2.50: Running description of Flying Handicap. 2.55: Recordings. 3.0: Resume of Moonee Valley race results. 3.1: Recordings. 3.15: Vocal Championship. 3.0: Royal Reserve Handicap, one and a quarter mile. 3.20: Recordings. 3.30: Running description of Royal Reserve Handicap. 3.35: Recordings. 3.55: Riders and positions for Handicap Trial Stakes. 4.10: Running description of Handicap Trial Stakes. 4.35: Riders and positions for Welter Handicap, one mile. 4.40: Recordings. 4.50: Running description of Welter Handicap. 4.55: Recordings. 5.0: Resume of Moonee Valley and Murray Bridge race results. 5.1: Close down.

EVENING SESSION—6.0: Chimes. 6.1: Resume of race results. 6.2: Birthday greetings. 6.15: Children's request numbers. 6.30: Dinner session. 7.1: Senior Birthday League Greetings. 7.0: Vocal Championship. 7.0: Rev. G. E. B. H. speaks on "Nature Study," under the auspices of "Boy Week." 7.25: Mr. C. G. Riley will speak on "Items of Interest." 7.40: Resume of Murray Bridge and Moonee Valley race results; country sporting and other sporting news. NIGHT SESSION—8.0: Chimes. 8.1: Programme review. 8.10: Holden's Silver Band (conducted by O. Sumption). 8.20: Vocal number. 8.24: Solo by member of band. 8.30: 5CL Vocal Championship. 8.0: Holden's Silver Band. 9.10: One-act play in which Phyllis Tier and Cecil Madigan will take part. 9.25: Holden's Silver Band. 9.30: 5CL Vocal Championship. 10.0: Holden's Silver Band. 10.10: Vocal number. 10.20: A. resume of Murray Bridge and Moonee Valley race results. 10.30: Dance recordings. 11.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth (Wavelength, 485 Metres).

Early morning session, morning session, traders' demonstration, and midday session, see Friday.

THE RADIO MATINEE—During the afternoon results and sporting information will be broadcast immediately received. 3.30: Chimes. 3.31: Reproduced music. 3.45: Sporting results and progress. 4.0: Information. 4.0: Chimes. 4.1: Reproduced music. 4.45: Features of to-night's presentation. 5.0: Close down.

EARLY EVENING SESSION—5.45: Chimes. 5.46: Children's good-night stories, by Uncle Bus and Auntie Maxine. 6.0: Dinner music. 7.30: Weather. 7.31: News. 7.35: Market. 7.40: Complete resume of to-day's racing, with results of all athletic fixtures. 7.48: The A.B.C. Sporting Observer's impression of to-day's game.

EVENING SESSION—At intervals during the evening description of the malleo cycle contest will be broadcast from the Agricultural Show Ground. Track results broadcast immediately received. 8.0: Temple Chimes; weather. 8.2: Harmony Girls. 8.3: Temple Court Dance Band, conducted by Merv. Lyons. 11.0: Close.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldg., Elizabeth Street, Hobart (Wavelength, 516 Metres).

11.30: Record recital. 11.34: Weather. 11.35: Record recital. 11.35: Weather. 12.0: Chimes. 12.11: Record recital; mail notices; housewives' guide. 12.3: Record recital. 12.30: News; announcements. 12.40: Record recital. 1.15: British official wireless news; railway auction sales. 1.10: Record recital. 1.30: Close. 3.0: Transmission from the T.C.A. Grandprix. 3.0: Grade B, grade, Sandy Bay V. New Town, described by Sid Jones. 4.30: All sporting results to hand. 5.0: Close. 6.10: All sporting results. 6.20: Children's corner, with "Uncle David." 7.10: Record music. 7.30: News. 7.40: Temple St. Lawrence will continue her travel talks. 7.50: James Counsel, on "European Affairs." 8.1: Record recital. 8.15: Transmission from the R.S.S.I.L.A. Club rooms, Macquarie Street, Hobart—annual smoke social of the Linlithgow Soldiers' Association of Tasmania. 8.35: A request programme of poppy records, specially arranged by Paton's Music Warehouse. 10.20: Close down.



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Local Programmes, Sunday, October 27

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 Metres).

THE CHURCH HOUR—10 a.m. to 12.30 p.m.

10.0: Announcements.
10.5: Studio music.
10.30: This morning's news from the "Sunday Sun," "Sunday Times," and "Truth"; British official wireless press.
10.45: Musical items.
11.0: From Sydney Unitarian Church—Morning service, conducted by Rev. Albert Thornhill, M.A.—

Opening Voluntary—Mr. S. V. Clutson.
Hymn 40, "O, Life That Maketh All Things New."

Collect, and Lord's Prayer.
Anthem, "O, Taste and See."
Hymn, "O God, Whose Law Is In the Sky."
Prayer.

Tenor solo, "The Sorrows of Death" (Mendelssohn), Mr. J. Scott-Ross.

Announcements.
Hymn 106, "God of Ages and of Nations."

Sermon by Rev. Albert Thornhill, M.A., on "What is Religion?"

Offertory.
Hymn, "The Voice of God Is Calling."
Benediction and Closing Voluntary.
12.15: From the Studio—Studio music.
12.30: Close.

AFTERNOON CONCERT—3 to 4.30 p.m.

3.0: From the Band Rotunda, Manly Beach—The Manly Municipal Band, conducted by J. Pheloung—

March, "Royal Favour" (Potter).

Hymn.
Overture, "Mignon" (Thomas).
"Londonderry Air" (arr. by Godfrey, Rossini).

From the Studio—Music.
From the Band Rotunda, Manly Beach—The Manly Municipal Band, conducted by J. Pheloung—

Selection, "Belle of New York" (Kerker).
Fox-trot, "Weary River" (Silvers).
Waltz, "The Last Waltz" (Strauss).
March, "For Freedom's Flag" (Crosby).
4.30: Close.

THE EVENING PROGRAMME—6 to 10.30 p.m.

6.0: A programme of Irish music, by Professor Randal Woodhouse, with annotations by Rev. Father McNally—
"The Lark in the Clear Air" (Esposito).
"The Foggy Dew" (Stanford).
"The Snowy Breasted Pearl" (Robinson).
"My Dark Rosaleen" (Needham).
"My Lagan Love" (Harty).

6.30: Dr. Edgar Ford will speak on "Music and the Man."
6.50: From Petersham Congregational Church—Evening service, conducted by Rev. A. P. Doran—Sunday School anniversary service—

Special singing by Sunday School Choir.
Invocation and Lord's Prayer.
Hymn, "Stand Up for Jesus."

Psalms.
Hymn.
Lesson.
Anthem.
Prayer.
Offertory.
Hymn, "Fight the Good Fight."
Sermon, "The Child's Greatness," by Rev. A. P. Doran.
Hymn, "Onward Christian Soldiers."
Benediction.
March.

8.30: From the Studio—A Studio concert, programme, arranged by Horace Keats. The National Broadcasting Orchestra, conducted by Horace Keats. The Wireless Singers, conducted by Joseph Post. The feature of the programme is the 1812 Overture, with Napoleon's Oration, by C. N. Baeyertz—

Overture, "Trenzi" (Wagner).
Orchestral and vocal excerpts, "Rigoletto" (Verdi).
Hymns—"Lead, Kindly Light" (arr. Saunders).
"For Those At Sea" (arr. Saunders).
"Nazareth" (Gounod, arr. Saunders).
"Colonial Suite" (Saunders).
Vocal and instrumental, "Miserere Scene" (Verdi).
"O, Star of Eve" (Wagner).
"Liebestraum" (Von Blon).
"Reve Angeli" (Rubinstein).
Orchestral and vocal excerpts, "Faust" (Gounod).
C. N. Baeyertz will give Napoleon's Oration.
Overture, "Solenelle 1812" (Tschaikowsky).

Note.—At 9 o'clock the countryman's weather session—

(a) New South Wales forecasts.
(b) Inter-State weather synopsis.
(c) Yachtsman's and Fisherman's forecast.

10.30: Close. National Anthem.

2BL

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

MIDDAY SESSION, 10.55 to 3 p.m.

10.55: Announcements.
11.0: From St. Jude's Church of England, Randwick, morning service, conducted by Rev. George Polain, T.L.L.
Acting-rector: Rev. George Polain, T.L.L.
Organist: Mr. Rupert Cooke.
Organ voluntary: "Marche Religieuse"
Processional Hymn 290: "Through All the Changing Scenes of Life."
Morning prayer: Venite, Psalm 24, First Lesson.

Te Deum; Second Lesson; Benedictus; Creed; Prayers.
Anthem, "I Waited for the Lord" (Mendelssohn).

Prayers.
Hymn 333, "Christ, Who Once Amongst Us."

Sermon, Rev. George Polain, T.L.L.
Reunion.
Solo, "Thus Saith the Lord," by Mr. Dan Hardy.

Aria, "But Who May Abide the Day of His Coming" ("Messiah").
Hymn 278, "Oh For a Faith That Will Not Shrink."
Benediction.

Recessional Hymn, 436, "Hark! The Sound of Holy Voices."
Closing Voluntary, "Choral Improvisation and Fugue in G Major" (Karl Elert).

12.15: From the Studio, musical items.
12.30: News from the "Sunday Sun," "Sunday Times," and "Truth."

12.38: A specially-arranged programme of instrumental music.
2.15: "Cheer-up" session, conducted by Uncle Frank.

2.30: Austradio musical reproduction.
3.0: Close.

LATE AFTERNOON, 4.30 to 6 p.m.

4.30: From the Christian Science Church, organ recital, arranged by G. Vern Barnett.
4.45: From the studio. Mona Deutscher, contralto.

(a) "As the Rain Cometh Down" (McDermid).

(b) "The Arrow and the Song" (Balfe).
(c) "A Little Prayer" (Hamblen)

4.52: From the Christian Science Church, organ recital, arranged by G. Vern Barnett.
5.7: From the studio. C. N. Baeyertz will continue his series, "Philosophic Talk from Bacon to Bergson," and his title this afternoon will be "Voltaire."

5.27: From the Christian Science Church, organ recital, arranged by G. Vern Barnett.
5.42: From the studio. Mona Deutscher, contralto.

(a) "Epitaph" (Cleghorn Thomson).
(b) "The Heart Worships" (Holst).

(c) "Like to the Damask Rose" (Elgar).
5.49: From the Christian Science Church, organ recital, arranged by G. Vern Barnett.

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: From St. Stephen's Church, evening service, conducted by Rev. Hugh Paton.
Sanctus.
Invocation.

Hymn 219.
Lesson, Genesis 25.
Prayer.

Hymn 294.
Lesson, Hebrews 12.
Anthem.

Prayer.
Hymn 293.
Sermon, "Selling Your Birthright."
Text: Hebrews 12:16.

Hymn 175.
Benediction.

Preacher: Rev. Hugh Paton.
Organist: Mr. Harry Chandler, M.A.

8.30: Weather report for the man on the land.

8.32: Relay from 3AR, Melbourne.
Programme arranged by Professor Bernard Heinze, featuring Edward Goll, and including the "Kreutzer Sonata."
10.0: Close. National Anthem.

2GB

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

9.0: Address by Miss Mary Rivett, "The Food of the Gods." 9.30: Address by Mr. Victor E. Cromer, "Christian Mysticism."

10.0: Music from studio. 10.15: Organ music from St. Alban's Church, Regent Street, Sydney. 10.30: Morning service from St. Alban's Church. 12 noon: Music from studio.

12.30: Close down. 3.0: Musical session 5.30: Children's session by Uncle George. 7.0: Address from St. Alban's Church. 7.35: Address from Adyar House. 8.15: Sacred concert, Mr. Gregory Valentine, violinist. 8.23: Miss Florence Gordon, contralto. 8.30: Mr. William Green, tenor. 8.37: Miss Ada Brock, pianiste. 8.45: Miss Elsie Peerless, soprano. 8.52: Mr. Gregory Valentine, violinist. 9.0: Weather report. 9.1: Miss Florence Gordon, contralto. 9.8: Mr. William Green, tenor. 9.15: Miss Ada Brock, pianiste. 9.23: Miss Elsie Peerless, soprano. 9.30: Address by Miss Mary Rivett, Science and Mysticism. 9.45: Close down.

2UW

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

10.30: Music and request numbers. 1.0: Close. 5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Musical programme. 10.30: Close.

2UE

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

10.30: Music and request numbers. 1.0: Close. 5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Musical programme. 10.30: Close.

MORNING SESSION.

9.45: Mass from St. Michael's Church, Daceyville. 10.30: Announcements. 10.32: Selections. 12.30: Announcements. Close.

EVENING SESSION.

6.0: Music from Catholic Studio. 6.30: "Question Box" talks, arranged by Dr. L. Rumble, M.S.C. 7.45: Evening Devotions from St. Michael's Church, Daceyville. 8.15: Announcements. 8.20: Overture, "La Traviata." 8.30: Orchestral and vocal selections. 10.15: National Anthem.

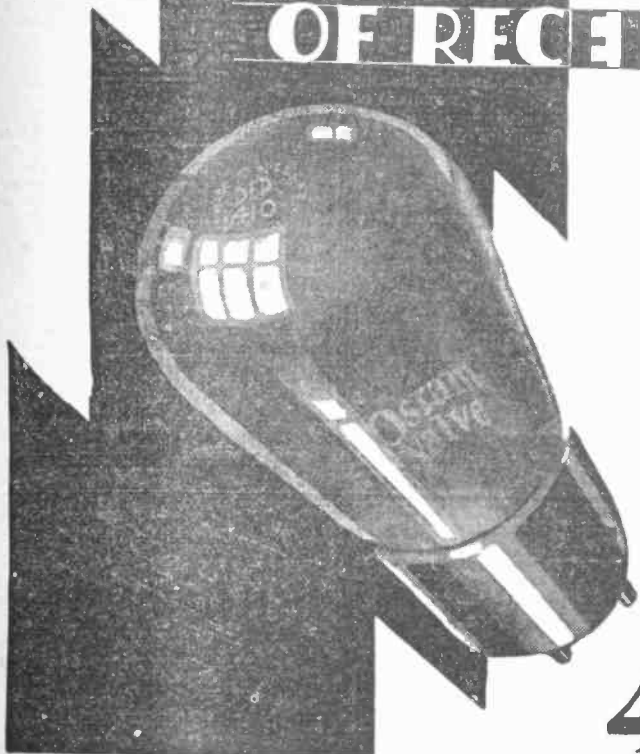
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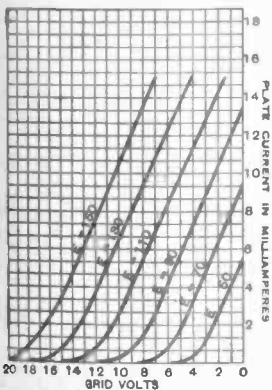
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Interstate Programmes, Sun., Oct. 27

3LO

Australian Broadcasting Co., 126A Russell St., Melbourne (Wavelength, 371 Metres).

MORNING SESSION.

10.0: Time signal. 10.1: Musical reproduction. 10.20: Express train information: British Official Wireless news; items of interest. 10.30: Bells of St. Paul's Cathedral. 10.45: Morning service from St. Paul's Cathedral. Hospital Sunday. Matins (choral) and Intercession. Te Deum and Benediction. Barnaby in E. Anthem. "Come, O Creator Spirit," words translated by Robert Bridges, music by Tertius Noble. Preacher, the Dean. 12.10: Recital of sacred music. 12.30: Close down.

AFTERNOON SESSION.

3.0: Pleasant Sunday afternoon from Wesley Church Central Mission. Speaker, Hon. Stanley S. Argyle. M.L.A. Hospital Sunday 4.30: Close down.

THE CHILDREN'S CORNER.

6.0: "Brother Bill's" talk this week is entitled "Climbing Up de Golden Stairs." "Plain Peter" will tell a story for the little ones. Birthday greetings by "Plain Peter." A special recital of children's music.

EVENING SESSION.

7.0: The Victoria String Quartette. "Quartette No. 12 in G Major" (Mozart). 7.10: Tom McPherson, baritone. "How Lovely Are Thy Dwellings" (Liddle). "It is Enough" from "The Elfish" (Mendelssohn). 7.17: Cecil Parks, violin, "Cabzonetta" from concerto (Tschalkowsky). "Serenade" (Tschalkowsky). "Zehnirs" (Hubay). 7.27: J. Howlett Ross. "The Death of the Giant." 7.40: Tom Macpherson, baritone. "Sea Fever" (John Ireland). "The Lute Player" (Allitsen). 7.47: The Victoria String Quartette. "Variation" (Veit). "Gavotte" (Handel). "Allegro" (Mozart).

NIGHT SESSION.

8.0: Stan Porter and his orchestra with company of vocal and instrumental artists. 10.15: Meteorological; British Official Wireless news. Items of interest. 10.30: God Save the King.

3AR

Australian Broadcasting Co., 126A Russell St., Melbourne (Wavelength, 384 Metres).

MORNING SESSION.

11.0: Service from Independent Church, Collins Street, Melbourne. Sermon: Rev A. Penry Evans. Subject: "So This is Life."

MIDDAY SESSION.

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

AFTERNOON SESSION.

4.30: "Czardas," Parts 1 and 2, from "Die Fledermans" (Strauss), Henri Verbruggen conducting the Minneapolis Symphony Orchestra. 4.38: Mignon. "Pure as a Flower" (Thomas). "Goodbye Mignon" (Thomas). Mario Chumlee, tenor. 4.46: Piano recital: Alfred Cortot. 5.0: "William Tell Overture" (Rossini). (a) "Dawn." (b) "The Storm." (c) "Pastorale." (d) "Finale." Walter Rogers and his Band. 5.12: Baritone solo, Richard Bonelli. 5.18: "Zigeunerweisen," Parts 1 and 2 (Sarasale), Mischel Piastra, violin. 5.25: The week's good cause: What the Hospitals have done for us. Mr. W. J. G. Turner. 5.40: The Famous Forty Elks Chorus. 5.46: "Quartette in G Minor," four movements (Debussy). New York String Quartette. 6.2: "The Rosary." "Calm is the Night," Marie Morrissey, contralto. 6.8: Violin and piano sonata. "The Krentzer Sonata" (6 parts) (Beethoven). Bronislaw Huberman and Schultz. 6.32: Request numbers. 6.47: St. Paul's Cathedral Bells.

EVENING SESSION.

7.0: Service from St. Paul's Cathedral. Evensong: Choral. Anthem: Hubert Parry's setting of John Milton's Ode. "At a Solemn Music." Sermon: Canon Snodgrass.

NIGHT SESSION.

8.30: Programme arranged by Professor Bernard Helnze. 9.58: Weather. 10.0: God Save the King.

4QG

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

MORNING SESSION

11.0: The complete morning service will be relayed from St. John's Anglican Cathedral, Brisbane. Com-

munion Service. "Stanford in B Flat." "Ave Verum" (Sampson). 12.15: Close.

AFTERNOON SESSION

3.15: The Queensland Band Association Band Test will be relayed from the Botanic Gardens. 5.0: Close.

EARLY EVENING SESSION

6.0: An hour for little listeners.

NIGHT SESSION

7.30: The complete evening service will be relayed from St. John's Anglican Cathedral. Magnificent and Nunc Dimittis (Stanford in A). Anthem. "Let the Bright Seraphim" (Handel). Note: Both morning and evening services from St. John's will be with full orchestral accompaniment.

At the conclusion of the church service the concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park.

9.30: Close.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 400 Metres).

MORNING SESSION

10.45: Carillon of bells from the Adelaide Town Hall. 11.1: Service from Stow Memorial Church—minister, Rev. Dr. G. H. Wright; organist, Mr. Foxhall Robinson. 12.10: British official wireless news. 12.15: Close.

AFTERNOON SESSION

3.0: Chimes. 3.1: Pleasant Sunday afternoon service from Glenagey Congregational Church—Mr. W. G. T. Goodman (Tramways Trust Manager) will speak on "Character in Business." 4.0: Close.

EVENING SESSION

6.0: Chimes. 6.1: Birthday greetings. 6.15: "The Bird Lady" and "The Sunshine Songsters." 6.45: Church choir numbers. 7.0: Chimes. 7.1: Service will be broadcast from the Exhibition Building, the occasion being the farewell sermon by Rev. W. H. Cann, of Central Methodist Mission.

NIGHT SESSION

8.20: Announcements. 8.20: From the Regent Theatre. Frank Roberts, Wurliizer organist—"Ballet Ephyenne" (Luigi). 8.37: Norman Morphet, tenor—"Phyllida" (Hosard Fisher). "Time Was I Roved the Mountains" (Herman Lohr). 8.44: W. Mxy, cornettist, selected. 8.51: The Madrigal Singers—"Carry Me Back to Old Virginie." "In This Hour of Softened Splendour." 8.58: Angelo Demodena, mandolinist, selected. 9.5: Linda Wald, soprano—"A Spirit Flower." "When All Was Young" from "Faust" (Gounod). 9.12: Frank Roberts, Wurliizer organist—"Indian Love Lyrics." "Lolita" (Peele). 9.18: The Madrigal Singers—"The Viking Song." "Good-night, Beloved." 9.28: W. Mxy, cornettist, selected. 9.33: Phyllis Everett, contralto, selected. 9.40: Angelo Demodena, mandolinist, selected. 9.47: Gordon Hele, baritone—"Cargoes." "Requiem." 9.55: News service. 10.0: Close.

6WF

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

MORNING SESSION—10.40: Sporting. 10.50: News service. 11.0: Church service. Baptist Church. 12.30: Reproduced music. 1.0: Close down.

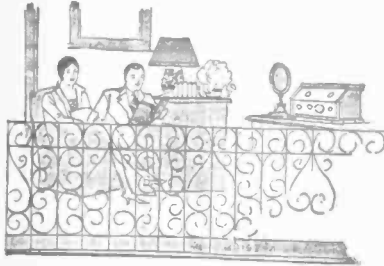
AFTERNOON SESSION—3.0: Chimes. 3.1: Reproduced music. 4.0: Chimes. 4.1: Magic Carpet Series, by Basil Kirke. 4.15: Reproduced music. 5.0: Close down.

EVENING SESSION—6.30: Children's Session, conducted by Mr. Charles Schwab, L.C.M. 7.15: Temperance talk to Younger Set, by Mr. Dent. 7.30: Church service. Seventh Day Adventist. 8.45: Church service, arranged by Bert. Howell, broadcast from the Ambassadors' Theatre, including assisting artists, Ambassadors' Orchestra, Les Waldron at the console of the grand organ, Rex Harrison, New Zealand's greatest baritone. 10.30: Close down.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldgs., Elizabeth Street, Hobart (Wavelength, 375 Metres).

11.0: Morning church service. 12.15: Close. 3.30: A concert, arranged by the Pleasant Sunday Afternoon Association. 4.30: Close. 6.15: Children's chorus singing. 6.45: Bertha Southey, Bramman will read a poem to the wee folk: "To-day or tomorrow" 7.0: Evening church service, Chalmers Presbyterian Church. 9.45: News. 9.50: Close.



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Local Programmes, Monday, October 28

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 431 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: Malls 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: Price Dunlavy at the Grand Organ.
- 11.0: Household Helps—Cooking, by Miss Ruth Furst.
- 11.10: Cables (copyright). A.P.A. and "Sun"—"Herald" news service.
- 11.15: Morning devotion.
- 11.30: Austradio musical reproduction.
- 11.53: British official wireless press.
- 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 to 2.30 p.m.

- 1.0: From the Aeolian Hall—Lunch-hour recital, arranged by the Alexander Sverjensky Musical Ensemble.
- 2.0: Stock Exchange, second call.

- 2.2: A glance at the "Daily Telegraph Pictorial."
- 2.7: A morning story.
- 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: Lorna King, pianist—
 - (a) "Hot Ivories" (Sinatra).
 - (b) "Demande-et-Repouse" (Coleridge-Taylor).
- 2.37: Fosse Brakell, contralto—
 - (a) "Hark What I Tell To Thee" (Hadyn).
 - (b) "Thoughts Have Wings" (Lehmann).
- 2.44: The 2FC Instrumental Trio.
- 2.54: Lorna King, pianist—
 - (a) "Fashionette" (King).
 - (b) "My Fleurette" (Kimbrough).
- 3.0: Educational session, under the auspices of the Department of Public Instruction—
 - R. G. Henderson, Examiner in English, "Imitative Rhythms in Poetry."
 - 3.15: H. F. Treherne, Supervisor of Music, "Imitative Rhythms in Music."
 - 3.30: The 2FC Instrumental Trio.
 - 3.42: Fosse Brakell, contralto—
 - (a) "Paint and Painter is My Slumber" (Brahms).
 - (b) "Sapphic Ode" (Brahms).
 - (c) "Lullaby" (Brahms).
 - 3.49: The 2FC Instrumental Trio.
 - 4.0: W. S. Reay will speak on "Moliere—The Shakespeare of French Comedy."
 - 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: Children's "Goodnight" stories, told by the "Hello Man," assisted by Aunt Eily.
- 6.45: Dinner-hour music.
- 7.30: A.B.C. Sporting Service.
- 7.37: Special country session; Stock Exchange resume; markets; weather forecast; late news from the "Sun"; truck bookings.
- 7.58: To-night's presentation.

THE EVENING PRESENTATION—8 to 11.30 p.m.

- 2FC's programme on Monday night is a classic feature, which lovers of good music look forward to. To-night we offer the complete choral concert, relayed from Melbourne, by the Victorian Liedertafel, in association with the Melbourne University Orchestra, conducted by Professor Bernard Heinze.
- 8.0: "Big Ben." Announcing a classic programme.
- 8.1: Alexander Sverjensky in a pianoforte recital—
 - "Litany" (Schubert-Godowski).
 - Three "Etudes Tableaux" (Rachmaninoff).
 - "Eugene Oneginne," Paraphrase (Tschalkowski-Pabst).
- 8.29: Foreword.
- 8.30: Relay from 3LO, Melbourne—Victorian Liedertafel. The Melbourne University Symphony Orchestra, conducted by Professor Bernard Heinze.
- 10.0: From the Studio—F. H. Raward will speak on "Boston—the American Athens."
- 10.15: Announcements; late official weather forecast.
- 10.20: From the ballroom of the Oriental—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 to 11 a.m.

- 8.15: G.P.O. chimes and announcements.
- 8.16: Music for every Mood.
- 8.40: Meteorological data for the country.
- 8.45: Malls and shipping information.
- 8.50: Memory melodies.
- 9.0: This morning's story.
- 9.30: A musical interlude.
- 9.40: British official wireless press.
- 9.45: New music.

- 10.5: News from the "Daily Telegraph Pictorial."
- 10.10: Austradio musical reproduction.
- 10.40: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
- 11.0: G.P.O. chimes. Close down.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements.
- 12.2: Lunch-hour music.
- 1.0: Afternoon news from the "Sun."
- 1.5: Studio music.
- 1.15: Women's Interest talk—Miss Proctor, "Colour Healing."
- 1.30: Austradio musical reproduction.
- 2.0: J. Knight Barnett at the Wurlitzer.
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.

- 2.30: Business Efficiency Talk—C. R. Hall, "Made in Australia Exhibition."
- 2.45: Rev. Richard Piper—"The Lesson it Teaches."
- 3.0: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
- 3.12: Robert Scott, tenor—
 - (a) "Onaway, Awake, Beloved" (Coleridge-Taylor).
 - (b) "My Lady Sleeps" (Cyril Scott).
- 3.19: Modern music.
- 3.22: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
- 3.32: Frieda Paull, 'cellist—
 - (a) "Gavotte" (Gabriel-Marie).
 - (b) "Cantilena" (Goiterman).
- 3.39: Songs of to-day.
- 3.42: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
- 3.52: From the Studio—May Sharpe, songs at the piano—
 - (a) "I'll always be in Love with You" (Stept).
 - (b) "Lord Luv 'Im" (Hastings).
 - (c) "Melody out of the Sky" (Donaldson) piano novelty, vocal interlude.
- 4.0: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
- 4.12: Robert Scott, tenor—
 - (a) "Serenade" (Cyril Scott).
 - (b) "Passing By" (Purcell).
- 4.19: Frieda Paull, 'cellist—
 - (a) "Gavotte e Minuette" (Stefano Galcott).
 - (b) "Lullaby" (Ernest Claude).
- 4.26: May Sharpe, songs at the piano—
 - (a) "The Song of Love" (De Sylva, Brown, Henderson, and Conrad).
 - (b) "Precious Little Thing Called Love" (Davis and Coote), piano novelty, vocal interlude.
- 4.33: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
- 4.45: From the studio—The Trade Hour—Demonstration music.
- 5.45: Weather information. Close down.

THE DINNER HOUR—8.15 to 7.55 p.m.

- 6.15: Dinner music.
- 6.45: The Younger Set Session—Boys' Aero Club, conducted by Mr. Norman Lyons.
- 7.5: Studio music: the Country Man's Market Session; Wool, wheat, stock, farm produce, fruit and vegetable markets.
- 7.30: Austradio musical reproduction.
- 7.55: What's on the air to-night?

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

- The wrestling is 2BL's big feature on Monday night in contrast with the classic programme that 2FC offers listeners. For those listeners who do not like sport, we would remind them that 2FC is relaying from Melbourne the Victorian Liedertafel programme, in association with the Melbourne University Orchestra, conducted by Professor Bernard Heinze. Between 8 and 8.30 Alexander Sverjensky will give a pianoforte recital.
- 8.0: P. C. Spouse, champion mouth organist of Australasia—
 - (a) "Quick March Medley."
 - (b) "Plantation Melodies."
- 8.7: Bert Gilbert continues his "Adventures of Hopcroft" Series.

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8.22: Frisco Novelty Duo, patter and harmony—
 (a) "You See My Neighbor's Daughter" (Levey)
 (b) "The Guy that put the 'I' in Ireland" (Byron)
 8.30: Palmistra, the Wizard of the Piano—
 (a) "Fashinette" (Jack Glogau).
 (b) "Spinal Chords" (Silvio de Rienzo).
 8.35: From the Stadium—
 The wrestling contest by the A.B.C. sporting expert.
 10.0: From the Studio—
 P. C. Spouse, Champion Mournth Organist of Australasia—
 (a) "Medley of Scotch Reels."
 (b) "Selection of Classics."
 10.7: Frisco Novelty Duo, in patter and harmony—
 (a) "Bird's Eye View" (whistling chorus) (Donaldson).
 (b) "I Lift up My Finger and I Sav Tweet, Tweet" (Saxon).
 10.17: Palmistra, the Wizard of the Piano—
 (a) "What a Pity" (Feldkamp).
 (b) "Sleepy Piano" (Mayerl).
 10.25: Late news from the "Sun." Late weather forecast.
 10.30: National Anthem. Close down

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 Mrs. W. J. Stelzer, housekeeping hints and shopping guide; talk by Mrs. Jordan. 11.30: Address by Miss Mary Rivett, "Ideals and Education." 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. 5.15: Children's session by Uncle George. 7.0: Music. 7.45: Feature story 8.0: Miss Elsie Condon, contralto. 8.7: Symphony Orchestra. 8.15: Mr. Tom Harrison, baritone. 8.22: Violin solos. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Miss Elsie Brown, soprano. 8.45: Address 9.0: Weather report. 9.1: Symphony Orchestra. 9.10: Miss Elsie Condon, contralto. 9.20: Mr. Heath Burdock, Shakespearian recital. 9.30: Mr. Tom Harrison, baritone. 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: Chimes Music. 1.15: Talk on Homecraft, by Pandora. 1.40: Music and request numbers. 2.30: Close. 4.30: Musical programme
EVENING SESSION.
 5.30: Children's Hour, conducted by Uncle Jack. 8.30: Close. 7.0: Request numbers. 7.45: Radio Talk by Mr. E. Homfray. 8.0: Cello and Violin recital. 9.0: Comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 280 Metres).
MORNING SESSION
 See Friday.
CHILDREN'S SESSION
 6.0: Birthday calls, request numbers, and kiddies' entertainment, by Aunt Jenima and Uncle Bert.
EVENING SESSION
 7.0: Musical interlude. 7.15: Dance music. 7.45: Migrant women's group. 8.0: Overture. 8.8: Tenor solos. 8.15: Dance music by Miss Wright. 8.45: Soprano solo. 9.10: Novelty interlude. 9.10: Selection of latest Parlophone, Columbia, Regal, Brunswick, and Golden Tongue records. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Macquarie Sydney (Wavelength, 295 Metres).
EARLY MORNING SESSION
 7.15: Selections. 8.0: Chimes. 8.1: Music. 8.30: Weather. Close.

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Local Programmes, Tuesday, October 29

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 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: Eric Dunlavy at the Grand Organ.
- 11.0: Household Helps—Hints to Housewives, by Miss Ruth Furst.
- 11.10: Cables (copyright), A.P.A. and "Sun"—"Herald" news service.
- 11.15: Morning devotion.
- 11.30: Austradio musical reproduction.
- 11.53: British official wireless press.
- 12.0: "Biz Ben"; Stock Exchange and metal quotations.
- 12.5: Illustrated music lecture—Walter Thorman, "Debussy and His Modern French Music."
- 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-hour music.
- 2.0: Stock Exchange, second call.
- 2.2: A glance at the afternoon "Sun."
- 2.7: Popular Education—A lecturer from the Museum, W. Boardman, "Animal Camouflage."
- 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The 2FC Instrumental Trio.
- 2.42: Dora Lindsay, Scottish comedienne—(a) "Sandy, the Dandy" (Gamble).
- (b) "Scotch Tongue Twister" (Lindsay).
- 2.49: Horace Keats, pianist—Suite, "In a Fairy Realm" (Ketelbey).
- 2.56: The 2FC Instrumental Trio.
- 3.3: Mab Fotheringham, soprano—(a) "There Are Fairies at the Bottom of Our Garden" (Lehmann).
- (b) "The Little Brown Owl" (Sanderson).
- 3.15: The 2FC Instrumental Trio.
- 3.25: Dora Lindsay, Scottish comedienne—"Palais de Dance" (Lindsay).
- 3.32: Horace Keats, pianist—(a) "Dors mon Enfant" (de Beaupuis).
- (b) "Blowing Bubbles" (Fulton).
- (c) "Les Brigands" (Arnold).

3.39: The 2FC Instrumental Trio.

3.52: Mab Fotheringham, soprano—

(a) "God's Lullaby" (Chevalier).

(b) "Mighty Like a Rose" (Nevin).

4.0: Louise Homfrey in "Impressions of a Wanderer."

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: Children's "Goodnight" stories, told by Aunt Willa, assisted by Cousins Gwen and Clarice.

6.45: Dinner-hour music.

7.30: A.B.C. Sporting Service.

7.37: Special country session; Stock Exchange resume; markets; weather forecast; late news from the "Sun"; truck bookings.

7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

Our State-wide Radio Dance Night still continues in popular favor. Consistent dance music is given throughout the evening until 11.30—this provides an excellent opportunity for home dances among radio listeners. A classic programme through 2BL service to-night provides pleasing contrast for those listeners who do not care for dancing.

8.0: The Australian Broadcasting Dance Orchestra.

8.12: Charles Lawrence, entertainer.

8.19: The Australian Broadcasting Dance Orchestra.

8.31: Harrison White, banjo solos—

(a) Song, "When Song is Sweet" (Sans-Souci).

(b) Song, "At Dawning" (Cadman).

(c) March, "The Jolly Coppersmith" (Peter).

8.38: The Australian Broadcasting Dance Orchestra.

8.50: Frank Ryan, entertainer—

"Dancing Days" (Ryan).

8.58: The countryman's weather session—

(a) New South Wales forecasts.

(b) Inter-State weather synopsis.

(c) Yachtsman's and fisherman's forecast.

9.0: The Australian Broadcasting Dance Orchestra.

9.12: Harry Crot, baritone—

(a) "Where'er You Walk" (Handel).

(b) "Now Sleeps the Crimson Petal" (Quilter).

(c) "Drinking Song" (Mascagni).

9.19: The Australian Broadcasting Dance Orchestra.

9.31: Tom Williams, violinist—

(a) "When My Dreams Come True" (Berlin).

(b) "I've Always Been In Love With You" (Green and Stent).

(c) "The Toymaker's Dream" (Go'den).

9.38: The Australian Broadcasting Dance Orchestra.

9.50: Margaret Grimshaw, popular vocal—

(a) "When My Dreams Come True" (Berlin).

(b) "Bird of Love Divine" (Wood).

(c) "I've Never Seen a Smile Like Yours" (Johnson and Frazier).

9.57: The Australian Broadcasting Dance Orchestra.

10.9: Margaret Grimshaw, popular vocal—

(a) "That's What Put the Sweet in Home, Sweet Home" (Newman).

(b) Selected.

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 to 11 a.m.

- 8.15: G.P.O. chimes and announcements.
- 8.16: Music for every Mood.
- 8.40: Meteorological data for the country.

- 8.45: Mails and shipping information.
- 8.50: Memory melodies.
- 9.0: This morning's story.
- 9.30: A musical interlude.
- 9.40: British Official Wireless Press.
- 9.45: New music.
- 10.5: News from the "Daily Telegraph Pictorial."
- 10.10: Austradio musical reproduction.
- 10.40: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
- 11.0: G.P.O. chimes. Close down.

MIDDAY SESSION, 12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements.
- 12.2: The Lunch hour music.
- 1.0: Afternoon news from "The Sun."
- 1.5: Studio music.
- 1.15: Women's interest talk, Claire Byrne, "Stammering."
- 1.30: Austradio musical reproduction.
- 2.0: J. Knight Barnett at the Wurlitzer.
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 to 5.45 p.m.

- 2.30: Fred Arlington-Burke will speak on "Historical Travels."
- 2.45: "Magic Carpet" series, Tom Gurr, "Maharatta Country."
- 3.0: Radio rhythm.
- 3.12: Peggy Bell, soprano. (a) "Si mes vers Avaint des Alles" (Hahn).
- (b) "The Lass with the Delicate Air" (A.L.).
- (c) "Stars and Dawn" (Haydn Wood).
- 3.19: The Melody Makers. (a) "I'll Always Be In Love with You" (Ruby).
- (b) "That's You, Baby" (Conrad).
- 3.29: George Browne, baritone. (a) "Jolly Old Cavalier" (Arlie Dix).
- (b) "If I Had You" (Connelly).
- 3.36: Latest dance music.
- 3.46: Peggy Bell, soprano. (a) "Star Vlcino" (Old Italian) (Rosa).
- (b) "The Little Blue Bay" (Del Riego).
- (c) "Sun Flakes" (Montague Phillips).
- 3.53: The Melody Makers. (a) "Pagan Love Song" (Brown).
- (b) "Breakaway" (Conrad).
- 4.3: George Browne, baritone. (a) "The World's All Right" (Weston and Lee).
- (b) "I'll Always Be in Love With You" (Stent).
- 4.10: The Melody Makers, selected.
- 4.20: Austradio musical reproduction.
- 4.45: The trade hour, demonstration music.
- 5.45: Weather information. Close down.

THE DINNER HOUR, 6.15 to 7.55 p.m.

- 6.15: Dinner music.
- 6.45: The younger set session, Girl Guides, conducted by Miss Gwen Varley.
- 7.5: Studio music; the country man's market session; wool, wheat, stock, farm produce, fruit, and vegetable markets.
- 7.30: Austradio musical reproduction
- 7.55: What's on the air to-night?

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

To-night our programme of classic music is under the direction of Mr. G. Vern Barnett, and features song groups by Mimi Gressier and a pianoforte recital by Winifred Burston, flute solos by Neville Amadio, Rene Rich, violinist, will also contribute to the programme. Listeners who prefer lighter entertainment are reminded that it is the dance night from 2FC to-night, and there are song groups and popular instrumental numbers and new stories.

- 8.0: Mimi Gressier, soprano.
- 8.7: Winifred Burston, pianist.
- 8.22: Clement Q. Williams, baritone. (a) "The Forsaken Maiden" (Wolf).
- (b) "To an Ancient Picture" (Wolf).
- 8.29: Rene Rich, violinist. "Fourth Concerto," first movement (Vieuxtemps).
- 8.36: Stanley Clarkson, basso.
- 8.43: Neville Amadio, flute solos. (a) "Suite" (Krantz).
- (b) "Barcarole" (Strelzki).
- 8.50: Clement Q. Williams, baritone.



FRANK RYAN, entertainer, who will be heard from 2FC to-night.

- (a) "How Many Hours I've Wasted" (Wolf).
- (b) "A Commission" (Wolf).
- 8.57: Winifred Burston, pianist.
- 9.9: Mimi Gressler, soprano.
- 9.16: Rene Rich, violinist.
- (a) "Reverie" (Vieuxtemps).
- (b) "Kuyawiak Mazurka" (Wieniawski).
- 9.22: Stanley Clarkson, basso.
- 9.30: Weather information for the man on the land.
- 9.32: Neville Amadio, flute solos.
- (a) "Andante" (Mozart).
- (b) "Am Waldesbach" (Wetzger), request.
- 9.39: George Black continues his series of talks, "In My Anecdoteage."
- 9.54: In lighter vein, we will entertain you with humorous songs and stories.
- 10.25: Late weather report; late news from "The Sun."
- 10.30: Close. National Anthem.

2GB

Theosophical Broadcasting Station, 29 Blich 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 Mrs. W. J. Stelzer. 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. 5.15: Children's session by Uncle George. 6.50: Radio Movie Club session. 7.0: Music. 7.30: Service talk by Sutton's radio doctor. 7.45: Feature story. 8.0: Miss Heather Kinnaird, contralto. 8.7: Instrumental trio. 8.15: Mr. J. Lou Walters, basso. 8.22: Symphony Orchestra. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Miss Mary Mulconry, soprano. 8.43: Cello solos. 8.50: Miss Heather Kinnaird, contralto. 9.0: Weather report. 9.3: Address. 9.15: Instrumental trio. 9.25: Mr. J. Lou Walters, basso. 9.35: Mr. Jack Win and Mr. Heath Burdock, humor. 9.40: Symphony Orchestra. 9.50: Miss Mary Mulconry, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

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

MIDDAY SESSION.

12.30: Request numbers. 1.0: Chimes. Music. 1.15: Talk on Homecraft, by Pandora. 1.40: Music and request numbers. 2.30: Close. 4.30: Musical programme.

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Request numbers. 8.0: Some operatic love scenes. 9.0: Comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

2KY

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

MORNING SESSION
See Friday.

CHILDREN'S SESSION

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

EVENING SESSION

7.0: Musical interlude. 7.15: Sporting feature, turf topics, how they should run tomorrow, by Mr. Geo. A. Davis. 7.45: Request numbers. 8.0: Orchestral selections. 8.10: Women's information service, by Mrs. Gray. 8.25: Baritone solos by Mr. Higgins. 8.33: Pianoforte solos by Mr. Hancock. 8.40: Music and request numbers from the studio. 8.50: Sporting feature, from the ringside of McHugh's Leichhardt Stadium, results of early events, and full description of main 15-round event. 9.40: Dance music from the studio. 10.0: Closing announcements.

2UE

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

For Early Morning Session, Midday Session, and Afternoon Session, see Friday.

EVENING SESSION.

7.15: Dinner music. 7.59: Announcements. 8.0: Chimes. 8.1: Overture, "Selections from Faust." 8.10: Vocal and orchestral selections. 10.15: Close.

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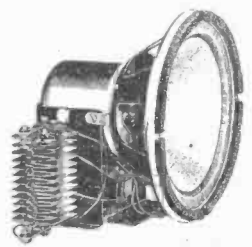
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Interstate Programmes, Tues., Oct. 29

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 to 12.30: See Friday.

MIDDAY SESSION.

1.0 to 1.30: See Friday.

EDUCATIONAL SESSION.

2.0: "Stories from the Operas," with musical illustrations, Miss Lucy Aron, B.A. 2.15: Musical Interlude. 2.30: "Romance of the Slave and Gold Coasts," Mr. A. A. Downs, 2.35: Musical interlude. 2.40: "A Talk in French," Mons. Th. Rouel, B.A. 2.55: Musical interlude.

THE RADIO MATINEE.

3.0: The Studio Light Orchestra "Two Hungarian Dances" (Brahms). 3.8: George Cowley, baritone. "Wie bist du meine Königin" (Brahms), "Mainacht" (Brahms). (Mr. Cowley's songs will be preceded by a short talk on Brahms). 3.19: George Findlay, piano recital. "Waltzes in G Sharp Minor," "Ballade in C Minor." 3.24: Bertha Jørgensen, violin. "Lullaby" (Brahms). 3.30: Charles O'Mara, entertainer, Irish song and story. 3.40: Studio Light Orchestra, plantation patrol. "Ole South" (Zamecnik), "The Old Refrain" (Guitar). 3.48: George Cowley, baritone. "Prelude" (Cyril Scott). "Ka Mate, a Maori war song" (Hikiron). 3.55: George Findlay, piano, four bright, British dance pieces. "Gavotte" (Balfour Gardiner), "Danse Negre" (Cyril Scott). "Valse Capriceuse" (Bridge), "Hornpipe" (Handel-Granger). 4.3: Charles O'Mara, Irish song and story. 4.10: Joseph Barthe, flute. "Canaille and Allegretto" (Harmston). 4.15: Studio Light Orchestra, selection. "The Girl Friend" (Rodgers). 4.30: Close down.

THE CHILDREN'S SESSION.

5.45: "Bobbie Bluegrass." 6.45: "Careers for our Boys and Girls. How to Become an Airman." Mr. Eric Cooper. 6.55: Musical interlude. 7.0: Time signal. 7.1: Countryman's session. 7.25: For the man on the land. Tobacco Culture—Field Work." Mr. T. A. J. Smith. 7.40: News. 7.45: "Public Finance in Australia—(1) The Budget and what it means." Professor D. B. Copland, M.A., D.Sc. (under the auspices of the University Extension Board).

NIGHT SESSION.

8.0: National Broadcasting Orchestra. Overture. "Egmont" (Beethoven). 8.8: Bartleman Male Choir (conductor, F. G. Bartleman), "The Mullaugh Musketeers" (Atkinson), "The Lincolnshire Poacher" (Bantock), "The Martyrs of the Arena" (Laurant de Rille). 8.18: Lloyd Powell, piano. Etudes Nos. 5, 2, and 3. Op. 25 (Chopin). "Liebesleid" (Kreisler-Rachmaninoff). 8.33: Cecil H. J. Williams, "The Night Patrol." 8.45: Elsterwick State School Band (conductor, Mr. Adamson, instructor, Stanley Balnes). Selection of popular airs. 8.50: "Tally-ho!" A hunting scene. Jovial songs, music, and reminiscences. 9.20: A short cello recital. Louis Hattenbach. "Jocunde" (Charpentier), "Wegenald" (Meissinger), "Gavotte Humortique" (Squire), "Mazurkas" (G Minor) (Popper). 9.34: Bartleman Male Choir. "The Gipsy Chorus" from "Il Trovatore" (Verdi), "Swedish Folk Song" (Brahms), "Ring Out, Wild Bells" (Fletcher). 9.43: Elsterwick State School Band, favorite hymns. 9.47: Mollie Mackay, soprano. 9.54: A mystery story, J. Howlett Ross, "The Tell-tale Heart." 10.3: National Broadcasting Orchestra, march, "Pomp and Circumstance" (Elgar). 10.14: Mollie Mackay, soprano. "A Birthday" (Woodman), "A Hushing Song" (Bath). 10.20: News, weather. Eric Welch's selections for the Kyneton races. 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: Music. 8.45: Weather. 9.0: Chimes. 9.1: News. 9.5: Music. 10.0: Chimes. 10.1: British official wireless news. 10.10: Announcements. 10.30: Arnold Coleman at the Wurlitzer.

MIDDAY SESSION.

12.0: Chimes. 12.1: Community Singing, from the Melbourne Town Hall, conductor, Frank Hatherley. 2.0: Chimes.

AFTERNOON SESSION.

2.0: Band: Vesella's Italian Band. 2.4: Bartitone: Michael Bohnen. 2.8: Piano: Leopold Gokowsky. 2.18: Soprano: Grace Moore. 2.22: Band: Vesella's Italian Band. 2.28: Tenor: Franklin Burr. 2.32: Entertainers: The Six Jumping Jacks. 2.38: Comedian: Al. Johnson. 2.41: Piano: Victor Lane. 2.47: Comedian: Al. Johnson. 2.50: Entertainers: The Six Jumping Jacks. 2.56: Frank and James McCravy. 3.0: Request numbers.

MAINLY FOR WOMEN.

3.20: The Baby: Thirst or Hunger? Sister Anne Purcell. 3.35: Musical interlude. 3.40: Useful crafts at home. 3.55: Musical interlude. 4.0: The latest fashions: Madame La Mode. 4.15: Musical reproduction. 5.0: Chimes. 5.1: Musical reproduction. 5.30: Weather. 5.45: Close down.

EVENING SESSION.

6.15: Dinner music. 7.32: Sporting results. 7.35: Latest musical releases. 8.0: Chimes.

NIGHT SESSION.

8.1: Wild Life Afloat, Capt. Donald MacLellan. DANCING AND VARIETY. 8.15: Paul Jeacle and His Band: "Gipsy Joe" (Donaldson), "Fascination Vamp" (Nussbaum). 8.22: Claude Carter, Entertainer: "Sentimental Baby," "He Knows His Groceries." 8.29: Bob Libbes, Trombone Solo: Selected. 8.33: Margery Jacoby, Soprano: "Little Silver Ring" (Chaminade), "A Spirit Flower" (Tipton). 8.40: Gus Quinn, Radio Magician: Have your pack of cards, paper, and pencil in readiness. 8.50: Paul Jeacle and His Band: "Breakaway" (Conrad), "That's You, Baby," "Stockholm Stamp" (Pettes). 9.0: Bert Ray, Comedian, will entertain. 9.8: Claude Jeacle, Tenor: Selected. 9.12: Claude Carter, Entertainer: "Where the Sky Little Violets Grow," "Outside." 9.19: Paul Jeacle and His Band: "T'm Croonin' a Tune" (Donaldson), "Speech" (arr. P. Jeacle), "Sweetheart on Parade." 9.29: Margery Jacoby, Soprano: "Down in the Forest" (Landon Rorald), "The Blackbird's Song" (Cyril Scott). 9.38: Bruce White, Piano: Selected. 9.40: Gus Quinn: More Radio Magic. 9.50: Paul Jeacle and His Band: Popular melodies. 10.0: Weather information and Herald news. 10.10: Bert Ray, Comedian, will again entertain. 10.20: Paul Jeacle and His Band: Latest Hits. 10.30: God Save the King.

4QG

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

For day sessions see Friday.

NIGHT SESSION

8.0: Symphony Orchestral Concert. Group 1. Grand Opera—The 4QG Symphony Orchestra (conductor, Erich John). Overture, "Le Dame Blanche" (Boieldieu). May Jordan (soprano). "Ah fors e lui" (from "Traviata," Verdi). Symphony Orchestra. Selection from "Il Trovatore" (Verdi). J. P. Cornwell (bass). "Prologue from I Pagliacci" (Leoncavallo). Group 2. Miscellaneous—Symphony Orchestra. "Simple Aveu" (Thome), Xylophone Solo. "Mocking Bird" (Stobbel). (Soloist: Frank de Haye). H. Cooper (contralto). "Little Mary Fawcett" (Willy). Symphony Orchestra. "Amaranthus" (Older). "Double Eagle" March (Wagner). May Jordan (soprano). "Vlanelle" (Del Aquila). Symphony Orchestra. "Song" (Strauss). 9.0: Metropolitan Weather Forecast. Movements of the Travelling Dental Clinic. 9.5: Group 3. Classical—Arthur Aldridge (tenor). Recit. and Aria. "Ma Parle." Symphony Orchestra. "Oxford Symphony" (Haydn). (first movement). Hilda Cooper (contralto). "Angels Guard Thee" (Godard). Symphony Orchestra. "Oxford Symphony" (Haydn). ("Menuet" and "Finale"). Group 4. Light Opera—Arthur Aldridge (tenor). "A Spirit Flower" (Campbell-Tipton). Symphony Orchestra. Selection from "L'Idée Time" (Schubert). J. P. Cornwell (bass). Selected. Symphony Orchestra. Overture. "Pique Dame" (Suppe). 10.0: Weather. Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 408 Metres).

MORNING SESSION.

11.15 to 2.0: See Friday.

AFTERNOON SESSION.

3.0 to 4.30: See Friday.

EVENING SESSION.

5.45: Strathalbyn race acceptances. 6.0 to 7.20: See Friday. 7.20: Under the auspices of the Workers' Educational Association, Mr. R. S. Burdon, B.Sc., will speak on "Color in Sky and Cloud and its Causes." 7.35: Mr. R. C. Bad (Assistant Lecturer in English, Adelaide University) will speak. 7.45: Dr. Herbert Basedow, M.P. in an interesting Australian talk.

NIGHT SESSION.

8.0: Chimes. 8.10: A concert from the Hindmarsh Town Hall, in which the following artists will take part—Hindmarsh Municipal Band, Miss D. Jacques, Mr. Walter Alston, Mr. Athol Lykke, Miss Audrey Drew, Miss Elsie Rowe, A.M.U.A. 9.0: Meteorological information, including Semaphore tides. 9.2: Overseas grain report. 10.15: News; weather; sporting, including Strathalbyn race acceptances. 10.30: Dance recordings. 11.0: Close.

(For 6WF and 7ZL See Page 46.)

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RCA - Radiotron

Local Programmes, Wednesday, October 30

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 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: Price Dunlavy at the Grand Organ.
- 11.0: Household Helps—Cooking, by Miss Ruth Furst.
- 11.10: Cables (copyright), A.P.A. and "Sun"—"Herald" news service.
- 11.15: Morning devotion.
- 11.30: Austradio musical reproduction.

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- 11.53: British official wireless press.
- 12.0: "Big Ben"; Stock Exchange and metal quotations.

12.5: Major-General Antill will speak on the "Evacuation of Gallipoli, with Circumstantial Details."

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.
 12.50: From Rosehill—Description of the races in the running. During intervals between races a musical programme will be given from the Studio.

4.35: From the Studio—Complete sporting resume.
 4.45: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Children's "Goodnight" stories, told by the "Hello Man," assisted by Uncle Ted and "Sandy."
- 6.45: Dinner-hour music.
- 7.30: A.B.C. Sporting Service.
- 7.37: Special country session; Stock Exchange resume; markets; weather forecast; late news from the "Sun"; truck bookings.
- 7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

2FC reserves Wednesday night for the radio play of the week, and to-night's offering is by the H. W. Varna Company—"A Hindu Vengeance" (Sheahy). C. N. Baeyertz will continue his series of humorous stories in dialect, there is a pianoforte recital by Lindley Evans, and unusual vocal numbers by Louise Homfrey, lady baritone. Through 2BL service a vividly interesting description will be carried out from the Milson's Point workshop where the construction of the Great North Shore Bridge still progresses.

8.0: From the State Theatre—The State Theatre Orchestra, conducted by Will Prior; Price Dunlavy at the Grand Organ.

8.12: From the Studio—Louise Homfrey, lady baritone—

(a) "When Summer Is Gone" (Wilhite).
 (b) "Laugh, Clown, Laugh" (Florito).

8.20: C. N. Baeyertz continues his series—"Humorous Stories in Dialect."

8.40: Lindley Evans, pianoforte recital—

(a) "Prelude and Fugue" (Bach).
 (b) "Solifegletts" (Bach).
 (c) "Rondo" (Beethoven).

9.0: The countryman's weather session—

(a) New South Wales forecasts.
 (b) Inter-State weather synopsis.
 (c) Yachtsman's and Fisherman's forecast.

9.3: From the State Theatre—The Stage Presentation—

The State Theatre Orchestra, conducted by Will Prior; Price Dunlavy at the Grand Organ.

9.15: From the Studio—H. W. Varna and Company in a Radio Play, entitled "A Hindu Vengeance," by F. Sheahy. Cast:—

Captain Swot H. W. Varna
 Major Ashby H. J. Salier
 Lieut. Wellington William Hume
 Koda Kahn Foster Dean
 Mahb (an orderly) H. de Witte
 Scene: A bungalow on the Anglo-Indian frontier.

9.47: Lindley Evans, pianoforte recital—"Sea Pines" (MacDowell).

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

10.15: From the Studio—Announcements and late official weather forecast.

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

11.30: Close. National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 338 Metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G.P.O. chimes and announcements.
- 8.16: Music for every Mood.
- 8.40: Meteorological data for the country.
- 8.45: Mails and shipping information.
- 8.50: Memory melodies.
- 9.0: This morning's story.
- 9.30: A musical interlude.
- 9.40: British official wireless press.
- 9.45: New music.
- 10.5: News from the "Daily Telegraph Pictorial."
- 10.10: Austradio musical reproduction.
- 10.40: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
- 11.0: G.P.O. chimes. Close down.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements.
- 12.2: Lunch-hour music.
- 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.
- 2.30: Dr. Harold Norrie—
- "Outstanding Personalities in Australian History—Lachlan Macquarie."
- 2.45: Magic Carpet Series—"Storyteller"—"Heroic Tales of the Sea—Hawkins."
- 3.0: Radio Rhythm.
- 3.12: Nea Hallett, popular vocalist—
- (a) "Redskin" (Zamecnik).
 (b) "When Summer is Gone" (Wilhite).
- 3.19: Dance Music.
- 3.29: Charlotte Robinson, pianist—
- (a) "Impromptu A Flat" (Schubert).
 (b) "Witches Dance" (M'Dowell).
- 3.37: Dismal Desmond, comedian—"Tortoises" (Burnaby and Arphorp).
- 3.44: Modern music.
- 3.54: Nea Hallett, popular vocalist—
- (a) "My Desire" (Cadman).
 (b) "My Dear" (Kahn).
- 4.1: Charlotte Robinson, pianist—
- (a) "Berceuse" (Faure).
 (b) "Seguidillas" (Albeniz).
- 4.9: Memory Melodies.
- 4.19: Dismal Desmond, comedian—
- (a) "I Wonder Will She Love Me When I'm Old" (McCarthy).
 (b) "I Don't Want My Cigar to Go Out" (Leo).
- 4.26: Dance numbers.
- 4.45: The Trade Hour. Demonstration music.
- 5.45: Weather information. Close down.
- THE DINNER HOUR—6.15 to 7.55 p.m.**
- 6.15: Dinner music.
- 6.45: The Younger Set Session—Boys' Radio Club, conducted by Mr. Norman Lyons.
- 7.5: A talk on "Bridge," by Graham Kent.
- 7.20: The Country Man's Market Session. Wool, wheat, stock, farm produce, fruit, and vegetable markets.
- 7.30: Austradio musical reproduction.
- 7.55: What's on the air to-night.

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

To-night our feature is one of those "unusual" things which listeners clamor for. Something quite out of the ordinary. Something which has never been done before—a description from the Milson's Point workshops of the steadily-growing Great North Shore Bridge. Through 2FC service there are songs, pianoforte recital, a new radio play and humorous stories in dialect, told by C. N. Baeyertz.

8.0: From Milson's Point—the workshops of Dorman Long, and Co. Ltd. Where the material for the North Shore Bridge is being fabricated. Dr. Bradfield, C. F. Hall, and Norman Lyons will convey to listeners some idea of how the bridge material is being prepared for its final assembling.

- 9.0: From the Studio—Fred Gooch, entertainer at the piano—"Jim's Philosophy" (Gooch).
- 9.10: Norman Martin, cellist—"Sonata—1st Movement" (Lalo).

- 9.18: May Webster and Paul Daley, entertainers.
- 9.28: Weather information for the man or the land.
- 9.30: Fred Gooch, entertainer at the piano—
"Life's Problems" (Gooch).
- 9.40: Norman Martin, 'cellist—
(a) "Serenade," from "The Wand of Youth" (Edward Elgar).
(b) Andante Cantabile" (Cesar Cui).
- 9.48: May Webster and Paul Daley, entertainers.
- 10.0: Austradio musical reproduction.
- 10.25: Late news from the "Sun." Late weather.
- 10.30: National Anthem. Close.

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 Mrs. Stelzer. 11.15: Talk by Mrs. Jordan. 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. 5.15: Children's session by Uncle George. 6.50: M.-G.-M. Radio Movie Club session. 7.0: Music. 7.45: Feature story. 8.0: Miss Mary Neal, contralto. 8.7: Instrumental quintette. 8.15: Mr. Charles Smythe, basso. 8.23: Symphony Orchestra. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Miss Gwen Selva, soprano. 8.45: Cornet solos. 8.53: Miss Mary Neal, contralto. 9.0: Weather report. 9.1: Address. 9.15: Instrumental quintette. 9.25: Mr. Charles Smythe, basso. 9.35: Mr. Jack Win and Mr. Heath Burdock. 9.40: Symphony Orchestra. 9.50: Miss Gwen Selva, 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: Chimes. Music. 1.15: Talk on Homecraft, by Pandora. 1.40: Music and request numbers. 2.30: Close. 4.30: Musical programme

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Request numbers. 8.0: Recital of songs by Mr. Alfred O'Shea. 9.0: Comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

2KY

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

MORNING SESSION

See Friday.

CHILDREN'S SESSION

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

EVENING SESSION

7.0: Musical interlude. 7.15: Sporting feature, complete review of to-day's racing, by Mr. Geo. A. Davis. 7.40: Health feature, by Northey du Maurier. 8.0: Hawaiian steel guitar selections. 8.15: Al. Rosenberg, novelty pianist. 8.30: Banjo solos, by Master Harry Weir. 8.36: Al. Rosenberg at the piano. 9.10: Sporting feature, presented by Tooth and Co., Ltd., Kent Brewery, from Sydney Stadium, full description of main 15-round event. 9.50: Music from the studio. 10.0: Closing announcements.

2UE

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

EARLY MORNING SESSION

7.15: Orchestral items. 7.59: Announcements. 8.0: Chimes. 8.1: Music. 8.30: Weather. Close.

EVENING SESSION.

7.15: Orchestral music. 8.0: Chimes. 8.1: Overture, "Il Trovatore." 8.10: Orchestral and vocal programme. 10.15: Close.



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Interstate Programmes, Wed., Oct. 30

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 311 Metres).
7.0 to 8.15: See Friday.

MORNING SESSION.

10.30 to 12.30: See Friday.
MIDDAY SESSION.
1.0 to 1.30: See Friday.
EDUCATIONAL SESSION.
2.0: Reading, "An Adventure at Sea," Mr. John Coyne. 2.13: Description of hurdle race, 2 miles. Kyneton races, by Eric Welch. 2.20: "Rambles in the Bush," Mr. Charles Daley. 2.35: Musical interlude. 2.43: Description of Novice Handicap, 5 furlongs. Kyneton races, by Eric Welch. 2.50: "How Our Laws are Made," Hon. J. H. Keating. L.L.B.

RADIO MATINEE.

3.5: Paul Jeacle and his band, "Carmen Capers" (Black). "Underneath the Russian Moon" (Gusman). 3.13: Description of Kyneton Handicap, 1 mile, by Eric Welch. 3.20: Mae Seaton, soubrette. "Dance of the Paper Dolls" (Sirus), When My Dreams Come True" (Berlin). 3.27: Paul Jeacle and his band, "Heigh, Ho, Everybody Heigho" (Woods). "Hard to Get" (Meyer). 3.33: Etta Bernard, contralto, "Hearts Haven" (Phillips). "Swallow Song" (Sanderson). 3.40: George Bodley, saxophone solo, selected. 3.43: Description of Handicap Trot, 1 mile 3 furlongs. Kyneton races, by Eric Welch. 3.50: Paul Jeacle and his band, "Bolshevik" (Jaffe). "I'm Bringing a Good Red Rose" (Kahn). 4.13: A comedy sketch, "Big Sister," by Norman McKinnel. Ethel Fraser, Mrs. Maurice Dudley; Dick Graham, Arthur J. Fay. Scene, a sitting-room in Ethel's home. 4.20: Mae Seaton, soubrette. "Goodness Gracious Gracie" (Cazen). "Sweetheart of All My Dreams" (Fitch). 4.27: Paul Jeacle and his band, request numbers. 4.33: Etta Bernard, contralto, "Hinemos's Love Song" (James), selected. 4.40: Horrie Sheehan, trumpet, selected. 4.43: Description of Kyneton Purse, 6 furlongs. Kyneton races, by Eric Welch. 4.50: Close down.

THE CHILDREN'S CORNER.

5.45: "Little Miss Kookaburra."
EVENING SESSION.
6.35: Musical interlude. 6.45: French talk by Madame Beward. 6.55: Musical interlude. 7.0: Melbourne Observatory time signal. 7.1: Countryman's session. 7.25: "Modern Etchels—the Effect of Hardening and Tempering," Professor J. Neill Greenwood D.Sc. 7.40: News service. 7.45: "Doing Strange Things in Out-of-the-way Places—Peering at Broome," Mr. H. L. Richardson. 8.0: Time signal.

NIGHT SESSION.

8.1: One hour of music by the masters, arranged by Professor Bernard Heinze.
9.0: The Venetian Four, "All Kinds of Women," "Calm as the Sea."
9.8: Percy Cody, trumpet solo. "My Dreams" (Tosti).
9.12: Frederick Whitlow, entertainer, character monologue, "I Don't Mind" (William Wallace); monologue, "Do You Remember" (Peter Chayney).
9.30: A Spanish musical burlesque. "Pedro the Treador," Pedro, the famous bull-fighter, comes to the village and captures the hearts of all the ladies. But the bull catches him when he's not looking. Exit Pedro.
9.51: The Versatile Four, "Sympathy Waltz," "The Navy."
10.0: National Broadcasting Orchestra. Selection, "La Traviata" (Verdi).
10.10: Frederick Whitlow, entertainer, character monologue, "Grandfather" (Herbert Jordan); monologue, "Peg Away" (Hamblen).
10.18: News; weather.
10.30: The Rex Dance Band.
11.30: God Save the King.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 311 Metres).

MORNING SESSION.

8.15 to 11.0: See Friday.
MIDDAY SESSION.
12.0: Chimes. 12.1: Home Cookery, Miss Avis MacLachlan. 12.15: Organ recital, from the Melbourne Town Hall, Dr. W. G. Price. 12.45: Luncheon music. 2.0: Chimes.

AFTERNOON SESSION.

2.0: Quartette: Budapest String Quartette. 2.3: Soprano: Elsie Sutaby. 2.12: Piano and Violin: William Primrose and Isold Menges. 2.20: Baritone: Peter Dawson. 2.24: Orchestral: Reginald King and His Orchestra. 2.28: Comedian: Johnny Marvin. 2.32: Orchestral: Jack Hilton and His Orchestra. 2.36: Baritone: Peter Dawson. 2.40: Violin: Fritz Kreisler. 2.44: Comedian: Johnny Marvin. 2.48: Orchestral: Jack Hilton and His Orchestra. 2.52: Entertainers: The Revelers. 2.56: Band: Coldstream Guards' Band. 3.0: Request numbers. 3.20: The Pre-school Child: Creating a love for music, Miss M. Luth. 3.35: Musical interlude. 3.40: Home Management: Economy of Good Carving, Miss Kathleen Beningfield. 3.55: Musical interlude. 4.0: Home Life in Other Countries: Country Towns of U.S.A., Dr. Cecil Greig. 4.15: Musical reproduction. 5.0: Chimes. 5.1: Music. 5.30: Weather. 5.45: Close down.

EVENING SESSION.

6.15: Dinner music. 7.32: Sporting. 7.35: Latest musical releases. 8.0: Chimes.

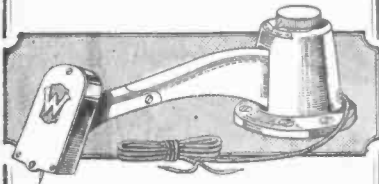
NIGHT SESSION.

8.1: Why We Behave as Human Beings: Imagination. Prof. J. A. Gunn, M.A., B.Sc., Ph.D.

The World's Finest Artists

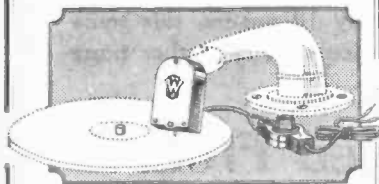
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8.15: Coburg City Band: Selection, "La Traviata" (Verdi).
8.33: Coburg City Band: Waltz, "Smiles, then burlesque, "Radio Switch." By which we will cross over to the Looney Valley Racecourse, where Coffee Cup is a hot favorite for the Derby; then to the Zoo; the By Jove Theatre; and back to Station Wait'o for a bed-time story.
8.53: Coburg City Band: Waltz, "Smiles then Kisses" (Ancliffe).
9.0: Veronica Cox, Soprano: "With a Water Lily" (Verdi). "Two Brown Eyes" (Grieg).
9.7: Edna Davis, Xylophone: "Light Cavalry" (Suppe). "Mystery Farm" (Wallis).
9.13: Norman Christensen, Tenor: "The Sun God" (Jaines), "I Know of Two Bright Eyes" (Clutsan).
9.20: Coburg City Band: Fox-trot, "The Toy-maker's Dream" (Golden); march, "National Emblem" (Bagley).
9.28: One-act Play, "Admiral Peters" (W. W. Jacobs) (produced by Catherine Neill). George Burtons (a naval pensioner); Thomas Leslie; Joe Stiles (his old mesmate); John Matthews; Mrs. Burton (a widow), Catherine Neill.
9.43: Edna Davis, Xylophone: "Ave Maria" (Schubert), "Kiddle's Cabaret" (Sizemore).
9.50: Veronica Cox, Soprano: "The Valley of Laughter" (Sanderson), "The Forest Lullaby" (Baynon).
9.57: Coburg City Band: Cornet solo, "Lady Divine" (Kouty-Shlikret).
10.2: Weather information and Herald news.
10.12: Norman Christensen, Tenor: "I Hear a Trumpet at Eve" (Zadman), "Love Abiding" (Jordan).
10.19: Coburg City Band: Selections, "Recollections of England" (Rimmer).
10.30: God Save the King.

4QG

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

For day sessions, see Friday.

NIGHT SESSION

8.0: The Brisbane Apollo Club's annual concert will be relayed from the Exhibition Hall, Brisbane.
10.0: From the studio. 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 4.30: See Friday.

EVENING SESSION.

6.0 to 7.20: See Friday. 7.40: Rev. E. S. Kiek will speak. 7.55: An address to Boy Scouts.

NIGHT SESSION.

8.5: Mr. George Mead will speak on his attempt on Adelaide to Melbourne cycling record, which he will commence to-morrow, under the auspices of 5CL.
8.10: Old-time dance night—waltz, "Supplication."
8.17: Old-time choruses by the Madrigal Singers. "Juanita," "Who's That A-calling?"
8.22: Marine fourstep, "Here We Are Again."
8.33: Gordon Hele, baritone—selected.
8.37: Barn dance, "Mr. Boose."
8.44: Cheerios.
8.45: Marcella, "Walking Home with Angeline."
8.51: Phyllis Evered, contralto—selected.
8.54: Waltz, "Destiny."
9.1: Meteorological information, including Semaphore tides.
9.2: Overseas grain report.
9.3: Old-time choruses, by the Madrigal Singers—"Will Ye No Come Back Again," "Oft in the Stilly Night."
9.10: Alberts, "Jolly Times."
9.24: Norman Morphet, tenor.
9.28: Schottische, "Mandaly."
9.35: Old-time choruses by the Madrigal Singers—"Sweet and Low," "Loch Lomond."
9.42: Boston four-step, "Variety Tunes."
9.50: Cheerios.
9.52: Waltz, "After the Ball."
10.0: Vocal number—selected.
10.7: Valeta—selected.
10.15: News; weather; sporting, including a resume of Kyneton race results.
10.25: Polka mazurka, "Clamentine."
10.30: Vocal numbers—selected.
10.33: Lancers, "The Variety Lancers."
10.48: Old-time choruses by the Madrigal Singers—"Wrap Me Up in My Old Stable Jacket," "My Bonnie is Over the Ocean."
10.55: Waltz, "Drifting Back to Dreamland."
11.0: Close.

6WF

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

For Early Morning Session, Morning Session, Midday Session, The Radio Matinee, Early and Evening Session, see Friday.

EVENING SESSION—8.0: Chimes. 8.1: Weather. 8.2: Overture. 8.5: Lion stories from the Jungle of Africa. 8.45: Rubeen Beta. 8.52: Announcements. 8.54: Weather. 9.0: Chimes. 9.1: Piano solos, Audrey Dean. 9.7: David Lyle, tenor. 9.16: Zlata Kalmikoff, cellist. 9.32: Mirth and melody by the "Versatile Two." 9.47: David Lyle, tenor. 9.54: Rubeen Beta, crooning baritone. 10.0: Chimes. 10.3: Dance Band. 11.0: Chimes. Close.

(For 7ZL, see Page 46.)

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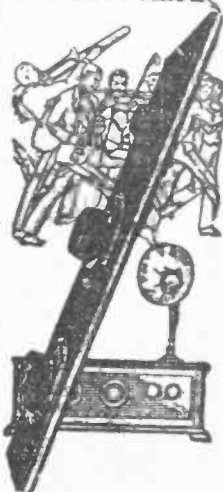
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Local Programmes, Thursday, October 31

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 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: Price Dunlavy at the grand organ.
11.0: Household helps—Domestic notes by Miss Ruth Furst.
11.10: Cables (copyright)—A.P.A. and "Sun" "Herald" news service.
11.15: Morning devotion.
11.30: Austradio musical reproduction.
11.55: British Official Wireless Press.
12.0: "Big Ben" Stock Exchange and Metal quotations.
12.5: A morning 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-hour music.
2.0: Stock Exchange, second call.
2.2: A glance at the afternoon "Sun."
2.7: To-day's acceptances by the A.B.C. racing observer.
2.17: Popular education—C. N. Baeyertz, "Spoken English."

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The 2FC Instrumental Trio.
2.42: Enid Conley, pianoforte solos—
(a) "Scherzo C Sharp Minor" (Chopin).
(b) "Waltz G Flat Major" (Chopin).
2.50: Agnes M'Diarmid, Soprano—
(a) "Shadow Song" (Meyerbeer).
(b) "Aid de Lia" (Debussy).
2.57: The 2FC Instrumental Trio—
3.9: Essie Neal, Violinist—
(a) "Paradise" (Kreisler).
(b) "Menuett" (Mozart).
3.16: Agnes M'Diarmid, soprano—
(a) "Solveig's Song" (Grieg).
(b) "Butterfly Wings" (Phillips).
(c) "The Crown" (Rae).
3.23: The 2FC Instrumental Trio.
3.35: Enid Conley, Pianoforte Solos—
(a) "Waltz D Flat Major" (Chopin).
(b) "Etude F Major" (Chopin).
(c) "Prelude B Flat Major" (Chopin).
(d) "Waltz E Minor" (Chopin).
3.43: The 2FC Instrumental Trio.
3.53: Essie Neal, Violinist—
(a) "Air on G String" (Bach).
(b) "Bartfal Emlek—Hungarian Dance" (Drdla).
(c) "Perfect Day" (Jacobs-Bond).
4.0: Rose Antill de Warren—"One short story—an Australian Bush Lassie."
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: Children's "Good-night" stories, told by Aunt Goodie; Don Ross, entertainer.
7.30: A.B.C. sporting service.
7.37: Special country session—Stock Exchange resume; markets, weather forecast; late news from the "Sun"; truck bookings.
7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

- Thursday night, through 2FC, is devoted to a programme of contrasting sections—Classical, dramatic, vaudeville. Here is entertainment guaranteed to make a wide appeal.
8.0: Alfred Cunningham, baritone, with trio accompaniment—
(a) "Hear me, ye Winds and Waves" (Handel).

- (b) "Rage, Thou Angry Storm" (Benedict).
(c) "Punchinello" (Molloy).
(d) "The Low-back Car" (Old Irish)
8.20: Don Ross, Musical Entertainer—
(a) Bagpipes, "Bonnie Dundee."
"The Campbells are Comin'."
"Barren Rocks of Aden."
"Show me the Way to go Home."
(b) Carillon, "Beautiful Fireside Nights" (Prell).
(c) Occarina, "Ticktacks" (Ross).
8.27: Brunton Gibb—in a sketch—
"A Legend of London" (Michel Arlen).
8.47: Madame Emily Marks and Enid Hynes—in a group of Schumann numbers.
Piano Solos, Enid Hynes—
(a) "Romance F Sharp."
(b) "Aufschwung" (Soaring).
Songs, Madame Emily Marks—
(a) "Widmung" (Devotion).
(b) "Im wunderschönen monat Mai" (Twas in the lovely month of May).
Piano Solos—
(a) "Novelletten."
(b) "Grillen" (Whims).
Songs—
(a) "Frühlingsnacht" (Spring Night).
(b) "Mondnacht" (Moonlight).
(c) "Du bist wie eine Blume" (Thou'rt like a lovely flower).
9.7: The Country Man's weather session—
(a) New South Wales Forecasts.
(b) Inter-State Weather Synopsis.
Yachtsman's and Fisherman's Forecast.
9.9: Harry Linden and Ida Berridge in a vaudeville vignette—
(a) "Georgia" (Linden).
(b) "Moths" (Hargreaves and Damerell).
(c) "He Kissed I Once."
(d) "Travelling Menagerie."
(e) "Barney" (Turner).
9.29: The Langley Trio.
9.49: Dorothy Dunkley, in a short radio sketch—"Paradise Restored."
10.0: From the Hotel Australia: Cec. Morrison's Dance Band.
10.15: From the Studio—Announcements, and late official weather forecast.
10.20: From the Hotel Australia—Cec. Morrison's Dance Band.
11.30: Close; National Anthem.

2BL

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

OPENING SESSION, 8.15 to 11 a.m.

- 8.15: G.P.O. chimes and announcements.
8.16: Music for every mood.
8.40: Meteorological data for the country.
8.45: Mails and shipping information.
8.50: Memory melodies.
9.0: This morning's story.
9.30: A musical interlude.
9.40: British Official Wireless Press.
9.45: News music.
10.5: News from the "Daily Telegraph Pictorial."
10.10: Austradio musical reproduction.
10.40: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
11.0: G.P.O. chimes. Close down.

MIDDAY SESSION, 12 noon to 2.30 p.m.

- 12.0: G.P.O. chimes. Announcements
12.2: Lunch hour music.
1.0: Afternoon news from "The Sun"
1.5: Studio music.
1.15: Women's interest talk. Mrs. Mildred Muscio, "The Age of Marriage."
1.30: Austradio musical reproduction
2.0: J. Knight Barnett at the Wurlitzer.
2.12: Studio music.

AFTERNOON ENTERTAINMENT, 2.30 to 5.45 p.m.

- 2.30: Brunton Gibb, "Random Remarks."
2.45: Magic Carpet series, "Edinburgh—the Pride of Scotland," by F. H. Raward
3.0: Dance music.
3.12: Margaret Hunt, soprano.
(a) "Dreams" (Wagner).
(b) "Winds in the Trees" (Goring Thomas).
3.19: Radio rhythm.
3.30: Madame Dobrinski, monologues.
(a) "A Handy Little Thing" (Montague).
(b) "Three Little Chestnuts" (Page).

- (c) "Mother's Maxims" (Pellissier).
3.37: John Haddock, entertainer.
3.44: Margaret Hunt, soprano.
(a) "Come Home, My Thoughts, from the Hill" (Landon Ronald).
(b) "A Sheepfold Song" (Landon Ronald).
(c) "A Little Winding Road" (Landon Ronald).
3.51: Dance music.
4.1: Madame Dobrinski, monologues.
(a) "Foolish Questions" (Sloane).
(b) "Janie" (Scott-Gatty).
(c) "The Lilac Tree" (Gartlan).
4.8: Memory melodies.
4.18: John Haddock, entertainer.
4.25: Dance music.
4.45: The trade hour, demonstration music.
5.45: Weather information. Close down.

THE DINNER HOUR, 6.15 to 7.55 p.m.

- 6.15: Dinner music.
6.45: The Younger Set session, Girls' Radio Club, conducted by Miss Gwen Varley.
7.5: Studio music.
The Country Man's market session. Wool, wheat, stock, farm produce, fruit, and vegetable markets.
7.30: Austradio musical reproduction.
7.55: What's on the air to-night.

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

- Listeners to 2BL to-night will hear an interesting debate by the Y.M.C.A. Debating Society, "That Youth is Now Supreme." The vorture by Ted Henkel's Band, with Fred Scholl at the Wurlitzer, will be taken from the Capitol, and later on the presentation, 2FC offers a liffle of everything, as Thursday is their "Contrast" night.
8.0: From the Capitol. Ted Henkel's Band. Fred Scholl at the Wurlitzer.
8.20: From the Studio. Mark Ericksen in popular ballads.
8.27: Hal Stead, novelty pianist.
(a) "When Summer is Gone" (Wilhite).
(b) "I'll Always Be in Love with You" (Step).
8.34: A debate by the members of the Y.M.C.A. Debating Society.
"That Youth is Now Supreme."
Affirmative: Messrs. Simpson and Hall.
Opposing: Messrs. Kidson and Snow.

- 9.4: 2BL Instrumental Trio.
(a) "Cantilena" (Bohm).
(b) "Children's Dance" (Lardelli).
9.14: Mark Ericksen in popular ballads.
9.21: Hal Stead, novelty pianist.
(a) "If I Had You" (Shapiro).
(b) "Alone With My Piano" (Valentine).
9.27: Weather information for the man on the land.
9.30: From the Capitol. Stage presentation.
9.45: From the studio. Dorothy Stevens, popular vocalist.
9.52: 2BL Instrumental Trio.
(a) "La Lettre de Manon" (Gillet).
(b) "Heart Wounds" (Grieg).
(c) "Last Spring" (Grieg).
10.3: Dorothy Steven, popular vocalist.
10.10: 2BL Instrumental Trio.
Suite, "Vive la Danse" (Finck).
10.25: Late news from "The Sun."
Announcements.
10.30: Close.

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 Mrs. W. J. Stelzer. 11.30: Music. 11.45: Close down. 1.30: Speeches from the League Club. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan; talk by Miss O'Keeffe, arts and crafts; Miss Craig. 2.50: Movie Know All. 3.0: Labor-saving demonstration from Buckingham's, Ltd. 4.0: Close down. 5.15: Children's session by Uncle George. 6.50: M.-G.-M. Radio Movie Club. 7.0: Music. 7.45: Feature story. 8.0: Miss Edna Lister, contralto. 8.7: Symphony Orchestra. 8.15: Mr. L. Howell tenor. 8.22: Mr. Jack Win and Miss Nora Windle in a humorous sketch. 8.32: Instrumental trio. 8.40: The Two Melodious Maids. 8.47:

Violin solo. 8.52: Miss Edna Lister, contralto. 9.0: Weather report. 9.3: Address. 9.15: Symphony Orchestra. 9.25: Mr. Len Howell, tenor. 9.35: Mr. Jack Win and Miss Nora Windle in a humorous sketch. 9.45: Symphony Orchestra. 9.50: The Two Melodious Maids. 10.0: Instrumental music. 10.30: Close down.

2UW

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

MIDDAY SESSION.

12.30: Request numbers. 1.0: Chimes. Music. 1.15: Talk on Homecraft, by Pandora. 1.40: Music and request numbers. 2.30: Close. 4.30: Musical programme.

EVENING SESSION.

5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Request numbers. 7.45: Garden Talk, by Mr. S. H. Hunt. 8.0: Light Orchestral concert. 9.0: Comments on Foreign Affairs, by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

2KY

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

MORNING SESSION.

See Friday.

CHILDREN'S SESSION

6.0: Birthday calls and request numbers and kiddies' entertainment, by 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, by Mr. G. Mason. 8.17: A humorous interlude. 8.30: Frederick Holt presents a recital of Australian compositions and composers, with musical and vocal illustrations. 8.45: Selection of humorous records. 9.10: Request numbers. 9.40: Continue record recital. 10.40: Closing announcements.

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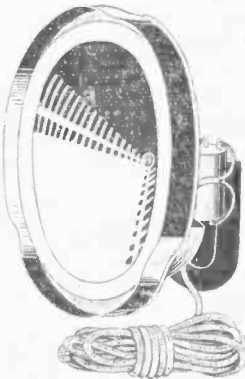
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Interstate Programmes, Thurs., Oct. 31

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 311 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: See Friday.

MORNING SESSION.

10.30 to 12.30: See Friday.

MIDDAY SESSION.

1.0 to 1.30: See Friday.

EDUCATIONAL SESSION.

2.0: "Great Australians—Caroline Chisholm, Emigrants' Friend," Mr. J. Howlett Ross. 2.20: Music explained and illustrated. Dr. A. E. Floyd. 2.40: "Australian Adventures," Captain Donald Maclean. 2.55: Musical interlude.

EVENING SESSION.

6.35: Musical interlude. 6.40: Let's talk about our animals—Melbourne Cup candidates—Mr. Eric Welch. 6.55: Melody broadcast. 7.0: Melbourne Observatory time signal. 7.1: Countryman's session. 7.25: For the man on the land—butter fat, reducing cost of production—Mr. W. J. Yuill. 7.40: News service. 7.45: The latest books. Mr. A. E. McKitcken.

NIGHT SESSION.

8.0: National Broadcasting Orchestra—excerpts from "The Nutcracker Suite" (Tschalkowsky).

8.8: John Hobbs, bass-baritone—"Leah" (Sterndale-Bennett), with orchestral accompaniment. 8.15: You will hear the outstanding personality of the week.

8.30: Paul Jeacle and his band—dance numbers.

8.40: Nell Crane, soprano—selected.

8.43: Paul Jeacle and his band—dance numbers.

8.53: Jock Kerr, Scotch comedian—"A Sup o' Haggis."

8.56: Paul Jeacle and his band—dance number.

9.6: John Hobbs, bass-baritone—"If Wishes Were Houses" (Rowley).

9.9: Paul Jeacle and his band—dance numbers.

9.20: Joe Delaney, tenor—"Everywhere I Go" (Martin).

9.23: Paul Jeacle and his band—dance numbers.

9.33: Nell Crane, "The Personality Singer."

9.36: Paul Jeacle and his band—dance numbers.

9.46: Jock Kerr, Scotch comedian—some funny stories.

9.49: Paul Jeacle and his band—dance numbers.

NEWS SESSION.

10.0: British official wireless news: meteorological information; items of interest.

DANCE MUSIC.

10.10: Paul Jeacle and his band—dance numbers.

10.20: Joe Delaney, tenor—"I Heard You Singing" (Coates).

10.23: Paul Jeacle and his band—dance numbers.

10.33: Nell Crane, "The Personality Singer."

10.36: Paul Jeacle and his band—dance numbers.

10.46: Jock Kerr, Scotch comedian—a little merriment.

10.50: Paul Jeacle and his band—dance numbers.

11.0: Joe Delaney, tenor—"The Garden of Your Heart" (Dorel).

11.3: Paul Jeacle and his band—Dance numbers.

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.

12.0: Chimes. 12.1: Beautifying the Home: Giving Atmosphere to Sunroom and Porch, Miss Lucy Ahon. B.A. 12.15: Fifteen minutes' synopsis. 12.30: Luncheon music. 2.0: Chimes.

AFTERNOON SESSION.

2.1: Band: St. Hilda Colliery Band. 2.12: Tenor Irving Gillette. 2.15: Novelty Trio: Trio Nuovo

2.21: Comedian: Will Fyffe. 2.24: Dance music: Stellar Dance Band. 2.30: Tenor: Irving Gillette.

2.33: Piano: Adam Carroll. 2.40: Comedian: Will Fyffe. 2.43: Orchestral: White House Orchestra. 2.49: Cornet: Sergeant Lessert. 2.55: Dance Music: Raymond Dance Band. 3.0: Request numbers. 3.20: Spring, Miss Hattie Knight. 3.35: Musical interlude.

3.40: Food and Cookery: Electric Cooking, Miss B. Osborne. 3.55: Musical interval. 4.0: Your Health and Appearance: The Fallacy of Slimness, Dr. Cecile Greil.

TRADERS' DEMONSTRATION SESSION.

4.15: Musical reproduction. 4.45: Evensong, transmitted from St. Paul's Cathedral. 5.30: Weather. 5.45: Close.

EVENING SESSION.

6.15: Dinner music. 7.32: Sporting results. Acceptances and barrier positions for the first day of the V.R.C. Spring Meeting, at Flemington, on Saturday, November 2. 7.55: Latest musical releases. 8.0: Chimes.

NIGHT SESSION.

8.1: The Odd Men Out will talk about Why Don't Men go to Church?

8.15: A special studio presentation of "Ricoletto" (Verdi).
10.20: Weather and news.
10.30: God Save the King.

4QG

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

For day sessions, see Friday.

NIGHT SESSION

8.0: The Studio Dance Orchestra. Dance Music. 8.10: Harry Humphreys. A Dame Sketch. "Mrs. Odson and Mrs. Acet" have another friend! chat. 8.25: The Studio Dance Orchestra. Dance Music.

8.35: Jack Lord (tenor). "Songs of Araby" (Clay). "The Little Irish Girl" (Lohr).

8.45: The Studio Dance Orchestra. Dance Music. 9.0: Metropolitan Weather Forecast. Movements of Lighthouse Steamers.

9.5: Jeanette Smales (soprano). "Love's a Merchant" (Molly Carey). "Wake Up" (Phillips).

9.15: The Studio Dance Orchestra. Dance Music. 9.25: Stanley Tamblin (bass). "There's No Home Like the Old Home" (Meta McLean). "Song of the Volga Boatman."

9.35: The Studio Dance Orchestra. Dance Music. 9.45: Grace and Nat Gould. At the Piano and with the Banjo.

10.0: News supplied by the metropolitan dailies. 10.15: The Studio Dance Orchestra. Dance Music. 11.0: Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 400 Metres).

MORNING SESSION.

11.15 to 2.0: See Friday.

AFTERNOON SESSION.

3.0 to 4.30: See Friday.

EVENING SESSION.

6.0 to 7.20: See Friday. 7.20: Dr. G. H. Wright, M.A. 7.35: Miss Laurie McLeod, of Weber, Shorthose, and Rice, on "Physical Culture"—hints to poultry breeders.

NIGHT SESSION.

8.0: Chimes. 8.10: From the Malvern Methodist Church—a concert, arranged by Mr. Fred. Pilgrim. Fred. Pilgrim, organist, "Spring Song" (Hollins); Malvern Choir, "Send Out Thy Light" (Gounod); Phyllis Webb, soprano, "Bird of the Wilderness" (Horsman); Clifford Roennfeldt, "cellist," "Prayer" (Squire); Malvern Choir, "O How Great is Thy Goodness" (Adams); soloist Mr. Ray Wood; Lewis Dawe, tenor, "On-ward Awake, Beloved" (Coleridge-Taylor); Malvern Choir, "Light in Darkness" (Cyril Jenkins), soloist Phyllis Webb; Fred. Pilgrim, organist, "Souvenir" (Lemare); Malvern Choir, "Saviour, Thy Children Keep" (Sullivan).

9.0: Chimes. 9.1: Meteorological information, including Semaphore tides. 9.2: Overseas grain report. 9.3: Announcements.

9.5: From Malvern Methodist Church—Clifford Roennfeldt, "cellist, selected; Malvern Choir, "Seek Ye the Lord" (Roberts), soloist, Lindsay Jessop; Phyllis Webb soprano, "The Heart Worshippers" (Moist), "Now Sleeps the Crimson Petal" (Quilter); Malvern Choir, "How Lovely is Thy Dwelling Place" (Brahms); Fred. Pilgrim, organist—choral, "New Joy of Malvern" (sings) (Bach); march on Handel theme, "Lift Up Your Heads" (Quilman); Clifford Roennfeldt, "cellist, selected; Malvern Choir, "There is a Green Hill" (Gounod), soloist Phyllis Webb; Lewis Dawe, tenor, "How Many Hired Servants" (Sullivan); Malvern Choir, "Who is Like Unto Thee" (Sullivan).

10.0: News; weather. 10.30: Dance recordings. 11.0: Close.

6WF

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

For Early Morning Session, Morning Session, Mid-day Session, and Radio Matinee, Early and Evening Session, see Friday.

EVENING SESSION.—8.0: Chimes. 8.1: Weather. 8.2: A.B.C. Revue Company. 8.40: Laughing competition. Prizes, 1st £2/2, 2nd £1/1, 3rd: Chimes. 9.1: Weather. 9.2: A.B.C. Revue Company. 9.45: Talk, "Magic Carpet Series," by Basil Kirke. 10.0: Chimes. 11.0: Close.

7ZL

Tasmanian Broadcasters Pty., Bursary Bldg., Elizabeth Street, Hobart (Wavelength 518 Metres).

11.30 a.m. Recital. 11.34: Midlands weather forecast. 11.35: Recital. 11.45: Miss Adeline Eager will speak on "Household Hints." 11.50: Recital. 11.55: Tasmanian Stations' 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information; mail notices; housewives' guide. 12.8: Recital. 12.30: News service; announcements. 12.40: Recital. 1.5: British official wireless news; railway auction sales. 1.10: Recital. 1.30: Close down. 3.0: Chimes. 3.1: Recital. 3.4: Weather. 3.5: General programme. 4.30: Close down. 6.15: Children's Hour with "Uncle David" and "The Story Lady." 7.10: Recorded music. 7.30: News. 7.40: Talks. 8.0: Chimes. 8.1: General programme. 9.30: News session. 9.45: Record recital. 10.0: Chimes. 10.1: Close.

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| Power Transformers, with A.C. filament winding, suitable for A.B.C. Power Pack | 32 6 |
| (Or Any Transformer Made Specially to Order.) | |
| Rectifying Valves, Mullard DU10, Philips 373 (as used in Commercial Eliminators) | 17 6 |
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| Heavy 30 henry chokes, 100 mils., low D.C. resistance | 10 6 |
| Hardwick-Field tapped wire-wound resistors, 13,000 ohms | 14 6 |
| Hydra 4 mfd. fixed condensers, 6/9, 2mfd. 4, .5mfd. | 2 6 |
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SPECIAL ANNOUNCEMENT

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FOR THE INFORMATION of manufacturers, dealers, and users of Superheterodyne radio receiving sets, we would state that the well known principle of double detection employed in these receiving sets is covered by Commonwealth Patent No. 16,552/20, and is owned and controlled by Standard Telephones and Cables (Australasia), Limited.

A licence under this patent is therefore required by all manufacturers, dealers, and users of Superheterodyne radio receiving sets, full information regarding which will be supplied on application to

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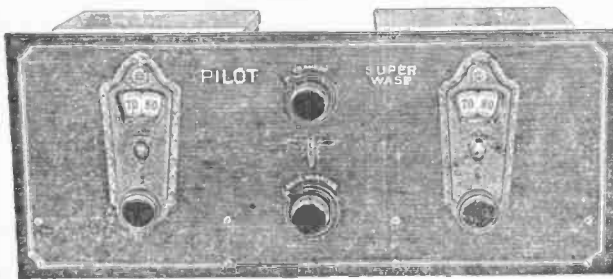
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The Radio Information Service

Under The Direction OF ROSS A HULL M.I.R.E

How Radio Signals Are Heard

P.N.U. (Haberfield): "Please explain in simple language how radio signals are heard by listeners, starting from the broadcasting studio, and finishing up at the receiver."

Answer: The sequence is transmitter, ether and receiver. In the first place, a singer or speaker produces vibrations in the throat. These vibrations disturb the air, and set it vibrating at a corresponding frequency. If vibrating in the studio, these sound waves would strike the drums of our ears, which would also vibrate in sympathy (the drums—not the ears). However, the diaphragm of the microphone (an instrument used to change sound waves into electrical waves or vibrations) is placed in front of the speaker. These vibratory sound waves are then changed to vibratory electrical waves, which are passed through an instrument known as an amplifier (which greatly increases their value), thence to that part of the transmitter known as the oscillator. This is the main part of the transmitter, because it is this that is generating ether waves, waves that are being sent out in all directions. They consist of exceedingly high frequency waves, which disturb the ether around the transmitting aerial. These disturbances in the ether cause ether waves to be set up in all directions.

Impressed on this carrier wave is the vibratory electrical current. When the ether wave strikes our receiving aerial, it passes through the primary coil direct to earth, but as it passes through this coil, electro-magnetic-lines-of-force are set up, which influence the secondary coil. The secondary coil feeds into a detector valve, which cuts out the carrier wave and leaves the electrical vibrations corresponding to the voice. After passing through the detector valve the signal may be heard in the 'phones. But it is still too weak to reproduce properly on a loud-speaker, so we pass the output from the detector to an amplifier. From here the signal passes to a coil, or electro-magnet, in the speaker, and as the signal passes through the coil in electrical impulses, the lines of force attract and repel the diaphragm of the loud-speaker causing sound waves to be set up in the air. These sound waves travel through the air in all directions, and some of them strike the drum of our ear, and thus the signals are heard.

H.A.C. (Waverley):—The only way in which this can be done is to charge each section of the "B" battery (say every six volts) separately. If this is done the charging rate must be decreased, since the charging rate for the small "B" cells is very much lower than for an accumulator. Queries are not answered by post.

C.E.W. (Windora): Regret we have no copies of this circuit. Heartily recommend the Screen Grid Marco Five. Found it an excellent receiver. Philips transformers are perfectly satisfactory for gramophone pickup.

A.M.K. (Armaron):—No more dangerous than any other home-made eliminator, providing all precautions mentioned in the article are taken. One would be rather foolish to place his fingers on various parts of the eliminator when the mains were on. May be dangerous if the constructor was foolish enough to do this. The City Council engineers do not favor the method, because of the danger to thoughtless enthusiasts.

V.S.S. (Camperdown): "Would you kindly give me information on how to build a four-valve amplifier suitable for small concert halls, etc.?" If possible publish a layout wiring diagram."

Answer: A four-valve amplifier is usually undesirable and unnecessary. Build the amplifier described in this issue.

W.D. (Balmain): The circuit is obviously an English one, and is unsuitable for use here, as we have no stations working on the high bands now, both 2FC and 6WP having reduced their wavelengths. Make up a Reinartz or some other simple receiver. Circuits have appeared in queries columns frequently.

"GRID RETURN" (Arielite):—Remove the valve tray and add the r.f. booster unit (see following issue for correction), or build r.f. stage as per Marco Four.

GENERAL: In last week's queries it was mentioned that we still had a number of copies left with the special supplement of call signs etc., as many readers were inquiring. We have since been overwhelmed with requests, and no copies are now left. Readers may however, inquire for copies through these columns.

J.K. (Sydney): See remarks above. Your stamps are being returned. You should be able to get all inter-State stations at fair value at night on our receiver, which is of good make. Perhaps it is faulty. Your aerial quite O.K., according to description. If the set is not selective, then perhaps one of the R.F. valves is faulty.

E.S. (Marbleville): "I built the Countryman's One-valve receiver a few weeks ago (improved circuit) and added a stage of audio. It went so well that I decided to add a stage of R.F. and the result was wonderful for a first set. That Sunday night I counted up all the stations I got in altogether, including 3LO, 3AR, 3CL, 4QG, 7ZL, and 6WP, all loud speaker. There is only one fault with it—I get a lot of interference. 2E gets mixed up with 4QG, and 2FC is the middle of 4R. When 2KY is on I don't seem to be able to hear him out until I get up to 2BL. I have tried a 6001 fixed condenser in the aerial lead, but it does not make it any better. I was wondering if the reaction coil was too close to the secondary. Should I add another audio?"

Answer: Your trouble will be simply eliminated by removing five, or between five and 10, turns from the aerial coil. This coil was made large, owing to the fact that a greater pickup is permissible by interference after this move the primary coil away from the secondary by breaking the coil at the filament point, sawing the former in two, and taking a flexible lead between the two coils, and extra stage of audio in every article on this subject, reducing the interference, but this is doubtful. The alterations to coils would reduce signals to some extent. Glad to hear of your good results.

GENERAL: Every week it becomes necessary to answer a general query in the following wording: Will readers please note that these particulars have been published as many as three or four times in the single issue of queries.

H.H.H. (Remark): See above. It has been repeatedly remarked that the circuit published recently was a Marco, using two screen grid R.F. amplifiers. The second R.F. amplifier can be left out if it is desired to use one only. Use A442, A415, A415, B405, B405 valves. Radiokes coil kit can be used. This was mentioned in every article on the Marco. The coils mentioned can be used in any circuit. You ask why instructions were not given to wind your own coils. Read the article again. You say, "The subject of model aeroplanes must be dreadfully popular, as I haven't seen a single query to date." The queries are answered over the air. You add: "And your James column—funny about as funny as a boll." Further remarks by you: "Now, Mr. Editor, what we want—and I represent the readers—is more circuits, and not foolish things like that Hull's Super Het." That sentence alone shows us a lot. A receiver such as Mr. Hull's was made for the man who wants, and can afford the very best of radio receivers. Next: "A man would want a million to build it, and it's only of use in the city." The set can be built for less if cheaper parts were used. The set can be used in any country town where 240 volts A.C. is supplied, and on batteries where no power is available. All boiled down, you resent the fact that we cater to all classes of readers. You would have us prefer a one-valve or three-valve receiver each week? What about other readers? Several duplicates of the super have been built, with great success. Re your next query, we have frequently advised that the Screen Grid Marco Four WAS NOT published. Your stamps are being returned. We have a copy of the S.G. Marco Five if you desire it.

F.A.B. (Taree): "Please give me details for winding a Reinartz coil, stating gauge wire, number of turns, diameter of former."

Answer: Use 3-inch diameter former, and 24-gauge wire. Primary 15 turns. Space 1/4 inch. Secondary and reaction all one coil. 75 turns. First turn and 47th turn are secondary.

A.G.P. (Melbourne): "I am very interested in the superhet published in your issue Friday, September 1929, and would like to build it for myself. I am at present using a five-valve Neurodyne In-cooperative & Radiokes Standard Neurodyne kit, and your article particularly mentions that the superhet kit is built up on exactly the same kit. Would you tell me what additions or alterations, and in what manner they should be made in order for me to convert my present Neurodyne kit into that mentioned."

Answer: The changes are mentioned in the article. A new primary of 40 turns of 30-gauge wire for L3. New oscillator windings—55 turns of 28 gauge for

L5, 30 turns of 30 gauge for L5, and 30 turns of same wire in a bank inside former for L7. Double silk-covered wire suitable.

A.L.B. (Goulburn): Use a voltage divider. Yes, ordinary lamps could be used. If you know the wattage the resistance is easily found. Watts equals volts times amps. The voltage is 240, therefore the current is watts over 240 (answer in amps.). Resistance equals volts over amps., equals 240 over amps. Example: All you know is that the mains are 240 volts, and that the lamp you have is marked 40 watts. You want to know the resistance. Find the current taken by the lamp first by dividing the power (40 watts) by the voltage (240). That equals 1-6th amp., or approximately 167 mils. Resistance equals E over I, equals 240 over 1-6th, equals 1440 ohms. The commercial appliance is called "voltage divider." Re charger, depends on charging current required. 4000 ohm earphones.

C.R. (Bargo): The valves are specially manufactured for use in R.F. stages, and, therefore, should be perfectly O.K.

W.B.R. (Armaron): "As I am commencing to take up wireless as a hobby, I would like to know if any reader can supply me with a copy of WIRELESS WEEKLY containing the plans and specifications of the Countryman's One-valve set. I shall be pleased to hear from any reader who will forward me this copy on receipt of payment of postage."

Answer: We have no copies left, but the second part of your letter has been published, as some reader may be able to oblige. Details of the Countryman's One, and the Improved Countryman's One were published in queries columns only a week or so ago. Address of inquirer it should say if they be able to assist. Mr. W. B. Ramsay, 32 Cleland Road, Armaron, Sydney, N.S.W.

F.A.C. (Durl): Once more we advise that in order to add a S.G. valve to the Reinartz, or to use a S.G. valve in place of the ordinary three electrode valve of the Marco Four, leave out the second R.F. stage, as published with the Marco S.G. Five.

G.H. (Dulwich Hill): The first amplifier will give much better results.

A.E.H. (Granville): A loose connection, or a faulty valve, or perhaps the aerial is touching some object. See that all valves are well down in their sockets. Move leads about gently to see if they are O.K. Test speaker cords. See other tests, and likely troubles as mentioned in the Trouble Finding Card (see recent supplement).

R.S. (Alexandria): Your neutralising condensers are probably not large enough or they may be connected wrongly. It is not essential that the station should fade right away when the neutralising condenser is adjusted, it should be made up nearly fade away, then when the r.f. valve is placed back in its socket, the station should be at full volume. If this does not happen, the receiver is not properly neutralised.

J.L.L. (Turramurra): Yes, the coil kit can be used.

W.G.E.A. (Mosman): No, sorry we have had no actual experience with this new coil kit, but according to reports it is quite efficient.

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 lay-out and wiring design. Under no circumstances will answers to queries be made by letter or by telephone. All answers will appear in the columns of this department in the order in which they are received.

Box 3368/PP
G.P.O. Sydney

Please enclose the accompanying queries in the information Service Department at 111, Victoria Street, Sydney.

This coupon in order to indicate that I am a bona fide reader.

H.K. (West Wyalong): Use a filter and smoothing circuit on the 240 volt D.C. mains, and use a conon filament lamp for a resistor, in order to drop the voltage to that required. It will be necessary to know the current required. If this is 1 amp., at say 200 volts, the value of the resistor should be R equals E over C, equals 240 over 1, equals 240 ohms. If you have a lamp with the power marked on it, you can find the resistance by dividing the wattage by the voltage, which will give you the current, then dividing the voltage (240) by the current calculated. For instance, say you have a 60 watt lamp. The current will be W over E, equals 60 over 240, equals 1/4 amp.; the resistance will be R equals E over C, equals 240 over 1/4, equals 1060 ohms. If, as in the first example, we only require a 240 ohms resistance, then three of these lamps placed in parallel will give a resistance 333 ohms, and four in parallel will give a resistance of 265 ohms (this latter will be near enough for the purpose). It will be seen that the voltage can be varied by using a number of lamps. If a greater resistance than that offered by one lamp was required, a lamp with a higher resistance could be used, or two or more placed in series. If two lamps in series gave too great resistance, and one lamp too small resistance, two lamps could be placed in parallel, and another lamp placed in series. Thus if one lamp had a resistance of 100 ohms, two in series would have a resistance of 200 ohms, two in parallel would have a resistance of 50 ohms. Three lamp in series parallel would have a resistance of 150 ohms.

W.R.A.R. (Kettering): The eliminator can be used on the Superhet. The maximum "C" voltage required is approximately 30 volts. The receiver has been tried out with the kit mentioned. The coils were made by Radlokes to Mr. Hull's specifications. Instructions for using the UX245 with the Superhet appeared in the article. The Philips filament transformer can be used. These lines should read: "When the two dials are in correct relationship there will be the rumbling of background noises, but immediately they get out of step there will be almost dead silence. As the dials are advanced, they can therefore readily be kept at their correct relative settings if the receiver is tuned to give maximum background noises as the dials are advanced."

F.S.W. (Karang): As far as we are aware there is no reward for receiving G.V.P. We get them at great volume here nightly. You have been misinformed, I think. If £1000 reward had been offered, it would have been claimed long before now, don't worry.

N.R.L. (Coogee): Sorry we have no copies, but will inquire for you. See below.

GENERAL: Can any reader please supply Mr. N.R.L., 62 Melody Street, Coogee, with a copy of WIRELESS WEEKLY containing the Improved Three Valve Reinartz.

A.K. (Rockdale): Yes, but you would have to use short wave condensers and coils. Your best plan would be to keep the set you have, and build a short wave adaptor. Circuits have appeared in Queries volumes.

A.B.C. (Warragul): Would you please let me know through WIRELESS WEEKLY, how to test transformers and condensers (fixed).

Answer: Connect a pair of headphones across a 4 1/2 volt "C" battery and take note of the volume of the click heard. Call this "click 1". Now connect the primary of the transformer in the circuit (anywhere will do so long as the primary is in series with the battery and phones). You should now hear a fairly loud click (click No. 2) not as loud as click No. 1. If the click is as loud as when load as click No. 1, the primary is shorted, it can only just be heard, it shows there is an open circuit. Now connect the secondary of the transformer in series with the battery and phones. The former in series with the battery and phones. The best test for fixed condensers is to use the 4 1/2 volt "C" battery and a torch globe. Connect in series, and if lamp lights, the condenser is faulty. Another way suited for large condensers is to charge condenser by connecting on to fairly high voltage, waiting a few seconds, then shorting across with a screwdriver with the insulated handle. A spark should be seen. If the suspected condenser happens to be shorted the mains fuses will be blown. Try the lamp test first, and if the lamp glows, do not continue with other tests.

W.M.D. (Parramatta): A two volt accumulator can be used on the Countryman's One Valve receiver providing you use a two volt valve. Receiver can be used on short waves providing proper condensers and coils are used. See details of short wave coils and condensers in last week's WIRELESS WEEKLY. The capacity of the tuning condenser for short waves could be between .0005 and .0025 mfd., depending on the coils used. Yes, overseas stations could be heard, but it would be advisable to add at least one stage of audio frequency amplification for best results. Will publish your request below.

GENERAL: Can any reader who has some dud valves of which they wish to dispose let Mr. W. McDonald, 1 Dixon Street, Parramatta, have them? He is willing to pay postage.

A.E.D. (Newcastle): "I have a Marco Four. When using three valves only, the set is perfect, but when I switch all four valves on, there is a continuous whistle. I have tried a .001 and a .0025 fixed condenser across the terminals, but without effect. When I place my fingers across the F and E terminals of the last transformer the whistle stops."

Answer: Depends on whether the "fourth" valve is the r.f. stage or the last amplifier. If the former, try an r.f. choke in the plate lead of the r.f. valve. If the latter (more probable), first, if you are using five or two different makes of transformers, reverse primary connections to one of them, as direction of winding may be different. Try in r.f. choke (if you are not already using one) in series with the condenser across the secondary of the first audio transformer.

H.O.B.I. (Willoughby): Probably owing to the load taken by the eliminator and lights. No simple plate lead of the detector valve. The Countryman's One, with improved circuit and details was republished in queries column a few weeks ago. Sorry no copies of the issue containing this receiver left. As requested, a paragraph has been published. See below.

GENERAL: Can any reader please supply Mr. J. McCrea, 21 Wilton Street, Willoughby, with a copy of WIRELESS WEEKLY, containing the Countryman's One receiver.

T.G. (Craydon): "Will you please instruct me how to make an indoor aerial?"

Answer: Details were published at head of queries last week.

J.H. (Parramatta): The Countryman's One tunes from approximately 200-600 metres. Sorry we have no back numbers of this issue left. Details for the Countryman's One and the Improved Countryman's One appeared in Queries column a few weeks back. See below. Request published.

GENERAL: Can any reader supply Mr. J. Holman, c/o Murrays, 64 Macquarie Street, Parramatta, with a copy of WIRELESS WEEKLY, containing the Countryman's One Valve.

"BAKER" (Via Taree): Please write plainly, and note recent remarks on "noms-de-plume". Primary 25 turns, secondary 70 turns, reaction 40 turns. Use 26 gauge D.C.C. wire. The .00035 condenser is too small. Use the .0005 mfd. condenser specified.

J.L. (Randwick): Hearing of the wonderful performance of the Countryman's One Valve I should like to build it. Unfortunately I was not a subscriber to WIRELESS WEEKLY when this interesting set was published. I would be very much obliged to you if you could supply me with the information as to where and how I could obtain that number of WIRELESS WEEKLY, or the circuit of the receiver.

Answer: We have no copies of the issue describing this receiver left. The two circuits (original and improved Countryman's One Valve) were published in Queries column with attendant details on August 23, 1928. Details on both circuits appeared in WIRELESS WEEKLY, June 21, 1929. A paragraph has been published below. There is really nothing extraordinary about these circuits.

GENERAL: Can any reader please supply Mr. J. Geeman, 102 Botany Road, Randwick, with a copy of WIRELESS WEEKLY containing the Countryman's One Valve receiver.

Y.G. (Rozelle): "How can I make the Go-Getter oscillate properly? When I turn the reaction condenser the set goes into oscillation with a pip."
Answer: Try a 100 ohm variable resistor across the primary of the first transformer. Reduce detector plate voltage.

(2): "How can I make a Reinartz two valve receiver more selective? I already have a fixed condenser in series with the aerial."
Answer: Reduce number of turns on primary, or move primary further away from secondary. May be necessary to use a wavetrap if interference is bad.

(3): "Would it be possible to use a midget condenser or a wavetrap? If so please give number of turns, etc. for coil. State diameter of former, and gauge wire."

Answer: Midget condenser will not help much in your case. A wavetrap would be a much better proposition. Wind 47 turns 24 gauge D.C.C. wire on a three inch diameter former, and connect a .0005 mfd. variable condenser across it. Couple this coil up to the secondary if there is room. If not, disconnect aerial from set, and connect lead to fixed plates of wavetrap condenser. Then connect moving plates of wavetrap condenser to aerial terminal of set.

(4): "Would the Screen Grid Booster Unit be of any use on the Go-Getter?"

Answer: No. This was made for the broadcast band.

(5): "I can't grasp how the A negative terminal of the Booster is connected to earth through the primary of the receiver. This is a lot to ask for, but someone has to help me out."
Answer: Merely connect the last turn of the primary coil to the nearest point on the shield, and soldering lug. Solder a lead from the end of the primary to the soldering lug. Re the resistor. An error appeared here, but the correction was given in the following issue.

(6): "Could you advise me where I could apply to so that I could learn the Morse code?"

Answer: Why not join the "Proving Radio Club"? The organising secretary is Mr. C. Y. Hook, 29 Blairgowrie Street, Dulwich Hill.

A.B.R. (Sydney): It is regretted that you look all that trouble with a circuit diagram and failed to repeat your query. Matters stand, we cannot help you. Will hang on to your letter and diagrams for several weeks, so that you might repeat queries. Please write plainly. Found it very difficult to understand some parts of your letter. Some words important part of any letter should be stated at the head. Therefore, please ask questions first, and give minute details afterwards. Sometimes after giving the inquiry in plain pages of well-nigh unreadable matter we find the query. "What is a grid leak? Can't you imagine our feelings?" See also below.

GENERAL: Though it has been mentioned in these columns many times, numerous readers, when referring to recent queries, do not repeat those queries. Remember, we are not a typewriter's ready agent. Another thing, too, that helps us to your benefit—please enumerate your queries and place queries at head of letter. If it is absolutely necessary for inquirers to tell us how many kittens the dog has rot, or how radio caused baby to swallow a tomato, let's have it in a Safety Valve letter, or at the end of your queries. Note that noms-de-plume should be placed immediately under the name of the querist. It is here that the querist's answerer looks, so that he can publish the initials. Another thing, too, that helps us to your benefit—please do not type long queries in long letters, done on small slips of paper for ease of the querist, or finding a non-de-plume slip on the corner of the paper to pull out the paper from his machine and re-type the name of the querist. It may seem nothing to the average reader, but when there's hundreds of such cases it gets a bit monotonous to the querist. One more groan. The querist who publishes the name of the querist in the name of the querist.

J.M. (Lithgow): The last part of this query applies to you also. Have you noticed the recent advice on Varta 10-volt wet units at 6d per unit. These are economical. Twenty cells would be sufficient. The inquiry could tap off any voltage required in sections of two volts. The coils cannot be used except as r.f. chokes. A 200 honeycomb coil can be used as an r.f. choke. Details of the coils, so that you can make them yourself, are given below.

GENERAL: A few readers have requested details of coils for the Three Valve Screen Grid battery receiver. They are as follows:—Primary coil, 10 turns on three-inch diameter former, using 24-gauge D.C.C. wire. Space, quarter-inch. Wind r.f. second, 47 turns. On another former, using one-inch diameter, wind r.f. plate coil, 32 turns. Another former should be wound with 47 turns for the detector secondary. Space quarter-inch and wind reaction coil, 25 turns.

E.R.N. (Broken Hill): The greatest voltage you would be able to obtain would be 110 volts by this method, and it would probably be lower, owing to the voltage drop through the rectifier. Yes, ordinary bell transformers. Do not recommend the system in your case.

W.J. (Campsie): "Would you please tell me what time VK2HU transmits Morse lessons now, as I cannot locate him on Sunday evenings at 8 o'clock these days?"

Answer: Write to the organising secretary of the "Proving Radio" Club, for whom these lessons were organised. The secretary's address is Mr. C. Y. Hook, 29 Blairgowrie Street, Dulwich Hill.

H.E.C. (Dulwich Hill): The circuit was published since we received your letter, so, no doubt, you have seen it.

E.G. (Burringbar): "If you read the other side of postal note, you will see that payment must be made to a person. Nothing is said about a firm to suggest that in WIRELESS WEEKLY you state to whom postal notes and money orders are to be made payable."

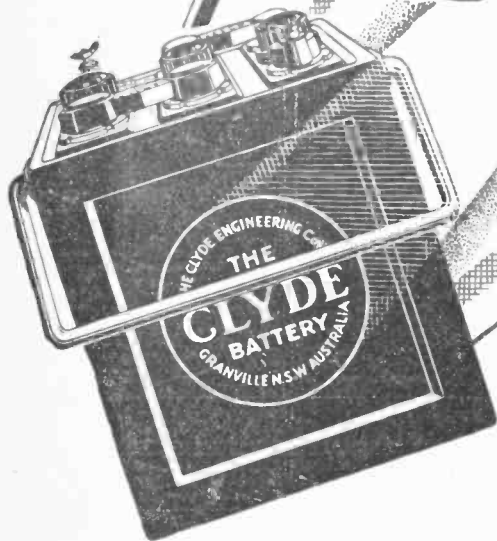
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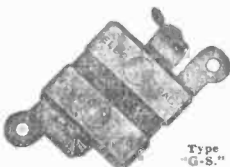
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Answer: Make payable to the Secretary, Wireless Newspapers, Limited, Elizabeth Street, Sydney.

(2) "What valves and transformers can be used in the Marco Four?"

Answer: Any valves with suitable characteristics, and any good transformers can be used. In the Philips' line you can use A42, A45, A45, A49, A49, B405 valves, and Philips' transformers. These are four-volt type, and the Mullard, say, two-volt type, you can use PM1FH, PM1LF, PM1LF, PM2. A lot depends on the filament voltage and plate voltage obtainable. Ferranti transformers are good. In the cheaper types of transformers, the A.W.A. "ideal" is quite efficient. Any good, well-known make can be relied upon to give satisfactory results. If you require greater detail regarding the an accumulator, its voltage and amperage, and source of "B" supply; also if you intend using "C" batteries. Some valves cannot be satisfactorily used without grid bias. The B405 power valve mentioned above, for instance, requires about 30 volts' grid bias at 150 volts.

(2) "Do any WIRELESS WEEKLY readers pick up 6WF, Perth, on a Marco Four? If so, what are the dial readings?"

Answer: The dial readings probably would not correspond in any two sets. Perhaps some reader with a Marco can help you, so your name and address are published.—Mr. F. Grebert, Burringbar. Please send coupon next time. Though your "bonafide" was established, the coupons are required for record purposes.

Y.E.D. (Murwillumbah): The last batch of QSL cards received were as follows:—From Java for VK2JY, VK2CD. From Belgium, VK7GH, VK5HG, VK2RX. From Germany, VK2KJ. From Czechoslovakia, VK5VX, VK5BJ, VK3BD. and two cards returned to VK3PA with wrong call signs. From Austria, for VK3PA, VK7GH, and another card with a wrong call (marked OAES). From Denmark, for VK5ON, VK3WX, VK3BG, VK3PM, VK7LJ, VK3BG, VK5JH, VK3PA. From England, for W. A. Bonsefield, Tasmania, and for VK2RX.

W.G. (Bexley): Of course. Screen-grid valves or a.c. valves and power pack, additional audio or r.f. stages, proper variable condensers, etc. No firm will undertake the alterations, since, as advised in your previous query, the set is sealed, and has to be broken before you can remove some of the parts. This is what I was trying to convey before. The parts are of German manufacture, and are not replaceable here with the same type. Other types are available, but they are useless for this set, because they are not of the correct dimensions. Everything in this receiver is miniature. The proper place to refer this set is the Electric Trading Co. The R.F. Booster Unit could be used in conjunction with the set, but note correction that appeared before the following issue with regard to the resistor. An additional audio stage could be added as a unit, since the audio stages (two in this receiver) are resistance coupled. The aerial should be about 80 feet long, 40 feet high, of 1/22 gauge enamelled wire, for best results.

J.H.W. (Haberfeld): Sorry, we have no copies left, but a request is made below. A licence is necessary before you can build and test receivers for commercial purposes.

GENERAL: Can any reader please supply Mr. J. H. Woods with a copy of WIRELESS WEEKLY containing the Improved Reinartz receiver? His address is 50 Northcote Street, Haberfeld.

H.B. (Brisbane): Your letter in connection with aerodynamics has been passed on to Mr. Lyons, of 2BL, who is conducting this session over the air.

W.B. (Jerry's Plains): "It may interest some s.w. folk to know that the Russian station, RABP, transmitting on approximately 70 metres, is giving an information service in English every night at about 8.15 p.m., S.M.T. The announcer (a woman) said, 'I will now give you the correct Tobias time. It is now 13 o'clock and 14 minutes.' Our Sydney Mean Time was then 8.50 p.m. Can you explain this?"

Answer: Thanks for the information. The time hours are not run in series of twelve, but a complete run of twenty-four. Thus 12 hours is noon. Twenty-four hours is midnight. Twenty-three hours is 11 p.m. Eleven hours is 11 a.m. Twenty-two hours is 10 p.m. and so on. See complete list and method of calculating, together with chart of foreign times, as compared with Sydney, in last week's WIRELESS WEEKLY (special short-wave number).

U.W. (Sydney): "Thanks for the r.f. Booster Unit. I was surprised when I hooked it up. Thought I had a "B" class local station, and it turned out to be 4GG, Brisbane!"

Answer: Pleased to hear of your success.

C.L.L. (South Australia): This crystal circuit was submitted to us by a reader, who claimed long-distance reception on it. It would be worthy of trial, since a number of readers have written, advising good results, since the circuit was published in quietest column.

K.T.H. (no address): The first circuit is O.K. for both short and long waves. By pulling over the switch shown in your diagram, the .0025 mfd. condenser is cut out of the circuit, and the set can be used for the broadcast band. When the switch is open the .0025 fixed condenser and the .005 mfd. condenser are in series (total capacity is then about .0016 mfd.), and the capacity arrangement is then O.K. for short-wave tuning. Details of coils, etc., were published in WIRELESS WEEKLY with the article on this receiver. The second circuit is a Reinartz, and this can only be used on short-waves by using small condensers and coils. If it is desired to satisfactorily use the receiver on the broadcast band, larger condensers and coils must be used. In the Reinartz circuit, the capacity of the condensers for short-wave work could be 01 .0014 mfd., C2, .0025 mfd. If it was desired to use valve base coils, you could look up the detailed information on number of turns, capacity of tuning condensers, and bands covered, etc., in an answer to a query a few weeks back. See also last week's issue.

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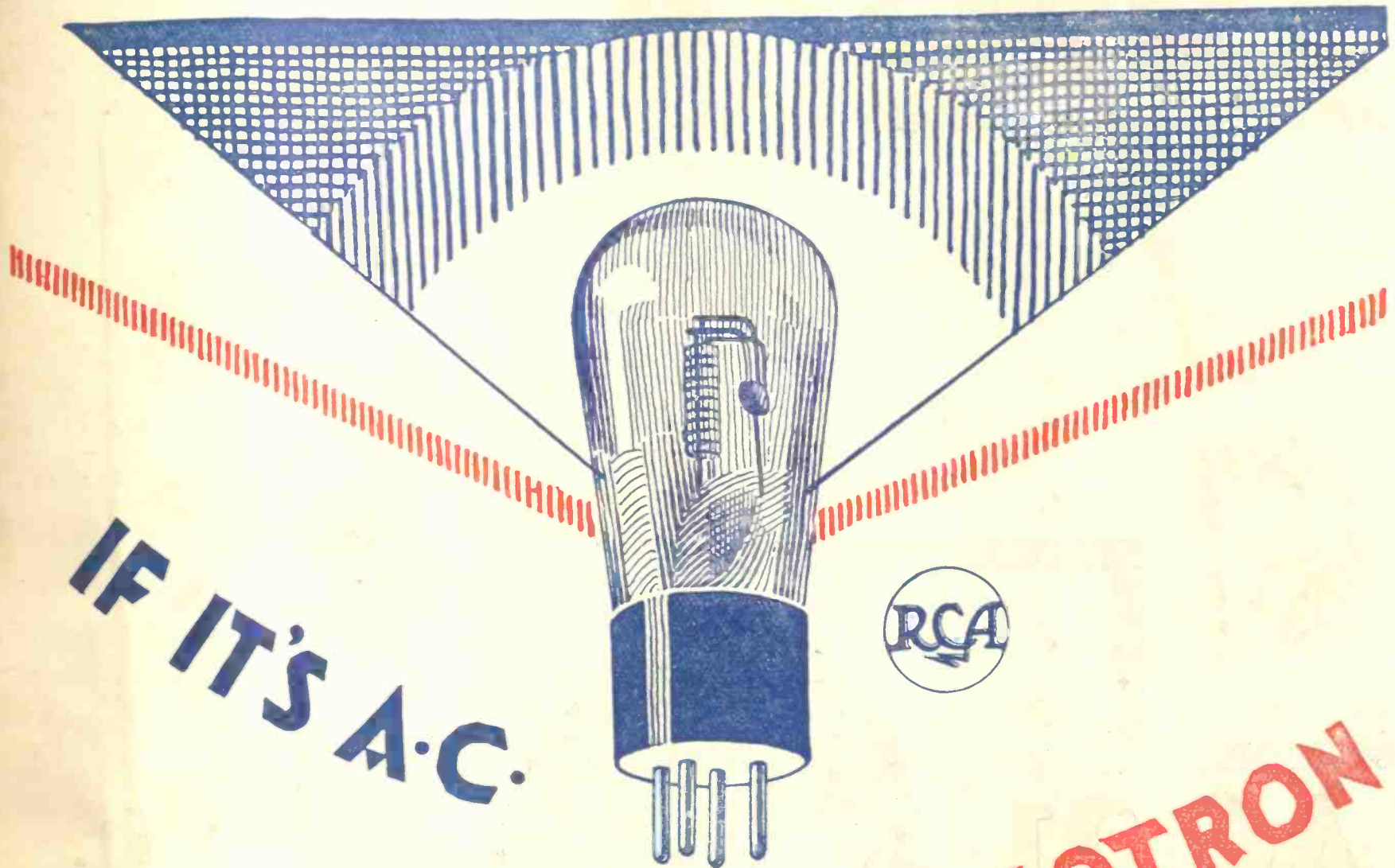
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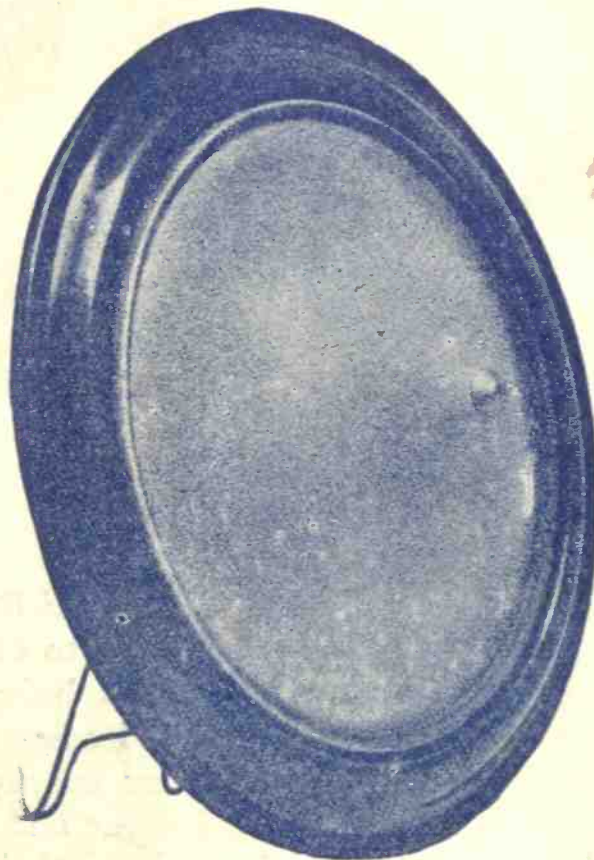
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