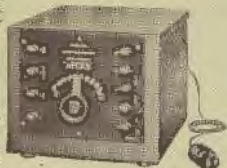


WIRELESS WEEKLY

Vol. 8, No. 21.

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

Friday, Sept. 17, 1926.



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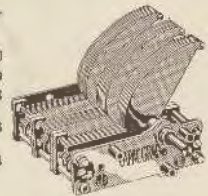
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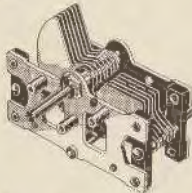
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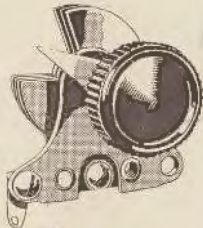
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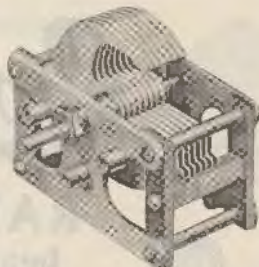
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WIRELESS WEEKLY

VOL. 8. No. 21.

SEPTEMBER 17, 1926.

World Programmes Soon

LAST WEEK Captain P. P. Eckersley, Chief Engineer of the British Broadcasting Company, said that it would only be a matter of time before Sydney listeners tuned-in London stations. On Monday, Mr. E. M. Lawton, American Consul-General, will deliver the opening address of the 2FC American programme, which several American stations are to attempt to relay, and which hundreds of DX listeners in the United States will probably tune-in direct.

These relays are by no means a novelty to listeners-in, nor are these prophesies new. But the former are becoming more frequent, and the fact that they have lost their novelty shows that they are conducted, not as a programmatic attraction and publicity stunt, but with a serious end in view. Then it is dangerous to be a prophet, because so often what is said may be used in evidence against one when the trial later on is conducted by Judge Public, and when a world famous engineer ventures to make such a forecast one may be sure that he has fully considered the facts.

And Captain Eckersley is not alone in his assertion. Other famous engineers have made sim-

ilar prophesies. Of course, there have always been the dreamers—those who leap o'er present obstacles and paint glowing pictures of a future separated by difficult hiatus from the present. The hiatus that imaginative minds sweep aside by mere assumption and pathetic belief in otherwise despised technicians. But now the practical man has declared himself.

Ten years' ago the few amateurs experimenting with the reproduction of speech by radio may have dreamed of tuning in a station 50 miles distant, but had little hope of its realisation during their generation.

Now, hundreds of Australians regularly listen to Japanese stations, in addition to our own broadcasters, and many have had success tuning-in American stations. As we advance, development becomes more rapid, and it seems logical that within a very short time a listener operating a first-class receiver should be able to tune-in American stations regularly. And the same should apply to the American listener and Australian stations.

That accomplished, it would be but a step further to tune-in London.

Capt. Frank Hurley, explorer, is seen on our cover this week. He is beginning a series of Travel Talks at 2FC.

A Radio Career or a Free Trip to Java

WE offer you a career. One with uncounted opportunities for advancement; one which a thousand young men are waiting to enter; and our offer removes all the cost from yourself.

By special arrangement with Amalgamated Wireless (A'sia) Ltd., we will present a full course, through the Marconi School of Wireless, to the youth between the age of 16 and 18 securing the greatest number of pre-paid subscriptions to "Wireless Weekly" over a period of three months, beginning on September 10.

This is in addition to our offer of a free trip to Java and Singapore on one of Messrs. Burns Philp's mail steamers for the reader—any reader—securing the greatest number of pre-paid subscriptions. However, no competitor can take more than one prize. When writing for subscription books he should state whether he is between the ages of 16 and 18, and is attempting to win a career, or whether he is attempting to win a free trip to Java.

The additional prize offered this week is due solely to the immediate and widespread response which met our announcement last week. Here is a career which in the ordinary course of events would cost £50 to begin, free to any youth with vision and willing to devote his spare-time

energy in an attempt to grasp this opportunity.

An intensive Marconi course lasts approximately 12 months, according to the ability of the scholar. During that time he is not only following his hobby, but he is also preparing for the future. And it matters not whether he lives in the city or the country, since the course will be dealt with by post until the student is well advanced, and then several weeks' personal tuition will be given in the School in Sydney.

As a beginning he receives four reference books, one key and buzzer, Morse practice set, a gramophone and twelve Morse Code practice records, to be used for practice until he can read and send Morse, are also sent.

Having finished the course, the student will sit for examination conducted by the Postmaster-General's Department, and on passing he receives a first-class Wireless Operators' Certificate from the Postmaster-General. This qualifies him for the position of a ship's operator, and paves the way to the title of radio engineer. Almost every radio engineer of importance in Australia has passed through this school. Those holding important positions include Mr. E. A. Burbury, Engineer 2FC, Mr. H. Johnson, Engineer 3LO, Mr. T. W. Bearup, Studio Manager 3LO, Mr. J. W. Robinson, Director 4QG, Mr. R. Allsop, Chief Engineer 2BL. There are many others.

These men passed through the school when radio was in its infancy. They foresaw the world-wide development which was to take place. But they admit that it has far out-distanced their dream. The development in radio to-day is likely to be small when compared to those of the next generation. To-day there are few, if any, radio engineers out of work. Tomorrow the demand will be greater than the supply.

Here is your opportunity, for where the fees may be prohibitive in many cases, this is entirely free. The school authorities usually limit en-

trance by a strict intelligence test, so that the course is open only to those willing to make the most of the instruction. However, they believe that any youth possessed of sufficient energy and enthusiasm to devote spare-time hours toward winning this scholarship is likely to be one of their brightest pupils, and is sufficient proof of his ability.

But the competition is open not to youth alone, but to any reader. A free return trip to Java and Singapore, and £50 incidental expenses—the whole worth £150—is the first prize. A complete holiday visiting strange tropic countries, seeing new people, and old customs, is the inducement we offer to the business man, his wife, or his daughter.

Subscription orders may be secured on "Wireless Weekly" forms. Books of 25 will be supplied to anyone filling in the following contract and sending it to Wireless Newspapers Limited.

To the Director,

Wireless Newspapers Limited,
51 Castlereagh Street,
Sydney.

Sir,—

In consideration of your allowing me to enter the "Wireless Weekly" Subscription Competition of Wireless Newspapers Limited, and supply me with a book of subscription forms, I undertake to remit to you within 24 hours after receiving same any signed subscription orders received and the amount of money received by me as represented on the order. I also undertake to account to you for all subscription order forms which you supply to me.

Signed.....

Address.....



An Eastern Character.



Mr. Oswald Anderson, manager 2FC, who contributes the following article.

IS THERE Anything Else WE CAN DO ?

Speaking of Stunt Transmissions, Mr. Anderson, manager 2FC, asks:

President of the Aero Club, that the machine was coming to Sydney for the week-end, and we could have an opportunity of carrying out our tests, so all was bustle at 2FC.

The first thing to do was to obtain the permission from the Radio Inspector to carry out the transmission; then a line to the Mascot aerodrome had to be applied for so that listeners could be given a description of the plane before it soared aloft. Radio engineers had then to put their heads together to make available a special transmitting set, capable of fitting into a plane. Then the important task of selecting an announcer and a mechanic had to be faced. The question of weight thinned the ranks to two or three, and Mr. Lawrence Halbert, a 2FC announcer, who has had previous air experience, and promised not to be air-sick, was given the important job.

Lines were arranged at the various picking up points, so that the transmission could be received and sent on to Pennant Hills by land line, and there put on the air at 1100 metres.

When it was known that the plane would not reach Sydney until dark on Saturday, it was realised that not much time would be available for tests. Anyhow, the whole of Sunday morning was devoted to this purpose, and, as listeners know, the actual flight in the afternoon more than came up to expectations, for a continuous transmission was carried out from a plane travelling at 80 to 100 miles an hour, reaching an altitude of almost 11,000 feet.

Any More?

And the following day, the first question I was asked was: "Have you any more stunts in view?" One must needs be the broadcasting manager to understand what taskmasters

listeners are. There is nothing so dead as yesterday's paper, and nothing so easily forgotten as the previous day's broadcasting programme, and, although we claim to be the holder of more broadcasting records than any other station in the world, we are always being asked this question. We reply: "Is there anything else to do?" Here are some of the stunts we have carried out. Can any listener-in suggest some new practical stunt?

2FC was the first station in Australia to carry out an under-water transmission, when two divers descended 100 feet below Sydney Harbour and gave descriptions of under-sea life. This transmission was very interesting if you remember, and we all chuckled when one of the divers sang from below the water—"That's the reason why I wear a kilt"—although this class of attire is hardly suitable for under-sea work.

Then the re-broadcasting of the arrival of the American Fleet was in itself a noteworthy effort. 2FC chartered a special steamer, which proceeded several miles outside the heads and was the first boat to welcome the Fleet. A description of the arrival and all the attendant noises was broadcast, and listeners in the country had details of the boats before the people that were clustered in thousands along Sydney Heads had even seen them.

Further re-broadcasting under difficult conditions was attempted when a set installed on a Sydney ferry boat went round the many bays of the harbour with the Imperial Press delegates and gave a complete programme. It transpired afterwards that this programme was logged in its entirety by a listener in San

"HELLO, everybody! That completes the transmission from the de Havilland aeroplane. 2FC is closing down till 6 p.m."

How many of the listeners who left their sets on Sunday, September 5, after the thrilling experience of hearing a transmission from an aeroplane 5,000 to 10,000 feet in the air, stopped for a moment to think of the tremendous detail that lay behind that 70 minutes' programme. It was only one programme out of a daily routine of fourteen hours, but the work entailed was tremendous.

We were delighted with the results, for this is the first successful aeroplane transmission that has been carried out in Australia. Briefly, this is what had to be done: We had our eyes on this D.H.50 machine for a long time, as Lieutenant-Colonel Brinsmead was good enough to promise us the use of the plane several months ago, but when he flew with it to Darwin to meet Captain Cobham and returned to Melbourne, without stopping at Sydney, our hopes were dashed. However, unexpectedly last Thursday afternoon, we received word, through Capt. Geoffrey Hughes,

Pedro, California, a remarkable feat when it is remembered the transmission was sent out in daylight and received in daylight.

A direct contrast to the programme from 10,000 feet up in the air, was the session recently devoted to a broadcast from the Balmain coal mine—the deepest of its kind in the world. A broadcasting party of 70 descended 3,000 feet and along a tunnel another 3,000 feet and gave from there a complete musical programme.

Land Line Records.

Then coming to the question of long land line transmissions. 2FC began by broadcasting the Prime Minister's speech on a 600 mile land line from Dandenong, in Victoria. Writing on this transmission the Managing Director of 2LO, London, said it was amazing. Then the broadcast from Wollongong, a distance of 45 miles. Following on the success of this came Newcastle, 104 miles; Goulburn (twice) 145 miles; Canberra, 220 miles; Kosciusko, 300 miles; Tamworth, 250 miles and Dubbo, 304 miles, creating records for continuous programmes carrying speech and music.

The Jenolan Caves transmission, when a full description was given from within these wonderful caves, is still

fresh in the minds of listeners. These transmissions have been so successful that it opens up great possibilities for a system of relay stations throughout the State. Then the programme from Mt. Kosciusko was taken from the highest point in Australia, 7,000 feet, and remembering how completely these novelty stunts have been carried out, we repeat the question which heads this article: "Is there anything else we can do?"

Further claims are made by 2FC in the direction of the hours on the air. It has to be admitted that no other station is giving as long, or complete, a programme. Fourteen hours per day, transmitting from 7 a.m. until 12 o'clock, midnight, is certainly very strenuous work. There is a staff of four announcers, two accompanists, a clerical staff continually answering letters that are sent to the studios—in itself a tremendous task. Outside people are always collecting information concerning racing and other sporting results apart from the work entailed in preparing the continually moving programmes. Then it has to be remembered that the station at Pennant Hills is very completely equipped, the aerial mast being 400 feet high—the second highest mast in the world—and, as the station is built

700 feet above sea level, the transmission is projected into the ether at a height of 1100 feet from the sea.

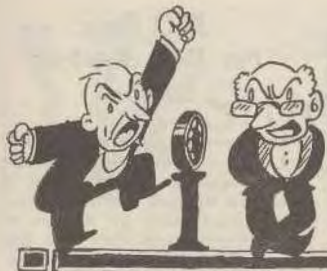
This article has dealt only with the stunting side of wireless programmes from 2FC, but were we to go into details concerning the minor work that is necessary to keep the wheels moving, it would take too much of the readers' time and too much space. Suffice it to say that in the preparation of the programmes—in itself a colossal task—600 pages of programme matter are prepared and despatched each week all over Australia. Features are booked 6 and 8 weeks ahead, and studio items 3 and 4 weeks, so that programmes are laid out well in advance. Then, perhaps, at the last moment, some special feature has to be taken, such as a speech on the Referendum, and the whole programme has to be re-arranged and spaces found at a later date for the various items which are cut out.

In the early days of broadcasting, listeners were prepared to stay at their sets for hours and felt duly rewarded if they obtained the most meagre results, but, with the rapid progress that has been shown it is now necessary for the stations to do the most elaborate stunting to stir the listener out of his usual slathy. In summarising these various stunts, I would like to draw attention to the palpable fact that there are hundreds and thousands of listeners in Australia, who constitute themselves into a body of active critics of broadcasting programmes. In each station there is a mere handful in whose minds the various ideas have to be evolved. How many real suggestions have been forthcoming from the listening public to help the studios and still advance the calls of wireless? Criticism in plenty, but suggestions of value, nil, unless it is from an enthusiastic listener who asked us to commence at 6 a.m. with the cricket scores instead of 7 o'clock, or to carry on dance music until 2 a.m. instead of concluding at midnight. 2LO, London, commences its programme in the afternoon, and the majority of American stations do not work until nightfall. Therefore, listeners in New South Wales can feel very satisfied indeed with the programmes that are being offered.



Back to Terra Firma: after the record breaking transmission of 80 minutes from 2000 to 11000 feet in the air. Left: Mr. Lawrence Herbert, 2FC announcer, right, Joe Reed, the A.W.A. operator.

Radio Speakers Must Appeal to Reason



A PROFESSOR of ancient history delivered the Commemoration Day address recently at a large university. For more than an hour he dealt with the pseudo sciences, and his remarks brought nods of approval and applause from the learned body of professors clothed in their robes before him on the platform.

The audience seemed to enjoy him at first, but after a half hour passed the mothers, fathers, sisters and brothers began to show signs of restlessness. Most of them had travelled many miles to see the diplomas awarded. The speaker was secondary. The professor continued to quote poems and passages from noted writers and the hands of many in the hall, cupped to their ears, indicated that the speaker's voice was not reaching far into the auditorium.

One father in the audience was heard to say, "I wish I had him on the radio." And the mother who sat at his right said, "What do you mean? Are they broadcasting this?"

"No," said the father, "I mean I could tune him out. We came here to see Helen graduate, and not to hear so much about the history of pseudo-sciences and rambling bits of poems."

Short Talks Best.

There have been other audiences at many Commemoration Days who wished that the speakers had prepared their talks for broadcasting.

The broadcasting managers have found that the best of speakers, with most interesting topics, do well to hold the interest of their audience for fifteen minutes. And it should be remembered that the radio audience at home is much more comfortable than those crowded into

public halls where restlessness easily holds sway.

But the public speakers have advantages in their favour; it would be impolite to walk out. On the contrary, just a slight turn of a dial and the radio auditor can "walk out" without being impolite.

Radio is popularising short talks, and most students of oratory recognise that radio has sounded the death-knell of the demonstrative speaker. It may be within a few years that radio will teach the scholarly orator to be brief and to the point, making his address take less time on the programme, yet giving his hearers the same information.

The old fashioned orator is rapidly passing, and broadcasting in recent years has interposed itself between the speaker and the largest crowds, while the human voice, unaided by this device, can make itself heard at the best to a limited audience.

Spectacular Orators Vanishing.

This fact was made startlingly clear recently, by two reporters both covering the same speech delivered in a hall by an evangelist. One reporter listened to the speaker with in his sight and hearing, while the other observed a crowd, almost as large, gathered in a suburban church before several loud speakers.

The audience in the hall listened, as a crowd, with aroused emotions, but dulled intellects. The audience in the church listened with unaroused emotions as thinking individuals. In other words, the radio, which gives the speaker his largest hearing, has destroyed his power to arouse the emotions of his audience except through an appeal to their reason. Instead of reaching the mind through the emotions, he must, when speaking

over the radio, react the emotions through the mind, if he is to reach them at all.

This all means that the orator of the future, to hold and impress his audience, must largely abandon appeal to emotion and confine himself to reason forcefully expressed and logically arranged. It means inevitably that the oratory of the future is to be the oratory of condensed reason, as distinguished from demagoguery with its appeals to prejudice and emotion.

Perhaps this is why radio has never become popular with parliament. While undoubtedly there are many lively debates which would bear broadcasting, most parliamentary speeches would bore listeners to extinction, for it is a matter of pride with most politicians that they are able to make a long speech without saying anything of importance.

Then most parliamentarians depend for the impression they make on their audiences on the very qualities which the microphone refuses to carry. It is notable that the really great political orator is always successful over the microphone for the reason that those very qualities which have gone to make him successful are the qualities required by the microphone.

In a recent issue, Mr. F. C. Cochrane mentioned several famous speakers in this connection attributing their success to personality. That brings us back to the question of individuality. As is always the case, it depends on the man himself.

PHILCO—"Have you got one yet?"—BATTERIES.

Hello! U.S.A. 2FC Sydney Calling

TH**ERE** is a one hundred per cent. American citizen in Sydney who regards the growth of wireless activities in Australia as even more phenomenal than the remarkable increase in the manufacture and use of radio goods in his own country. He is Mr. E. M. Lawton, Consul General for the United States in Sydney. As a radio fan of long standing, operating a four valve neodymium at his home in Darling Point Road, he claims an intimate knowledge of broadcasting in both countries.

"It is not difficult to understand," he said, this week, "why the use of wireless in the United States is so widespread, when one realises that there is no license fee for listeners-in, and so many centres of population in each of the forty-eight States, within the range of a dozen broadcasters.

"These provide the widest possible choice of programmes, not only as to variety, but in point of excellence as well.

"Imagine the facilities and interest in such events as when President Coolidge's inaugural address was relayed clear across the continent, and was clearly heard by more than forty million people, according to the estimates in some of the American papers. Moreover, as the difference in time between the Atlantic and Pacific coasts is more than five hours, it is possible, with the more expensive sets, to have radio programmes available every hour in the twenty-four.

"On the other hand, the broadcasting stations of Australia are of necessity confined to a few capital cities, and the sparsely settled interior is generally quite distant from the stations which are all on the coast, so that in point of comparison with the difference in population, greater expense of sets, license and maintenance, the enthusiasm of the Australian public is even more marked. I think it is wonderful, and the quality of the programmes in Australia certainly compares most favourably with similar programmes in my homeland."

Neither are these remarks for Aus-



Mr. E. M. Lawton, American Consul General in Sydney, who will deliver the opening address at the 2FC American night on Monday

tralian ears alone. On Monday, September 20, Mr. Lawton will open the American programme to be broadcast from 2FC. A number of large American stations will attempt to relay the local station, but even should they fail, there will be a large number of radio IX hams listening in.

The musical programme has been made as characteristically American as possible.

Madame Emily Marks, the well-known soprano, who has spent 10 years in America, and did work for several broadcasting stations there, will sing four numbers by American composers, including two by Mrs. H. H. Beach, new to Sydney audiences.

Nevin Tosseau, the Poster King, will give the usual Monday night radio poster drawing, taking as his subject some well known American figure. Mr. Lumsdaine will give a musical steeplechase of a medley of American airs. The 2FC Dance Band will play topical music and the items from the Haymarket Theatre will also be in keeping with the programme. Items from the Town Hall will be broadcast on the occasion of the annual meeting of the Royal Shipwreck Relief and Hutane Society, and special reference will be made by the speakers on that occasion.

3LO Prize For Best Amateur Station

TO encourage amateur experimenters now transmitting musical programmes for the benefit of broadcast listeners, and to encourage the interest taken by listeners in these transmissions, 3LO is to hold a competition for the purpose of finding the best amateur station in Melbourne.

For some years, many amateur stations have regularly broadcast musical programmes, after the main broadcasting stations cease working each night. The programmes from these stations have been much appreciated by listeners, and thousands tune in when they begin working. Though the power employed by the amateur stations is low, surprising efficiency has been attained at most of them, and several of the Melbourne stations are regularly received in Australia and New Zealand.

Associated with 3LO Melbourne in the competition is the Wireless Institute of Australia. Details of the competition were arranged between the general manager of the Broadcasting Co. of Australia Pty. Ltd. (Mr. W. T. Conder) and representatives of the Institute. Each amateur station entering for the competition will transmit two programmes on separate nights. The competition programmes will be broadcast after the main stations stop working, between 11 and 11.30 p.m. Only one station will send a competition programme each night. Points will be allotted for the composition of the programme and its musical merit, by a musical judge appointed by 3LO Melbourne.

Points will also be allotted for the technical merit of the programme; for the efficiency obtained in proportion to the power used at the transmitter, the design of the transmitting apparatus, and the quality of workmanship displayed in assembling the equipment. Three prizes, ten guineas, five guineas, and three guineas, will be awarded for the best stations taking part in the competition.

(Continued on Page 53.)



Studio News & Notes

CAPTAIN FRANK HURLEY.

Arrangements have been completed for Captain Frank Hurley, the well known explorer, to broadcast from 2FC. He has just returned from Thursday Island, having completed taking his picture, "The Hound of the Deep." Another programme will be submitted to listeners on Friday evening, September 24, when Captain Hurley will describe the adventure surrounding the taking of this film, direct from the projection room, and as the machine runs the film through, he will give listeners a word-picture of the whole thing. Incidental music will be supplied on the new system inaugurated in 2FC Studios, where two separate transmissions from different places can be given at the same time. From the Studio on Wednesday evening, Sep-

tember 15, Captain Hurley will take as his subject, "Antarctic Nights," and he will describe an enthralling story of the Shackleton Expedition, of which he was a member. Incidental music will be supplied. The third appearance will be at the Studio on October 1, when he will take listeners, in imagination, through the wild districts of Papua, telling the tale of the Head Hunters, which will be illustrated by some interesting native records which Captain Hurley will re-lease for the first time. It is hoped to arrange for another appearance before Captain Hurley goes to Brisbane next month. He is one of the outstanding figures in exploration work, and a tremendous amount of interest will be shown in his broadcasting.

TRAVEL RADIOGRAPHS.

This interesting title covers a night at the 2FC Studios on Wednesday, September 22, when Major Sandford Morgan will take his listeners, in imagination, a trip up the Tigress, illustrating his talk with realistic native music and effects. During the last talk, an impression of a sand storm while describing the crossing of the Desert, was realistically carried out.

KATINKA ON THE AIR.

The Langley Operatic Society will broadcast, through 2FC, the first act of "Katinka," from the Rockdale Town Hall on Saturday, September 25. There are now six amateur operatic organisations associated with 2FC, enabling listeners to hear popular musical comedies played in the past.

TOC H.

An impressive ceremony will be broadcast on Wednesday, September



Miss K. Cracknell, contralto, at 2FC.

29, when 2FC will transmit the Toc H. service from the Newcastle Cathedral. The Governor-General will light the Foster Lamp, which is the parent Lamp in Australia to the Toc H movement. Dean Crotty, of Newcastle, has arranged for a vivid description of the ceremony to be given from the cathedral by Mr. Ellis Price, the well known elocutionist. Various hymns will be heard from the cathedral, and the music will form a background to the continuous description. Preceding the service will be an organ recital, by Mr. T. H. Massey, and the Governor-General will give a concluding address.

RANDWICK RACES.

During the spring A.J.C. meeting, listeners will be kept in close touch with sporting events from 2FC. The 2FC racing commissioner is a busy man these days, gathering information from all quarters. The Randwick races will be described in running.



Miss Gladys Verona, the distinguished prima donna, who has been five years in England with the Carl Rosa Operatic Co., and has been engaged to sing at 2BL.



Mr. Lobban
Hodgins, a new
2FC artist.

NEW "TRAVELOGUES."

Major H. Sandford Morgan, D.C.M., in conjunction with 2FC, and the "Evening News," is initiating for the first time a novel method of broadcasting tales of travel.

On September 22, the back page of the "Evening News" will contain a series of pictures of places visited by the Major on his travels. At 9 p.m., on the same day, a word picture, descriptive of the scenes depicted, will be put "on the air." Thus listeners will be able to view the pictures and at the same time hear a graphic description of them. It is hoped to vary the programme by items of music and song applicable to the scenes between the description of each picture, all of which will be numbered.

CONSERVATORIUM OPERA.

On Tuesday, 2BL will produce, under the direction of Mr. Roland Foster, of the State Conservatorium of Music the opera, "Lily of Killarney," by Sir Julius Benedict. This opera, which is famous for its duet, entitled, "The Moon Hath Raised," will be heard. A lecture by Mr. H. L. Downing, entitled, "Some New Guinea Ghosts," will be

heard, and a new comer to Broadcasters' ranks will be Mr. C. J. Dunn, who will deliver the first of a series of four talks, entitled "Word Pictures from Shakespeare," dealing on this occasion with act 1 scene 2 of the tragedy of Julius Caesar. Mr. Dunn will be assisted by a number of elocutionists, who will produce the scene that he is to describe.

HABERFIELD CONCERT.

Station 2BL will broadcast a concert, provided by the Haberfield Tennis Club, on Wednesday. Artists include newcomers to the listeners-in, and will be heard in songs, musical selections in abundance. Mr. Stanley Crittenden will deliver the second of his talk on the building of a valve set, describing the actual construction of this most necessary piece of apparatus.

BOYS' WEEK.

Station 2BL is co-operating closely with the Boys' Week movement, promoted by the Sydney Rotary Club. During Boys' Week, a number of well-known citizens will deliver a series of talks prepared specially for this occasion, and one of these will be delivered each evening at 7.50, commencing on Monday, September 13. This function will last from Friday, September 24, until October 1. The first will be delivered by Mr. B. R. Gelling on What is Rotary, followed by Mr. Fred Burley on The Parade and Display, Rev. Howard Lea on Church Day, Mr. Lawrence Campbell on Entertainment, Mr. W. H. Ifould on Citizenship, and will conclude with a talk by Mr. James Nangle on The Exhibition. A request for support and co-operation will conclude each address. Listeners-in are asked to co-operate with the Rotary Club in its endeavour to assist the rising generation of boys in order that its work will not be in vain. On Sunday, September 26, a special church service in connection with the Boys' Week will be broadcast, and an entertainment by the boys' choir at the Town Hall, will be put on the air on Monday, September 27.

DR. RADIO AGAIN.

Dr. Radio's practice continues to grow. Every hospital testifies to his

healing powers. Now a letter has come to 3LO Melbourne awakening memories of the fearful railway smash at Caulfield station a few months ago. "At St. Leonard's Hospital are two of the injured. One is a boy named Alex. McKenzie, who was sitting in the train next to the young fellow who was killed, and who was a chum of Alex's. Alex and the boy in the next cot have a wireless set between them, and if you could only know what that wireless means to those two lads, how it helps so wonderfully to pass the weary hours. One of the boys tries to sleep in the morning as long as he can, so that he will not have to wait so long for the wireless to begin broadcasting.

RECORD NUMBER OF TALKS.

Mr. E. J. Van de Velde, whose lectures and travelogues from 2FC are so popular, has created a record by delivering 51 of these talks from that station. Mr. Van de Velde has just concluded the 2FC Radio Photographic Competition, the results of which will be announced shortly.

He is to lecture before Farmer's Radio Birthday Club members on "Zoological Gardens of the World," which will be illustrated with slides and cinematograph pictures taken by himself.



Mr. E. J. Van
de Velde.

What's on the Air in Melbourne

OPERA FROM 3LO.

THOSE interested in the development of opera in Australia, will be glad to know that arrangements have been made by 3LO, Melbourne, to broadcast "Orpheus"

able that 3LO, Melbourne, will transmit items from Ballarat. Listeners-in would be particularly pleased if the opening performance could be included in broadcasting programmes, as Signorina Toti dal Monte and her concert party have been engaged for the occasion.

LETTERS WE LIKE.

At all times we like to get letters of encouragement, writes our 3LO correspondent. It bucks the studio up wonderfully—but few things are better than to learn that we have been of real service. Taking three letters at random from our morning mail, we find the first is from a blind listener-in and this is what she says: "We feel we must write and let you know what a veritable 'God send' our wireless set is, and how much we enjoy all the items broadcast, especially the current events. Until we had our set installed, we were dependent on kind friends to read the paper to us, but they always seemed to leave out just the things we wanted to know, and we felt we could not always be bothering them to go over the paper again. Now it is all changed, we can hear everything of interest, news of the day, music, lectures, and everything that matters most. We would like to recommend every blind friend to have it installed



Billie Lockwood, who has made a hit with 3LO kiddies.

immediately, so that they can enjoy with us all the good things broadcast from day to day."

The next is from three "Athletic Australian Lassies," thanking us for broadcasting the wrestling matches, and "asking for more." "We want to know something about this splendid sport," they write, "and as our parents won't allow us to attend the actual wrestling contests, we have no other opportunity." The last is from a little girl in hospital who waits for the bedtime story every night, and who (next to oranges) has found the wireless her greatest comfort. "Tell Miss Billie Lockwood," she writes, "that all the children here love her—we did so laugh at her song 'Oh! how I long to be sick.'"

These are the kind of letters we like to get, and are glad to say that a goodly proportion of our mail bag at 3LO is in the same cheery optimistic tone.

SET AT CHILDREN'S HOME.

"The children in this home love the wireless and the Hello Man," writes the Matron of the C.M.M. Children's Home, "Daimar," Carlingford, to the manager of the Clyde Battery Co. All trace was lost of the batteries of the set at the home recently, owing to the death of one of the attendants. The set was out of working order, until the Company gave the Home a complete set of batteries



Miss Mary Mack, contralto at 3LO.

(Gluck) from the Melbourne Playhouse Theatre on Friday, September 24. Mr. Fritz Hart, of the Conservatorium, has the production in hand. Well-known vocalists have been allotted the principal parts, and particularly fine work is promised from the chorus who, under Mr. Hart's capable baton, have been doing some hard work during the last month or two. On the same evening an opportunity is being given us to hear one of Mr. Hart's own compositions, an operetta "Dierdre in Exile."

BALLARAT COMPETITIONS.

Victorian musical and elocutionary enthusiasts count as one of the greatest events of the year the South Street Competitions at Ballarat. This year the entries are even heavier than usual, and the class of competitor particularly high. It is prob-



Miss Margaret Marshall, brilliant young elocutionist at 3LO.

The Listener's Point of View

LISTENERS have been getting a dose of politics lately. Programmes have been wrecked, sunk without leaving a trace, and naturally the poor station has been "getting it in the neck," as the nearest seapegote. The telephone has been going constantly, and some of the language shouted over the wire has been enough to fuse it.

All this wild eloquence has gone to the wrong address. Poor SLO has had no more to do with it than any of the annoyed telephonists. Every station gets its license subject to the right of the P.M.G. to veto any item or to supply any item. That is what it comes to, broadly speaking. During an election campaign, a strike, an upheaval of any kind, it is the right of the Government through the Cabinet Minister responsible to dictate what shall go "over the air." All very wrong, of course, and all very annoying, but when things are wrong or annoying, it helps a lot to get on to the blameworthy party.

Talking of complaints, I read the most humorous letter from a subscriber the other day. He was full of worries, all about broadcasting, and numbered them all, from 1 to 7. He had been living on lemons, I imagine, for his comments were very acid. The funny thing was that they were all based on absolute ignorance.

He criticised one of the announcers at SLO, and blamed the other, who, he said, altered the microphone before he spoke, reducing the strength. Apparently he believed that an announcer turned on just so much "juice" as he thought he needed, and sometimes mis-guessed the quantity.

"All this talk of fading," wrote the dissatisfied customer, "is just due to this fellow. If he would stop monkeying with the microphone everything would be all right. He makes a complete mess of things, and the sooner he stops the better."

He went on to speak of the "talks," informing SLO that "nobody likes them. Everybody switches off whenever they are announced." Apparently he has been making a complete round of Victorian subscribers, and thus

announces the result of his plebiscite. He then asked for a complete musical programme from 8 to 11, as "everybody liked that best." I have often had occasion to point out that programmes are arranged on the Jeremy Bentham principle—"The greatest happiness of the greatest number," and I am afraid that so long

Writing under the name of "Hello," our SLO correspondent discusses various phases of radio broadcasting in this article. Destructive criticism of the programmes, radio ridicule, and television, are his subjects this week.

as that system prevails, listeners who hate talks must learn to bear them, realising, if possible, that someone who loves them is having his turn.

This extraordinary selfish point of view never ceases to amaze me. Australians are noted for their "give-and-take" dispositions. We are a sporting crowd, and like to let the other chap have a point of view. But these disgruntled critics who want what they want when they want it and want it all the time are hard nuts to crack. Nothing can be done for them or with them. They have got to be ignored.

Ridiculing Radio.

American magazines and newspapers have surprised me of late by the habit many writers are indulging in of ridiculing wireless, as though it were a nuisance that sensible people would not tolerate. Frequently in stories, characters will refer to the "mad medley" of programme items. In a recent yarn, the hero implored someone to "stop that damned thing, with its confounded mixture of bed-time stories, jazz, and squalling sogram." I don't know into what state they have let the American air get into with their multiplicity of stations, but if their selectivity is so bad as to allow them to get those three items from different stations at the same time, I am not surprised at

the growing impatience with the radio. I suspect, however, that it is just a bit of that extraordinary writers' awn that sometimes visits the most reasonable, the sort that makes a musician want to smash a gramophone, which he contemptuously calls "canned music," or an ultra-"naice" personal wish that motors had never been invented, because the petrol makes the countryside small so appalling. They don't mean it; they would be horribly upset if by a cataclysm of nature their hasty wish could be granted. Musicians make too much out of gramophone record royalties; "naice" persons still call the taxis they revile, and writers are making more money out of the too-civilised world they profess to despise than they ever did when civilisation still lingered on the threshold. I know people, intelligent souls, who laugh when you ask them if they have "listened-in," and assure you that they are not in the slightest degree interested, even when their colleagues are using the invention to spread light and learning over a vast audience than they have conceived before, even in their wildest dreams. There is no fool like the intellectual fool when he is riding his high horse. Almost every great invention has been ridiculed by this sort of person in its early stages.

Broadcast Television.

More and more there are signs increasing of the success of television. A year ago a very occasional mention in the cables was all one heard of this application of vision to wireless. Now, hardly a week passes without some allusion, either from England or America to the improvement in the apparatus designed to make this as usual and as simple as ordinary broadcasting.

Its importance, to a wide-awake station like SLO is enormous. I have no idea what apparatus at the receiving end will be required, nor of its probable cost; but I imagine that it will be, like radio sets, at first dear and cheapening rapidly as competitors

(Continued on Page 53.)



"Bunny" Shepard, well known traffic officer, as drawn by a listener-in in the 2FC Poster Competition.

A RECORD MAIL.

On September 7, the mail at the 2FC included two hundred letters dealing with the aeroplane transmission from all parts of the State. To give readers some idea of the tremendous mail handled by the Broadcasting studio, in addition to the aeroplane letters, there were sixty addressed to "Redgum," in connection with his gardening talks, as well as three groups of answers to various competitions, running from 2FC, not forgetting letters from the children and the ordinary daily correspondence.

DR. T. J. HENRY.

Dr. T. J. Henry, recently returned from a tour of North Queensland, has been engaged by 2FC to give three talks from the studio before leaving for America next month. The first talk is set down for September 16th, and the subject will be "Glimpses of Hollywood." The second talk on September 23th, "A General Impression of Los Angeles," and the third will be given on October 15th, dealing with the Inland Sea of Japan.

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5 Valve Sets, with all accessories	29	10	0	Per week	0	14	0
5 Valve Sets (Super 5) with all accessories	45	0	0	Per week	2	0	0
9 Valve Sets (Super-het.) with all accessories	90	0	0	Per week	2	0	0

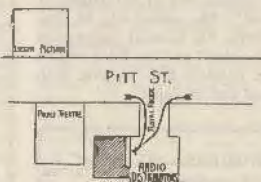
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News from the North

SPEECHES at the dinner to be tendered the members of the Imperial Parliamentary Delegation at Parliament House, Brisbane, on Saturday, October 2, will be relayed by 4QG. In addition to some important speeches, enjoyable musical items will be included.

The number of entries received at 4QG for the recently advertised Radio Voice Contest, have proved the popularity of the idea. Apart from its individual attraction, the contest will enable listeners to compare the artists whom they hear regularly from 4QG with those who are appearing on the air for the first time.

"Little Miss Brisbane," who entertains the children from station 4QG on Wednesday evenings has embarked on a scheme calculated to make the kiddies write better letters. Each Wednesday evening she reads out in full the three best letters which reach her during the week. The Manager of Metro Goldwyn Films Ltd., a regular listener to 4QG, has presented a beautifully framed photo of Jacky Coogan to the station, the gift being intended as a present to the boy or girl writing the best letter to "Little Miss Brisbane."

So popular are the month organ solos provided during the children's session at 4QG by "The Sandman," that some selections by him have been included in the regular programmes for the benefit of the "big little listeners."

According to a ballot conducted by the Brisbane "Daily Standard" some weeks ago, Hawaiian Music obtained third place of preference, by vote of

listeners. This has led 4QG to engage the Pacific Trio, who will be heard in some new Hawaiian numbers shortly.

Lovers of choral music will doubtless be pleased to hear that arrangements have been completed between 4QG and the Sandgate Methodist Choir for two full programmes in the near future. It will be remembered that the Sandgate Choir gave a special recital during last Easter, and that this was a rare radio treat.

Delightful classical concerts are relayed once every month from the studio of Mr. Luis Amadeo Pares in Little Roma Street, Brisbane, by 4QG. No pains whatever are spared to make these concerts successful, and talent of no mean order is provided in order to entertain the public.

NEW VALVE BOOKLET.

We are in receipt of an interesting booklet on Radiotron Valves, published by Amalgamated Wireless (A'sia.) Ltd. Well illustrated, it sets out full particulars of the characteristics of each of these world famous valves. The booklet is particularly useful, and should be much appreciated by both listeners-in and experimenters. It contains full particulars regarding Radiotron UX-200A, a new and wonderful detector valve, and the new power amplifiers, UX-201, UX-112, UX-171, and UX-210. There is incorporated in the booklet a detailed chart of characteristics. These booklets may be had, gratis, on application to Radio Dealers or to Amalgamated Wireless (A'sia.) Limited, 97 Clarence Street, Sydney.

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Make Your Set

A Super-Het.

WHERE is the radio enthusiast who has not wished to own a super-heterodyne? The one element that prevents the more general use of this remarkable receiver is both the initial cost and upkeep. To a reader who is about to make his first large purchase of a complete set of component parts it is not so formidable as to the reader who has gradually built up his receiver along the lines of advancement presented from time to time in the columns of "Wireless Weekly." He has probably finished with a four or five valve tuned radio frequency set similar to the one described as "Wireless Weekly" receiver No. 7. He frequently cannot afford to scrap his present apparatus, and just as frequently he cannot dispose of it at a value commensurate with its original cost.

It is for this relatively large class of readers that we publish this article. The photographs and back views show clearly how to construct a small unit, which may be attached to any receiver to convert the ordinary tuning method into the super-heterodyne principle.

Assuming that the receiver to be converted is of the five-valve tuned radio frequency type, with two radio frequency amplifiers, a detector and two audio amplifiers, it is obviously necessary to use all of the valves for their present duties. Thus the detector and audio amplifiers, being already unchangeable, remain the same. The variable condenser in the R.F. side can be adjusted to the best advantage as desired. The specific problem is then to use the R.F. portion in exactly the same way that

radio frequency amplification is used in a super-het.

Turning back to a brief study of the super for the benefit of the beginner, it may be seen that it is made up of the following:

(1) A frequency changer or first detector. (2) An oscillator that sets up a local oscillation of such a value that it will heterodyne the received wave and produce a beat note or resultant wave of an entirely different frequency, very much lower in value (but having a larger wavelength) than either of the others.

It so happens that the efficiency of radio frequency amplification is much greater at the lower frequencies (viz. the higher wavelengths) than it is on the higher frequencies (viz. lower wavelengths). It is almost universally agreed that the most suitable wavelength range for amplification in a super-het. is from 30 to 200 kilocycles (viz., 1,500 to 10,000 metres). But this does not exclude the use of other frequencies. The efficiency and stability of radio frequency as used

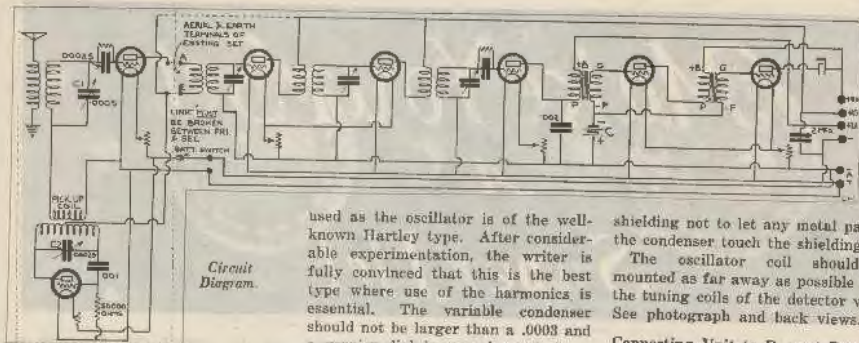
in the present day five-valve set, while not to be compared to the average super-heterodyne, is nevertheless very stable, providing a non-regenerative detecting circuit is used.

Take the straight-out neutrodyne; with the variable condensers set at maximum the wavelength range will invariably be approximately 550 metres. For the sake of ease in computation, assume that the maximum frequency is 500 k.c. (viz., 600 metres). It can be readily understood that, if all three dials of the neutrodyne are set to a given frequency, then it is only necessary to precede the set with a first detector and oscillator so designed as to be capable of producing a beat note of the desired frequency.

Considering first the possibility of producing a beat note that shall be equal to the difference of the incoming signal and the 500 k.c. available as an intermediate frequency, the oscillator will have to cover a range of 1500 k.c. (viz., 200 metres) minus 500 k.c. (600 metres) equals 1,000 k.c. (300 metres) to 530 k.c. (545 metres) minus 500 k.c. equals 50 k.c. approximately, or 6,000 metres. By similar reasoning we find that if we wish to produce a beat note equal to the sum of the two, a range of from 2,000 k.c. (viz., 150 metres) to 1,050 k.c. (236) is necessary.

It is impractical to use the former with the ordinary type of receiver, whilst the latter is rather critical. There is no good reason, however, why the oscillator cannot be made to be additive or vice versa as desired, providing we separate it sufficiently from other coils used in the ordinary

In answering readers' queries, we regret that our correspondence has reached such a volume that we have had to cease replying to queries by post. Under the new system, the Technical Editor will answer questions through the columns of the journal only. Owing to the increase of business since the reorganization of "Wireless Weekly," we are unable on any condition to answer queries made by personal callers or by telephone.



receiver, so that no undesired signal will be heterodyned. In actual practice the oscillator may work not only by the two methods given above, but it may also heterodyne with one or more of the harmonics of a given wave and thus cover greater range (read details concerning reception of 2FC with a super-het. receiver described as "Wireless Weekly" Receiver No. 4).

Thus it will be seen that the band of frequencies to be covered may be fairly narrow, and still be suitable for the reception of both the high and low wave Australian broadcasting stations. There is nothing mysterious or difficult about the detector section, but the oscillator is not easy on account of the particular range it has to cover.

Description of Unit.

The input circuit of the detector valve is made up of an aperiodic primary coil and a tuned secondary, plug-in spiderweb or H.C. coils may be used for tuning. In series with the grid return of the first detector is a 10 turn pick-up coil which is wound on a 2 inch Radion tube capable of being rotated the full 180 degrees inside the main oscillator coil.

The main oscillator coil consists of 50 turns of No. 26 d.c.c wound on a 3 inch Radion tubing and tapped at the 25th turn. A space is then left between the 25th and 26th turns to enable the shaft attached to the smaller tube to rotate inside the larger one.

The more advanced reader will readily recognise that the circuit

used as the oscillator is of the well-known Hartley type. After considerable experimentation, the writer is fully convinced that this is the best type where use of the harmonics is essential. The variable condenser should not be larger than a .0003 and a vernier dial is very important.

With larger size condenser, two and sometimes three places can be found where the signal of a given station can be heard. This is due to the particular combination of this type of oscillator and the wavelength range of the intermediate amplifier. They will both respond to harmonics of the wave as well as to the fundamental.

This often results in finding one point that is very much better than another, and sometimes when interference is encountered in one position it will be absent in another. The tuning of this oscillator dial is extremely sharp and under some conditions, if hand capacity effects are noticed, it should be shielded. Be very careful in the case of using

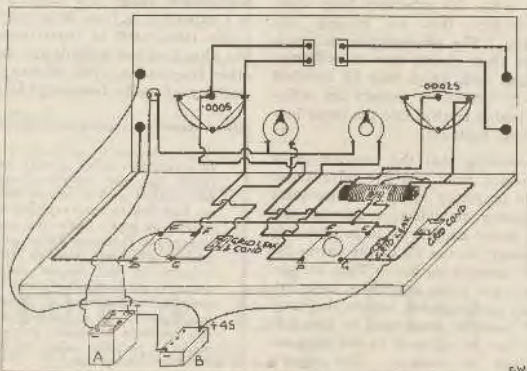
shielding not to let any metal part of the condenser touch the shielding.

The oscillator coil should be mounted as far away as possible from the tuning coils of the detector valve. See photograph and back views.

Connecting Unit to Present Receiver.

It is taken for granted that the receiver to which the unit is to be added is in good operating condition. This, of course, is essential. The only other important part of the whole system is the oscillator. This can readily be checked for oscillation by turning its tuning condenser and tapping the grid terminal of the oscillator valve, when a plucking sound should be heard in the loud speaker, or phones, each time the finger touches or leaves the grid terminal. The loud speaker or phones must of course be attached to the output terminals of the receiver, and the valves lit to normal brilliancy.

Common "A" and "B" batteries may be used for both receiver and oscillator unit. The filament switch



Back of Panel View of Set.

in the oscillator circuit cuts out the unit at will, so that by charging over the aerial and earth connections from the ordinary receiver to the unit, comparisons of the two types of tuning can be quickly and easily made.

Tuning.

The first step in tuning is to set the dials of the ordinary receiver at the highest possible point at which all three will be in resonance for a given wave. (To do this it will be necessary to alter the position of the dials until they all correspond when using the ordinary types of tuning.)

Next set the condenser C1 (which controls the tuning of the first detector) at about the mid-point, and turn on all the rheostats. Now carefully rotate the oscillator condenser C2 very slowly until a strong whistle is heard. If this does not occur move C1 a few degrees and repeat the operation with C2.

When these two condensers are adjusted for best reception, retune the three dials on the main receiver. After they have been once adjusted they need not be changed again.

Be sure that if the receiver is not of the neodydine type that the filament current or "B" battery voltage is so adjusted to prevent oscillation of any of the valves, except the actual oscillator. The unit should not be placed too close to the main receiver, and particular attention is necessary to prevent the latter from picking up signals directly from the aerial.

The writer does not claim that this will make a 2,000 mile receiver out of a one hundred mile one, but it will increase the all-round selectivity to a degree that is really astonishing, considering that there are only two simple controls. Frequently the C1 condenser can be set, and all tuning can be done with the oscillator condenser C2. The signal strength and range depends to a great extent on the skill and patience of the operator. The writer has obtained very good results with a .00025 condenser as C2. This covers more range than is necessary. If, however, tuning is found too critical, reduce the value of C2 by removing some of the plates. This, however should not be necessary, as a 17 plate (.0005 mfd.) condenser has been used with very excellent results by attaching a good vernier dial to the shaft.

In concluding let me again emphasize the importance of the oscillator as being the only important part of the circuit that can possibly be wrong. Therefore, if you experience any trouble, be sure to look there for it. The chances are that you will find it in that cheap grid leak that should never have been used.

RADIO BOOM IN CANADA.

THE Canadian Bureau of Statistics has just issued figures showing that there have been issued 134,486 licenses to operate receiving sets in Canada during 1926. Comparing this with the population of Canada, it represents one license for every 66 inhabitants. The Province of Ontario has 60,110 of these, the next being Quebec with 21,141, followed by Saskatchewan, with 15,944.

The licenses are fairly well distributed, more or less according to the density of the population. The radio listeners in the three Prairie Provinces, numbering almost 40,000, have found their receiving sets not only entertaining but also useful as a means of keeping in touch with market conditions, news and weather forecasts.

Canada has at present 57 licensed broadcasting stations, which are divided as follows:—Ontario 24, British Columbia 10, Saskatchewan 7, Alberta 5, Quebec 5, Manitoba 2, Nova Scotia 1, New Brunswick 1, Prince Edward Island 1.

The above do not of course include the amateur transmitting stations. Some of the larger cities have several stations, but as there is no dual broadcasting, they do not come on the air at the same time. Manitoba is in a special position, as the Manitoba telephone system, which as a Provincial Government organization have control of broadcasting in that Province, and the only other licensed station there is the Canadian National Railway, who, however, use the Manitoba Telephone System's Station "CKY." Listeners in Eastern Canada, and particularly in Ontario, Quebec and the Maritime Provinces, have the advantage of being able to tune in many

American stations, as the bulk of these lie between New York and Chicago.

Owing to the increasing popularity of radio, the radio industry in Canada has grown considerably during the last year, a number of manufacturers now producing complete sets, valves, batteries and accessories. During 1926, altogether 48,498 receiving sets of Canadian manufacture were produced with a selling value of \$439,205 at factory. Radio valves amounted to \$259,937, or double the value of valves made in the previous year. The total Canadian production of radio apparatus and accessories amounted to \$1,109,732. In addition to this imports amounted to \$710,507. As these values are based on manufacturers' prices, it is clear, that the actual sales value to the consumer is much greater. An interesting feature of the radio industry lies in the fact, that a number of the leading radio manufacturers in the United States have opened factories in Canada and are thus providing employment for Canadians.

The radio industry in Canada is, however, still young, and there is ample scope for expansion and increased production. The figures show that there is a big field still untouched and many years of increased prosperity can be looked forward to. As time goes on and improvements come along, radio sets will be looked upon as much a part of the home as the piano or gramophone are to-day.

Indications already show, that the demand during the coming season will be considerably greater than last year and radio manufacturers are consequently making special arrangements to be early in the field.

STROLLING PLAYERS.

The studio orchestra of 3LO, Melbourne, is becoming almost a strolling organisation. Already they have appeared at several concerts away from the studio, and on September 22, they will make their first appearance at the St. Kilda Town Hall at the annual smoke concert of the Hon. Justice's Association. Miss Elsy Treweek will also appear, and the items will be broadcast through 3LO, Melbourne.

PHILIPS VALVE -- C 509

PHILIPS Research Engineers, after years of patient toil and care, have evolved a general purpose valve, C509, which will give results to suit the most critical amateur.

On account of its very large output it is specially suitable as a Power Amplifier for Loud Speaker work, yet its design makes it suitable for High Frequency stages. This Valve gives decidedly, a purity of tone with magnificent volume, while no trace of distortion is at any time apparent. Obtainable at all Radio Dealers. Sold with either Standard, English or American Caps, also the New UX Cap.

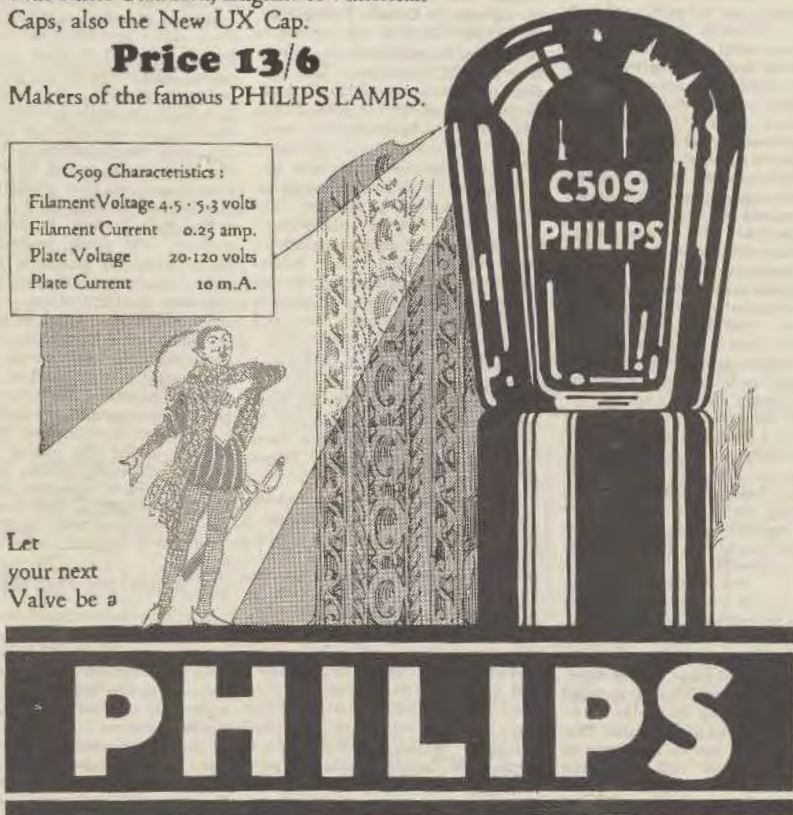
Price 13/6

Makers of the famous PHILIPS LAMPS.

C509 Characteristics :

Filament Voltage	4.5 · 5.3 volts
Filament Current	0.25 amp.
Plate Voltage	20-120 volts
Plate Current	10 m.A.

Let
your next
Valve be a



PHILIPS

RADIO ROMANCE.

Romance knows no bounds. In prehistoric days the ardent suitor sent words of love inscribed on the most handy and most portable boulder. To-day it is possible for sweethearts to converse from opposite ends of the earth. But radio romances are a rarity. Mr. Jack O'Hagan, the popular young balladist who is a frequent and welcome member of the programmes of 3LO, Melbourne, has received many letters from young ladies who have fallen in love with his radio personality.

The following is one of the most interesting to date: "I am sending you some words asking if you would kindly read them and let me know if you could possibly set them to music. I have listened to your songs and enjoyed them that much that I am broken up now that father has decided to do away with the wireless set. So do not think too unkindly of me, and let me know if you think the verses are any good. If you like to alter them, do so." Then follow the verses:

*In our old home in the country,
When the evenings were so long
We used to listen to your voice
And hear your gentle song.
We used to sit and hear you sing
When the lamps were dim and low
We listened to each word you sang
With faces all aglow.*

Chorus:

*But now we cannot hear your songs
Our hearts are sad and sore,
We cannot put our minds to work,
As we did long before,
The aerial is broken down,
The batteries are dead,
We cannot get a single sound
And your dear voice has fled.*

*In our old home in the country
The evenings are still long,
We cannot listen to your voice,
Nor hear your gentle song,
We cannot sit and hear you sing,
When the fires are burning low,
We listen to the wind and rain,
Our faces do not glow.*

NOVEL INNOVATION.

Keogh Radio Supplies have initiated an entirely new idea in supplying radio parts on the time payment system. The idea is to encourage radio users to buy the best parts, and so add to the efficiency of their receivers.

TRIMM SUPER SPEAKERS

Same wonderful reproduction as Trimm Headsets



TRIMM
Entertainer

The Trimm Entertainer will appeal to every radio buyer. This speaker gives the performance and tones of speakers selling at much higher prices, yet its price is within everyone's reach. The Entertainer stands 19½ inches high, has a 12-inch bell. Volcanite horn and base are finished in the attractive Volox black. Slide adjustment lever gives instant control of tone and volume. Large diaphragm gives purer, sweeter musical tones over the entire range found in radio broadcasting.

Price £4/9/-

Trimm Concert

The Trimm Concert is the speaker with the "Natural" tone. Large Volcanite horn stands 22 inches high. Opening of sound chamber is 3 inch, increasing gradually to 15 inches at the bell. Extra large diaphragm gives beautiful tones over the entire range, from high of violin to low of organ. The Concert is the only speaker that reproduces the bass of orchestral or instrumental selections in their true tonal value. For appearance, tone, results and volume on DX as well as local, the "Concert" cannot be excelled. Standard finish black. Volume is controlled by easily accessible adjustment.

Price £6



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Broadcasting Programmes

for the Coming Week



Friday, Sept. 17

2FC

Early Morning Session.

- 7—Time Signals. The Chimes of 2FC and Announcements.
 7.5—Cricket Scores: 2nd day's play of the match Australia versus Palmer's XI.
 7.10—Weather information. Commercial news. Shipping Intelligence; Mail Services.
 7.25—Investment Market, Mining Share Market, Metal Quotations.
 7.35—Wool Sales, Broadstairs Markets, Interstate Markets, Woolser Markets.
 8—Time Signals; Cricket Scores: A "Cheerio Talk" by Mr. J. K. Powell.
 8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Announcements.
 9.20—Music from the Studio.
 10—Cricket Scores.
 10.5—Late "Sydney Morning Herald" news service.
 10.15—Music from the Studio.
 11—Progress Cricket Talk.
 11.50—A Cooking Talk and Recipes by Miss Ruth Furst.
 11.55—Close down.

Midday Session.

- 12—Time signals. The chimes of 2FC and Announcements.
 12.5—Stock Exchange. First Call.
 13.10—Music from the Studio.
 13.25—Rugby News.
 1—Time signals. Weather Intelligence.
 1.5—Cricket Scores.
 1.45—"Evening News" Midday News Service; Markets.
 1.50—Music from the Studio.
 1.55—Stock Exchange. Second Call.
 2.30—Music from the Studio.
 2.35—Close down.

Afternoon Session.

- 3.30—The Chimes of 2FC and Announcements.
 3.35—Broadcast from the Haymarket Theatre, Orchestra under the baton of Mr. Stanley Forst.
 5—Vocal Recital by the pupils of Mr. E. H. Jones.
 5.40—Miss Florence Barrow, contralto: "At Night" (Reichmanoff).
 5.45—From Farmer's Tea Rooms: The Oak Hall Trio.
 5.55—Music from the Studio.
 6—Miss Jeanne Sheppoff, soprano.
 6.5—A Music Talk by Mr. E. Chapple.
 6.15—Music from the Studio.
 6.25—Miss Florence Barrow, contralto: "Who'll Buy my Lavender" (German).
 6.25—From Farmer's Tea Rooms: The Oak Hall Trio.
 6.35—Miss Jeanne Sheppoff, soprano.
 6.40—Music from the Studio.
 6.45—Stock Exchange. Third Call.
 6.45—Music from the studio.
 6.55—Close down.

Early Evening Session.

- 6—Time signals. The chimes of 2FC and announcements.
 6.5—"The Hello Man" talks to the children.
 6.45—A talk to the elder boys: "Three Red Bricks."
 6.50—Broadcast from Farmer's Tea Rooms: Vocal and instrumental items.
 7—A Talk by the 2FC Racing Commissioner.
 7.15—From the Studio: "Evening News" late news service. Weather information.
 7.40—A Film Talk.

Night Session.

- 7.55—The Chimes of 2FC and Announcements.
 8—Sydney Instrumental Trio: Mr. Lionel Lawson, violinist; Mr. Lindley Evans, pianist; Mr. Gladstone Bell, cellist.
 8.10—Mrs. Walter Kingsley, baritone.
 8.20—Mr. Gladstone Bell, cello solo.
 8.30—Mr. Walter Hunt and Miss Eve Warhurst in a one act play.
 8.45—Miss Daisy Mangen, soprano.
 9.2—Mr. Lindley Evans, piano solo.
 9.14—Mr. Cyril Monk will give the 4th Travet

Farmer's service, Sydney, call sign 2FC, wave length 1100 metres.

Broadcasters Ltd, Sydney, call sign 2FL, wave length 950 metres.

Broadcasting Co. of Australia, Melbourne, call sign 8LO, wave length 371 metres.

Associated Radio Co, Melbourne, call sign 8AL, wave length 424 metres.

2FL, wave length 950 metres.

Queensland Radio Service, Brisbane, call sign 4QG, wave length 883 metres.

Central Broadcasters Ltd, Adelaide, call sign 6CL, wave length 893 metres.

Radio Broadcasting Co. of N.Z., Auckland, call sign 1YA, wave length 429 metres.

Western Farm's, Perth, call sign GWF, wave length 1250 metres.

Tasmanian Broadcasting Pty. Ltd., Hobart, call sign 7ZT, wave length 646 metres.

Talk of the series, illustrating countries described with violin solo, and he will deal with the following places: Zurich, Lyons, Milan, Geneva, The Rhine, Amsterdam, The Hague.

9.5—Miss E. Oxenbould, vocal items.

9.45—Miss Walter Kingsley, baritone.

9.50—Sydney Instrumental Trio.

10.3—Mr. Walter Hunt and Miss Eve Warhurst in a one act play.

10.15—Miss Daisy Mangen, soprano.

10.24—Miss B. Oxenbould, vocal items.

10.32—Announcements.

10.36—Broadcast from the Wentworth Hotel, Sydney. Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.

12—National Anthem. Close down.

2BL

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
 7.30—Talk on Health and Hygiene.

- 7.35—Physical Training and Health Exercises.
 7.45—Broadcasters' Special News Service.
 7.52—Special News from Rugby.
 7.56—Musical Programme from the Studio.
 8—G.P.O. Clock and Chimes. Close down.

Morning Session.

- 10—G.P.O. Clock and Chimes. Special News Service from the "Daily Telegraph."
 10.10—Music from the Studio.
 10.25—Special news from the "Daily Telegraph."
 10.45—Music from the Studio.
 11—G.P.O. Clock and Chimes. Social Cricket Session.
 11.5—Musical Programme from the Studio.
 11.19—Markets.
 11.20—London Metal Quotations.
 11.25—Broadcasters' Information Service, including Mails, Shipping, Weather, Baseball, Social Fixtures for the following day.
 11.40—Musical Programme from the Studio.
 11.45—News from "Sun" Color Edition.
 11.55—Talks to Women, by Mrs. Jordan, Catering for the Family.
 12.25—Miss Helen J. Beebling, will talk on The Advantages of Golf.
 12.30—Broadcasters' Trust Expert will discuss the training operations and horses' form from Randwick.
 12.45—Miller's Instrumental Quartet, under the direction of Caryl Casting.
 1.30—Sydney Stock Exchange calls.
 1.45—Latest sporting information from the "Sun."
 2—G.P.O. Clock and Close down.

Afternoon Session.

- During the afternoon, results of races broadcast immediately after each race by courtesy of "Sun" Newspapers.
 3—G.P.O. Clock and Chimes. Weather Report and Social Notes from "The Sun."
 3.10—Resume of Night's Programme.
 3.15—Civil Service Restaurant Trio under the direction of Miss De Cury Brenner.
 3.19—A talk on English Literature and Poetry by Mr. J. M. Treatise.
 3.45—Music from the Studio.
 4—G.P.O. Clock and Chimes. Music from the studio: Civil Service Restaurant Trio.
 4.15—Musical Programme from the studio.
 4.30—Serial Story, entitled, "The Scarlet Locket," by C. M. Siblett.
 4.45—Music from the Studio.
 5—G.P.O. Clock and Chimes; Producers Distributing Society's Market Report.
 5.10—Shipping Information when available.
 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes. The pupils of Miss Monica Sully will entertain the kiddies.
 6.45—Broadcasters' Dinner Orchestra.

Special Country Session.

- 7.15—Australian Mercantile Land & Finance Co's Stock and Bond Report.
 7.20—Weather Report.
 7.24—Talk on Land Subjects.
 7.31—Stock Exchange Reports.
 7.37—Producers Distributing Society's fruit and vegetable report.
 7.41—Fruit and vegetable reports (Sun).
 7.45—Grain and Poultry Reports (Sun).
 7.48—Country news from "The Sun."
 7.55—Close down.

Evening Session.

- 8—G.P.O. Clock and Chimes; Hoyt's Imperial Orchestra under the direction of Mr. Lionel Hart, broadcast from Hoyt's Picture Theatre.
 8.20—Miss Grace Williams, contralto.
 8.27—Talk concerning your rates etc.
 8.37—Mr. Clem Kilburn, baritone.

- 8.45—Hoyt's Imperial Orchestra.
9.—G.P.O. Clock and Chimes: Resume of following day's programme.
9.5—Weather Report and Forecast by courtesy of J. C. Morrison and The Meteorologists.
9.5—Sporting Talk by the Senior Sporting Expert of "The Sun," on "The Prospects of To-morrow's Races."
9.5—Interval.
9.49—Miss Grace Saville, contralto.
9.47—Mr. Clem Williams, baritone.
9.55—Lecture by Mr. J. M. Prentice.
10.15—Doc Morrison and The Gladiators, from the ballroom of the Bondi Casino. During the intervals between dances, News Reports, by courtesy of the Sun will be broadcast.
11.—From the Studio: The Palmgrove Orchestra under the direction of Mr. Stan Fisherburgham.
12—G.P.O. Clock and Chimes: National Anthem.

2GB

Evening Session.

- 7.30—Music.
7.45—Announcements.
7.55—Instrumental artists: Lloyd Davies, Dan Scully, Monica Horner, Betty Stuart.
8.—Advance Australia Series.
8.20—Organ recital, by Wilfred Arlson, from St. Alban's Church, Redfern.
8.35—Songs by Ethelbert Elliott.
8.45—Viola solos by Monica Horner.
8.53—Address by Professor Ernest Wood.
9.5—Announcements.
9.10—Organ recital by Wilfred Arlson, from St. Alban's Church, Redfern.
9.20—Songs by Ethelbert Elliott.
9.28—Monira Horner, violin solos.
9.38—Instrumental, "Zampa."
9.43—Announcements.
9.53—God Save the King.

3LO

Midday Session.

- 12—Time Signal! British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Action" and "Herald" News Services.
12.45—Stock Exchange Information.
12.60—Meteorological Information: Weather Forecasts for Victoria, Tasmania, South Australia and New South Wales; Ocean Forecast.
1—Time Signal!
1.1—Studio Orchestra.
1.15—Reginald Brady, violin.
1.17—Connie Courtney, soprano (by permission of J. C. Williamson Ltd.).
1.24—Studio Orchestra.
1.28—Reginald Brady, violin.
1.40—Connie Courtney, soprano.
1.47—Studio Orchestra.
2—Close down.

Afternoon Session.

- 3—Chorus by the students of the Canfield Technical School, transmitted from the School Hall.
4—Miss Frances Fraser, "Phases of German Life."
4.15—Rita Hilton, entertainer.
4.22—Sofonia Orchestra.
4.29—Raymond Ellis, baritone.
4.36—Studio Orchestra.
4.45—"Herald" News Service; Stock Exchange Information.
5—Close down.

Evening Session.

- 6.45—Children's Hour. Answers to letters and Birthday Greetings: Jessie Batschler will sing; Billy Hannay; Littlebit's Fairy Story; Black Beauty; The Lost Princess.
6.49—"Argus" and "Herald" News Services; Reuters and the Australian Press Association.
6.53—Weather synopsis. Shipping movements.
6.57—Stock Exchange Information.
7.—Fish Market Reports by J. R. Borrett Ltd.
7.4—River Reports.

- 7.4—Market Reports by the Victorian Producers' Co-operative Co. Ltd., Haymarket sheep sales; Poultry, grain, chaff, straw, rye, dairy produce, potatoes and onions; Fruit reports of oranges and lemons, supplied by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

- 7.50—Under the auspices of the Department of Agriculture, Mr. J. Brake, Senior Inspector of Agriculture; Summer Fodder Crops.
7.40—Mr. Richard Taber, part author and playing one of the leading roles in "Is Zat Son" will speak at 7.50.
8—Collingwood Citizens' Band.
8.10—Mr. E. C. E. Taylor, Hon. Secretary, Associated Public Schools' School Life and Sport.
8.30—Organ Recital by Dr. Floyd, transmitted from St. Paul's Cathedral.
9—Collingwood Citizens' Band.
9.15—Miss Hilton, entertainer.
9.17—Collingwood Citizens' Band.
9.23—Mr. Leslie Bennings; Buffalo Grass Lawns.
9.37—Raymond Ellis, baritone.
9.44—Collingwood Citizens' Band.
9.50—Rita Hilton, entertainer.
9.57—Horn Johnson's Monte Carlo Band.
10.—Musical Reports, supplied by the Automobile Club of Victoria; British Official Wireless News from Rugby; Announcements.
10.37—Raymond Ellis, baritone.
10.44—"Argus" News Service; Meteorological Information.
10.50—J. Robinson, cornet.
10.55—Collingwood Citizens' Band.
11—God Save the King.

3AR

Morning Session.

- 11.30—The British Official Wireless Press, received by 9AR's operator from Rugby Wireless Station, England. Express train information. "Argus" news bulletin.
12—Time Signal Chime from the G.P.O., Studio Barometer Readings; 1st Weather Forecast; Events of the Day.
12.15—Musical Selections, relayed from Hoyt's de Luxe, Bourke Street.
12.30—Stock Exchange news.
12.35—Market Reports.
12.48—Musical Selections.
12.56—Mail Notices. Shipping Movements.
1—Close down.

Afternoon Session.

- 2.30—Hoyt's Premier Orchestra, under the direction of Miss Ella Brien. Birthday Week Programme.
3—The Erics Trio.
4—Time Signal Chime from G.P.O., 2nd Weather Forecast.
4.50—Gardeners' Chat to Children, by Mr. R. Stanley Halper.
4.54—"The Evening Amusement Guide."
5—Time Signal Chime from G.P.O.; Studio Barometer Readings; 2nd Weather Forecast; Close down.

Early Evening Session.

- 6.35—The Children's Corner, by Uncle Red.

Evening Session.

- 7.50—Time Signal from the G.P.O.; British Official Wireless Press; Studio Barometer Readings. Racing Anticipation by "Field Glasses."
8—Time signal from G.P.O.
8.5—Mr. Kenneth Uren, pianist.
8.9—Mr. Frank George, tenor.
8.15—Miss Phyllis Thomson, monologue, "The Inspired Song." Violin obligato played by Albert Urquhart.
8.23—Master Albert Urquhart, violin.
8.30—Mr. R. Stanley Haines, talk, "Growing Edible Beans."
8.45—Miss Margaret Chisholm, contralto.
8.52—Mr. Frank George, tenor.
8.59—Miss Phyllis Thomson, educational.
9.5—Mr. Kenneth Uren, solo pianist.
9.12—Mr. Will Frost, tenor.

- 9.19—Master Albert Urquhart, solo violinist.
9.26—Miss Margaret Chisholm, contralto.
9.38—Mr. W. W. Fothergill, talk on Figures and Aids to Quirk Working.
9.43—Mr. Will Frost, tenor.
9.45—Miss Helen Croft, soprano.
10.—Time Signal Chime from G.P.O.; Studio Barometer Readings; Ace News Service, exclusive to 3AR.
10.10—Lezzer's Ballroom Orchestra, under the leadership of Mr. Harry Nanpie.
11—Close down.

4QG

Midday Session.

- 12.55—Tune-in.
12.58—Time Signal.
1—Market Reports. Weather Information. "The Daily Mail" news, the "Daily Standard" news.
1.20—From the Hotel Carlton, Lunch Hour Music by the Carlton Orchestra.
2—Close down.
Afternoon Session.
2.30—A Frolicsome of Music.
3.45—A description of Brisbane and District—given from the top of 4QG's aerial tower, by Mr. F. W. Stevens (Chief Engineer, Queensland Radio Service).
4.15—"The Telegraph" news.
4.30—Close down.
Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session. Stories by "The Sandman."
7—The Farmers' Session; Market Reports; Lullabette; "Dawson Valley Irrigation Scheme—Some Suitable Crops and Classes of Farming," by Mr. A. F. Partridge (Commissioner for Irrigation and Water Supply).
7.36—From the Studio, "The Standard" news. Stock Exchange.
7.40—Announcements.

Night Session.

- 7.45—Lecture Session—"Making Australian Films" by Mr. Chas. E. Chauvel (Director Australian Film Productions).
A State Wide Dance will be conducted by Station 4QG. The Special Savoy Dance Orchestra will supply the music, which will be broadcast, and the announcer (Mr. C. V. Woodland) will act as M.C. Radio Clubs and private parties have been organised in various portions of the State, and will dance to wireless music from 8 p.m. until midnight.
Between dances, vocal numbers will be broadcast.
Week-end Road Information for motorists, supplied by the Royal Automobile Club of Queensland, at approximately 9 p.m. "The Daily Mail" news service will be broadcast at 10 p.m.
12—Close down.

5CL

Morning Session.

- 11.30—G.P.O. Chimes.
11.35—Featuring a Stock Duo Art Number.
11.40—"Advertiser" News Service.
11.55—Vocalion number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service and Grublet scores.
12.16—Featuring a Stock Duo Art Number.
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.
1.50 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
3—G.P.O. Chimes.

BURGESS—"Constant
satisfaction assured
—BATTERIES.

Afternoon Session.

- 4—G.P.O. Chimes.
 3.1—Relay from "Maple Leaf" Cafe—Orchestra numbers.
 4.6—From Studio—Serial Story.
 4—G.P.O. Chimes.
 4.1—Broadcast from "Arcadia" Cafe—Orchestra numbers.
 4.5—Stock Exchange Reports, General Information, and Station Announcements.
 5—G.P.O. Chimes.

Evening Session.

- 6.33—G.P.O. Chimes.
 6.31—Bedtime Stories, by "Auntie Peggy."
 7.80—Market Reports.
 7.40—Sporting Talk, by "Old Timer."
 8—G.P.O. Chimes.
 8.1—The Merry-makers' Orchestra, interspersed with vocal items by Miss M. Reidel, Mr. H. Klug and Mr. H. Mumme.
 9—G.P.O. Chimes.
 9.1—Weather Reports.
 9.3—Studio Concert, continued.
 10.15—"Advertiser's" news service and ships within wireless range.
 10.30—Studio concert continued.
 10.45—Station announcements.
 11—G.P.O. chimes, National Anthem. Close down.

7 ZL

Morning Session.

- 7.1—"The Mercury" news, stock market, shipping, commercial intelligence, weather information. Records from the Studio.
 12—Selections on the Salento. G.P.O. clock and chimes. Close down.

Afternoon Session.

- 3—G.P.O. Clock and Chimes.
 3.30—Hobart Stock Exchange quotations.
 3.5—Weather information.
 4—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7—Children's Corner. "Big Brother's" chats to his Pals.

Evening Session.

- 8—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway station produce sales. Weather information.
 8.5—Hobart Stock Exchange quotations.
 9.10—Weekly gardening chat, by Mr. George Nation.
 9.20—"Sports Budget," supplied by Mr. T. W. Newton, of Hobart Sports Depot.
 9.50—Miss Jean Hibbard, mezzo soprano; Miss Gwenia Bidouca, mezzo soprano; Miss Joan Dodd, vocalists; Miss Ruby Pines, accompanist; Mr. Robert Large, baritone; Mr. W. J. Clarke, Jr., Trumpeter; Mr. Reg Cooper, bass.
 9.58—"The Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.



Saturday, Sept. 18

2 F C

Early Morning Session.

- 7—Chimes of "Big Ben" and Announcements.
 7.15—Cricketer Scores; 8rd day's play of the match, Australia versus Palmer's XI.
 7.18—Weather Information, Commercial News, Shipping Intelligence and Market Reports. Mail services. Rainfall, Temperatures, Astronomical memoranda.
 7.25—Investment Markets, Mining Shares Market, Metal Quotations.
 7.33—Wool Sales. Broadcasts Markets, Inter-stata Markets, Produce Markets.
 7.45—"Sydney Morning Herald" News Service.

- 8—"The Chimes of "Big Ben." Music from the Studio.
 8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Programme Announcements.
 9.20—Music from the Studio.
 9.45—Talk by the 2FC Racing Commissioner.
 10—Chimes of "Big Ben." Cricket Scores.
 10.5—Late "Sydney Morning Herald" news service.
 10.15—Music from the Studio.
 11—Australian Press Association and Reuters' Cable Service.
 11.15—A Talk on Gardening by "Red Gum."
 11.30—Close down.

Midday Session.

- 12.55—The Chimes of 2FC and Announcements.
 1—Chimes of "Big Ben." "Evening News" midday news service and weather information. Race results will be transmitted at regular intervals.

Afternoon Session.

- 2.55—The Chimes of 2FC and Announcements.
 3—Time Signals; Musical Items will be transmitted from the studio during the intervals between race and sporting results.
 4.30—A complete resume of the afternoon's sporting events.
 5—Time Signals. Close down.

Early Evening Session.

- 6—The Chimes of 2FC and Announcements.
 6.5—"Aunt Mary" and "Sylvia" will entertain the Children.
 6.45—Broadcast from the Hotel Australia, orchestral items.
 7.15—"Evening News" late news service and weather information.
 7.45—A Motor Talk.

Night Session.

- 7.55—The Chimes of 2FC and Announcements.
 8—Broadcast from the Crystal Palace. Items by the Orchestra, under the baton of Mr. Harry Stone.
 8.30—Broadcast from the Paddington Hall. A Night of Old Time Dance Music, played by Wilson's band.
 8.40—From the Studio—Mr. Alex. Whitson, baritone, "Nancy Lee."
 8.44—Old Time Dance Music.
 8.52—Miss Elsie Peewles, soprano.
 8.56—More Dance Music.
 9.5—Mr. Ad. Cree, comedian.
 9.15—Old Time Dance Music.
 9.24—Mr. Alex. Whitson, baritone.
 9.32—More Dance Music.
 9.42—Miss Elsie Peewles, soprano.
 9.48—Some More Dance Music.
 9.58—Some More Dance Music.
 10—Mr. Alex. Whitson, baritone.
 10.12—Miss Elsie Peewles, soprano.
 10.25—Some Old Time Dance Music.
 10.40—Mr. Ad. Cree, comedian.
 10.58—Mr. Harrison White, barjo solos.
 11—Broadcast from the Wentworth Hotel, Sydney; Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
 12—National Anthem; Close down.

2 B L

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
 7.20—Talk on Health and Hygiene.
 7.35—Physical Training and Health Exercises.
 7.45—Broadcasts Special News Service.
 7.55—Special News from Rugby.
 7.58—Musical Programme from the Studio.
 8—G.P.O. Clock and Chimes. Broadcasters' Turf Report will discuss the training operations and horses' form from Randwick.
 8.15—G.P.O. Clock and close down.

Morning Session.

- 10—G.P.O. Clock and Chimes. Special news service from the "Daily Telegraph."
 11.10—Musical programme from the Studio.
 11.25—Special news from the "Daily Telegraph."
 11.45—Musical programme from the Studio.
 12—G.P.O. Clock and Chimes. Race results will be broadcast immediately after each race, by courtesy of "The Sun" Newspapers. Mrs. Jordan will talk on simple cooking for children.
 12.30—London Metal quotations.
 12.35—Broadcasters' information service, including Wells, Shipping, Weather, Rainfall, Social fixtures for the following day.
 12.50—News from "Sun" Cable Edition.

Afternoon Session.

- 4—G.P.O. Clock and Chimes. Music from the Studio.
 4.10—Talk on Sporting and Athletic Fixtures for the day—Lacrosse, Hockey, Tennis, Rugby League all fixtures. Rugby Union all fixtures, Soccer, Australian Rules, Baseball, Racing, Trotting, Conring, Bowls. During the afternoon sporting information will be broadcast by courtesy of "The Sun" Newspapers.
 5.15—G.P.O. Clock. Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes. Uncle George and the Kiddies.
 6.45—Parillon Dinner Orchestra, under the direction of Mr. Cec. Morrison.

Evening Session.

- 8—Special programme broadcast from Koroitiki, as an attempt will be made to create a record as regards the highest point from which Australian broadcasting has been carried out.
 11—The Duncowen Dance Orchestra, under the direction of Mr. Merv. Lyons, broadcast from the ballroom of the Duncowen. During the intervals between dances, News Reports, by courtesy of the "Sun" will be broadcast.
 12—G.P.O. Clock and Chimes; National Anthem.

3 L O

Morning Session.

- 11—Sonora Recital.
 11.10—Ross Darey and Inez Vinnard, entertainers.
 11.20—Harold Rodgers, organ.
 11.30—Organ Recital.
 11.40—Ross Darey and Inez Vinnard, entertainers.
 11.50—Harold Rodgers, piano.
 12—Time Signal; British Official Wireless News from Rugby; Reuters and the Australian Press Association cables. "Austral" and "Herald" news service. Shipping intelligence.
 12.45—Stock Exchange information.
 12.50—Meteorological information. Weather forecast for Victoria, Tasmania, South Australia, and New South Wales. Ocean forecast. River reports.

- 1—Time signal.
 4.1—Studio Orchestra.
 1.10—Walter Smith, cornet.
 1.14—Jack O'Hagan, baritone.
 1.20—Studio Orchestra.
 1.25—Walter Smith, cornet.
 1.41—Jack O'Hagan, baritone.
 1.47—Studio Orchestra.
 2—Close down.
 2.30—Result of the Open Handicap, Melbourn Races.

BURGESS—"They're on
 the Leviathan"—
 BATTERIES.

Afternoon Session.

- 2.—Result of Three Year Old Handicap, Mentone Races.
 2.3.—Studio Orchestra.
 2.36.—Result of Suspended, Mentone Races.
 2.31.—Studio Orchestra.
 2.4.—Result of Mentone Handicap.
 4.1.—Studio Orchestra.
 4.36.—Result of Trial Plate, Mentone Races.
 4.31.—Studio Orchestra.
 4.4.—"Herald" News Service.
 4.6.—Close down.

Evening Session.

- 8.45.—Sporting Results.
 9.—Children's Hour: Answers to letters and Birthday Greetings; Jessie Batchelor will sing to the children; Mary Gunless' poems, Selections from Kildyosilla, by "Englishwoman"; The Fairies Breakfast Bell; The Jackus and the Lady; for the little ones: Supping, Just Supping; for Mary Gunless and Betty Bonolis, Say it with Music.
 9.40.—"Argus" and "Herald" News Services; Sporting results. Reuters and Australian Press Association cables.
 9.53.—Weather synopsis, Shipping movements.
 9.55.—Stock Exchange information.
 1.2.—Fish Market Reports by J. E. Borrett Ltd.
 7.4.—River Reports.
 7.6.—Market Reports by Victorian Producers' Co-operative Co. Ltd.: Grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Night Session.

- 7.26.—Mr. Fred Chapman, "The Craters and Crater Lakes of Mount Gambier."
 7.46.—Under the auspices of the Sporting Dog Club of Victoria, Mr. G. McEwin Duncan, The Pointer.
 8.—Victorian Railways Institute Orchestra.
 8.10.—Raymond Ellis, baritone.
 8.17.—Moana Ima Doa, Hawaiian Instrumentalists.
 8.27.—Victorian Railways Institute Orchestra.
 8.47.—Rev. Richards, The Art of Public Speaking.
 8.57.—Mabel White, soprano.
 9.4.—C. Richard Chiles, flute.
 9.10.—Victorian Railways Institute Orchestra.
 9.24.—Original Sketch, written by Bardsley Turner.
 9.44.—Raymond Ellis, baritone.
 9.51.—Moana Ima Doa.
 10.—"Argus" News Service; British Official Wireless News from Rugby; Meteorological Information; Sporting Results: Races, Football, Metropolitan Soccer League; Metropolitan Amateur Association Lectures.
 10.17.—Mabel White, soprano.
 10.24.—Tasma Tierzan, "cello solo.
 10.30.—Victorian Railways Institute Orchestra.
 10.43.—Announcements, etc.
 10.46.—Victorian Railways Institute Orchestra.
 11.—God Save the King.

4QG

No Middy Transmission.

Afternoon Session.

- 2.25.—Tune-In.
 3.30.—Church Service from the Seventh Day Adventist Church, South Brisbane.
 4.30.—Close down.

Early Evening Session.

- 6.25.—Tune In.
 6.50.—The Children's Session. Bedtime Stories by "Uncle Ben" and "Uncle Jim," assisted by "Mabel Sunshine."
 7.13.—Sporting News.
 7.40.—Close down.

Night Session.

- 7.45.—A sporting talk, by Rugby League Officials.
 8.—Special Recital from the Studio of Mr. Luis Anzoco Perez, "The Hall of the Musee," Little Bona Street, Brisbane.
 8.15.—Weather Information officially supplied by the Commonwealth Weather Bureau.
 8.20.—Instrumental Items and Solos.

- 10.—From the Studio, "The Daily Mail" news service. Close down.

5CL

Morning Session.

- 10.30.—G.P.O. Chimes.
 10.31.—Studio Orchestra.
 11.45.—"Advertiser" News Service.
 Afternoon Session.
 2.—From the Studio: Interstate sporting results and "A" grade football results as available.

Evening Session.

- 6.30.—G.P.O. Chimes.
 6.31.—Bedtime stories by "Auntie Sybil."
 7.30.—Market Reports.
 7.40.—Resume of the chief sporting results throughout the Commonwealth.
 8.—G.P.O. Chimes.
 8.1.—Programme of jazz music by Naval Gun Chasers (H.M.A.S. Adelaide), interspersed with vocal items by Miss H. Simcock and Miss H. Wheeler.
 10.15.—Sporting results.
 10.30.—Studio concert continued.
 10.55.—Station Announcements.
 11.—G.P.O. Clock Chimes, National Anthem and close down.

7ZL

Morning Session.

- 11.—G.P.O. Clock Chimes. "The Mercury" news, Stock Market, Shipping, Commercial intelligence, Weather information and Sporting announcements.
 11.45.—Selections on the Salonola. Hobart Stock Exchange quotations.
 12.—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7.—Children's Corner, "Big Brother" chats to his Pals.

Night Session.

- 8.—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information and sporting results.
 8.5.—Hobart Stock Exchange quotations.
 8.16.—"Come to Tasmania Movement," by Mr. McIlraith Reid, Director of Missions, subject: "The Geology of Tasmania."
 8.20.—Palms de Dance Band, City Hall.
 8.45.—British Official Wireless news, copied direct from Rugby by our own operator. Weather synopses. Station announcements. Close down.

Night Session.

- 6.—Chimes of "Big Ben" and announcements.
 6.3.—Mr. Maurice Price will give Oscar Wilde's poem "Happy Prince," set to music by Liza Lohmann. Mr. Ewart Chapple at the piano.
 6.15.—Programme arranged by Madame Emily Marks.
 6.50.—Broadcast from the Lyceum Hall, Pitt Street, organ solos.
 7.—Broadcast from the Lyceum Hall, Pitt Street, Evening Service, arranged by the Central Methodist Mission. Rev. W. A. Foreman, preacher.
 8.20.—Broadcast from the Grand Opera House, a concert by the N.S.W. State Military Band.
 10.—Close down.

2BL

Morning Session.

- 11.—Service broadcast from Newtown Congregational Church.

Afternoon Session.

- 8.40.—Bible Class, conducted by Mr. W. (Calro) Bradley.
 4.—Manly Band, broadcast from Ocean Beach, Manly.

Evening Session.

- 6.30.—Newtown Congregational Church Service.
 8.30.—City of Sydney Band, broadcast from the studio.

2GB

Morning Session.

- 10.20.—Organ music from St. Alban's Church, Redfern.
 10.30.—The morning service from St. Alban's Liberal Catholic Church.
 12 noon.—Close down.

Evening Session.

- 6.45.—Music from the Studio.
 6.55.—Announcements.
 7.—Music from Adyar Hall.
 7.5.—Lecture from Adyar Hall, entitled "The Voice of the Silence, the Three Klymasas" by Professor Ernest Wood, international Lecturer of the Theosophical Society.
 8.—Announcements from Studio.
 8.5.—Music from Studio.
 8.15.—Grand Concert from Adyar Hall, comprising—Instrumental and Quartet items by Dan Scully, Monica Hoeder, F. Heides, and Norman Incaulms.
 Violin solos by Dan Scully.
 Songs by Signor Alberto Marini.

3LO

Morning Session.

- 10.55.—Express Train Information.
 11.—Morning Service from Scots' Church, Collins Street, Melbourne. Preacher, the Rev. Dr. Norman Maclean.
 12.15.—British Official Wireless News from Rugby; Close down.

Afternoon Session.

- 3.—Pleasant Sunday Afternoon Service from Wesley Church, Lonsdale Street, Chalmers; Rev. Dr. S. J. Holan.
 4.30.—Close down.

Evening Session.

- 6.45.—Children's Hour. Answers to letters and Birthday Greetings. "Tilly Bunny" and his "Brer Rabbits" will sing to the children. Stories will be "Mimosa" and "Loveliest Life."
 6.40.—Close down.

Night Session.

- 7.—Service from Welsh Church, Latrobe St., Melbourne.
 8.20.—Brunswick City Band.
 8.30.—Alberto Zelman, violin.
 8.45.—Raymond Ellis, baritone.
 8.55.—G. Howley, Ross, Gordon Pilgrimage.
 9.15.—Brunswick City Band.

Sunday, Sept. 19

2FC

Morning Session.

- 10.55.—Chimes of 2FC and Announcements.
 11.—Broadcast from St. Stephen's Presbyterian Church, Phillip Street—Morning Service.
 12.15.—From the Studio—News Service.
 12.50.—Close down.

Afternoon Session.

- 2.55.—The Chimes of 2FC and Announcements.
 3.—Organ and vocal recital from Pitt Street Congregational Church, arranged by Miss Lillian Frost.
 4.30.—From the Studio: A Talk on "Our Pals" aboriginals, and what the Church Missionary Association is doing for them.
 5.—Close down.

- 8.23—Alberto Zelman, violin.
8.28—Raymond Ellis, baritone.
9.46—Brunswick City Band.
9.59—"Argus" News Service; Announcements, etc.
10—God Save the King.

4 Q Q

- 10.55—Turn-in.
11—The complete morning service will be relayed from St. Stephen's Cathedral.

Afternoon Session.

- 3.10—Turn-in.
The Band Concert provided in the Brisbane Educational Courses by the Brisbane Federal Band (Mr. W. H. Davis, conductor).
3.30—Close down.

Night Session.

- The complete Evening Service will be relayed from St. Stephen's Cathedral.
8.30—Band Concert. Close down.

5 C L

Morning Session.

- 11—Relay from the Parkside Baptist Church; Divine Service.

Evening Session.

- 6.30—G.P.O. Chimes.
6.41—Bodiney stories for the children.
7—Relay from St. Peter's Cathedral—Divine Service.
8.15—From the Studio—Vocal items by Miss L. Ward, Jean Sinclair, J. Bley, and Arnold Matthea.
8.45—Mr. P. H. Niehuls, "The New Evolution."
9—G.P.O. Chimes.
9.1—Weather reports.
9.5—Studio Concert, continued.
10—G.P.O. Chimes, National Anthem, and close down.

7 Z L

Evening Session.

- 7—Service from Memorial Church, Hobart. Preacher, Rev. Arthur C. Nelson.
8.45—Concert from the studio under the auspices of the Shakespeare Society, Hobart.
9.45—"The Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.



Monday, Sept. 20

2 F C

Early Morning Session.

- 7—The Chimes of 2FC and Announcements. Time signals.
7.5—Music from the Studio.
7.10—Weather Information, Commercial News, Shipping Intelligence, Retail, Temperatures, Astronomical Memoranda.
7.25—Investment Market, Mining Share Market, Metal Quotations.
7.35—Wool sales, breadstuffs, markets, produce markets.
7.45—"Sydney Morning Herald" news service.
8—Time signals. A Chocro Talk, by Mr. J. K. Powell.
8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Programme Announcements.
9.30—Music from the Studio.
10—Time Signals, Music from the Studio.

- 10.5—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
11—Time Signals. Program Cricket talk. Cables.

- 11.3—Australian Press Association and Rotar's Cable Services.
11.5—Last minute sporting information, by the 2FC Racing Commissioner.
11.15—Music from the Studio.
11.50—Close down.

Midday Session.

- 12—Time Signals, The Chimes of 2FC and Announcements.
12.5—Stock Exchange, Best call.
12.10—Music from the Studio.
12.50—Itchy Wireless News.
1—Time Signals, Weather Intelligence.
1.5—"Business News", Midday News Service, Producer's Distributing Society's Report.
1.20—Music from the Studio.
1.30—Stock Exchange—second call.
1.35—Music from the Studio.
2—Time Signals; Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
2.35—A Recital on the Bohning Player Piano.
3.30—From Farmer's Tea Rooms: The Oak Hall Trio will play (leader, Mr. Horace 5.25).
3.40—Miss Ethel Muller, contralto.
3.45—From Farmer's Tea Rooms: Oak Hall Trio.
3.55—Music from the Studio.
4—Miss Ida Johnstone, soprano.
4.5—From Farmer's Tea Rooms: The Oak Hall Trio.
4.15—Music from the Studio.
4.20—Miss Ethel Muller, contralto.
4.25—From Farmer's Tea Rooms: The Oak Hall Trio.
4.30—Music from the Studio.
4.35—Miss Ida Johnstone, soprano.
4.40—Stock Exchange, Third Call.
4.45—Music from the Studio.
5—Close down.

Early Evening Session.

- 6—Chimes of "Big Ben" and Announcements.
6.5—"The Hello Man" talks to the children.
6.40—Talk to the Elder Children.
6.50—An Esperanto talk on "The International Language, and those who use it," by Mr. J. N. Edmunds.

Night Session.

- 7—Broadcast from the Sydney Town Hall, items by Dr. Green's Band, playing at the 4th Annual Concert of the Royal Shipwreck Relief and Humane Society of N.S.W.
7.15—From the Studio: "Evening News" late news service, weather information.
7.40—From the Town Hall, items by the Fire Brigade's Band.
7.55—Announcing an American Night.
8—Broadcast from the Haymarket Theatre, Sydney; Operatic Orchestra, under the baton of Mr. Stanley Porter.
8.25—From the Studio—American Consul General in Charge, Mr. E. M. Sawyer, will send greetings to American Broadcasting Station, and announcing an American Night from 2FC, which has been arranged at the request of several American stations.
8.40—Madame Emily Marks, soprano, in compositions by American composers.
8.45—Madame Emily Marks, soprano.
8.15—Broadcast from the Sydney Town Hall, items from the Concert of the Royal Shipwreck Relief and Humane Society of N.S.W.
8.45—From the Studio, Mr. Jack Lumsdaine will give the 4th series of the Musical Steeplechase.
9.40—Broadcast from the Sydney Town Hall, 10.15—From the concert, the Royal Shipwreck Relief and Humane Society of N.S.W.
10—Broadcast from the Haymarket Theatre, Sydney, orchestral items.
10.25—From the Studio, 2FC Dance Band.
10.55—Announcements.
11—2FC Dance Band.

- 11.30—Broadcast from the Wentworth Hotel, Sydney, Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
12—National Anthem; Close down.

2 B L

Early Morning Session.

- 7.15—Physical Training and Health Exercises.
7.30—Talk on Health and Hygiene.
7.45—Physical Training and Health Exercises.
7.45—Broadcasters' Special News Service.
7.55—Special News from Rugby.
8—G.P.O. Clock and Chimes. Close down.

Morning Session.

- 10—G.P.O. Clock and Chimes, Special News Service from the "Daily Telegraph."
10.10—Music from the Studio.
10.25—Special news from the "Daily Telegraph."
10.45—Music from the Studio.
11—G.P.O. Clock and Chimes. Special Celestial Session.
11.5—Musical Programme from the Studio.
11.15—Markets.

- 11.30—London Metal Quotations.
11.35—Musical programme from the studio.
11.30—Broadcasters' Information Service, including mails, shipping, weather, rainfall.
11.45—Women's Session; Social Notes by Mrs. Jordan and talk on Making Pickles.
12.25—A talk on Golf Clubs by Miss Helen Fern Beagling.
12.30—Shopping Guide.
12.35—Broadcasters' Turf Expert will discuss the training operations and horses' form from Randwick.
12.45—Hiller's instrumental Quartette, under the direction of Garyl Castling.
1.30—Sydney Stock Exchange calls.
1.45—Latest sporting information from the "Sun."
2—G.P.O. Clock and Chimes. Close down.

Afternoon Session.

- During the afternoon results of races will be broadcast immediately after each race.
4—G.P.O. Clock and Chimes. Weather report and Social Notes from the "Sun."
5.10—Resume of night's programme.
8.15—Delmar Jones' Music Room Trio.
8.30—"A Course in Philosophic Thought," by Mr. J. M. Prentice.
8.45—Musical Programme from the Studio.
9—G.P.O. Clock and Chimes. David Jones' Tea Room Trio.
9.40—Serial story entitled "The Scarlet Cockatoo," by C. M. Sublette.
9.45—Music from the Studio.
10—G.P.O. Clock and Chimes; Producer's Distributing Society's Market Report.
10.10—Shipping information when available.
5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes; Uncle George and the Kiddies.
6.40—Pavilion Dinner Orchestra, under the direction of Mr. Geo. Merriman.
Special Country Session.
7.15—Australian Mercantile Land & Finance Co's Stock, Wood and Hide Report.
7.20—Weather Report by Courtesy of Mr. C. Mares, Government Meteorologist.
7.25—Stock Exchange Returns.
7.31—Producer's Distributing Society's Fruit and Vegetable Report (Sun).
7.35—Fruit and Vegetable Report (Sun).
7.38—Train and Fodder Report (Sun).
7.42—Cattle and Poultry Market Report.
7.45—"What's On," a guide to the visitors and citizens of Sydney.
7.55—Close down.

Night Session.

- 8—G.P.O. Clock and Chimes; Newtown Band, broadcast from Industrial Hall, Newtown.

PHILCO—"Experience teaches"—BATTERIES.

- 8.20—Mary Neal contralto solo.
- 8.27—Lecture from the studio.
- 8.47—Broadcasters' Old Time Party.
- 9.07—Resume of Programme.
- 9.57—O. Clock and Chimes.
- Al. Hammett and The Ambassadors' Dance Band, broadcast from the ballroom of the Ambassadors. During the intervals between dances, descriptions of frocks and social notes will be broadcast by Mrs. Potts.
- 9.30—Lecture from the Studio.
- 9.56—Newtown Band.
- 10.15—Al. Hammett and The Ambassadors' Dance Band broadcast from the ballroom of The Ambassadors, during the intervals between dances news reports by courtesy of "The Sun" Newspapers will be broadcast.
- 12—G.P.O. Clock and Chimes. National Anthem.

2 GB

Evening Session.

- 7—Talks to children by Capt. Halfour Clarke.
- 7.36—Music from the Studio.
- 7.48—Announcements.
- 7.55—Instrumental music by Maudie Horler, Muriel Lang, Lloyd Davies, Betty Stuart.
- 8.10—Address by J. Van der Loos, LL.B.
- 8.22—Songs by E. B. Butterworth.
- 8.30—Violin solos by Lloyd Davies.
- 8.38—Announcements.
- 8.45—Songs by Madam Weyfield.
- 8.55—Solo solos by Muriel Lang.
- 9.2—Golf No. 4, by Arthur Hurton.
- 9.12—Songs by E. E. Butterworth.
- 9.21—Chamber music.
- 9.35—Songs by Madam Weyfield.
- 9.44—Violin solos by Lloyd Davies.
- 9.52—Announcements and close down.

3 LO

Midday Session.

- 12—Transmission from Messrs. Allan's Stand at the Royal Show Grounds.
- 12.30—British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services.
- 12.45—Shipping Intelligence. Stock Exchange information.
- 12.50—Meteorological Information. Weather forecasts for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports.
- 1—Time signal.
- 1.1—Studio Orchestra.
- 1.10—Walter Smith, cornet.
- 1.17—Rosa Darcy and Inez Vinnard, entertainers.
- 1.25—Studio Orchestra.
- 1.35—Frank Stokham, clarinet.
- 1.42—Rosa Darcy and Inez Vinnard, entertainers.
- 1.49—Studio Orchestra.
- 2—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 2.30—Close down.

Afternoon Session.

- 3—Studio Orchestra.
- 3.10—Mrs. Silk will talk on homecrafts.
- 3.25—C. Richard Chang, flute.
- 3.35—Raymond Ellis, baritone.
- 3.49—Studio Orchestra.
- 3.50—Walter Smith, cornet.
- 4—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 4.30—Raymond Ellis, baritone.
- 4.37—Miss Flora Pell, Supervisor of Domestic Arts, Education Department; Domestic Economy.
- 4.45—"Herald" News Service; Stock Exchange Information.
- 5—Close down.

Evening Session.

- 5.45—Children's Hour. Answers to letters and birthday greetings.
- 6—Jessie Smith will sing to the children, and then Little Miss Kookaburra will tell a dear little fairy tale and the seventh instalment of "The girl who played the game."
- 6.40—"Argus" and "Herald" News Services; Reuters and the Australian Press Association Cables.

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SYDNEY

- 6.53—Weather synopsis. Shipping movements. Overseas Shipping.
 7—Stock Exchange Information.
 7.2—Fish Market Reports, by J. R. Borrett Ltd.
 7.5—River reports. Aerial mail information by Australian Aerial Services.
 7.8—Market reports by the Victorian Producers' Co-operative Co. Ltd.: Haymarket, sheep, cattle, poultry, grain, hay, straw, jute, dairy produce, potatoes, and onions. Market prices of oranges and lemons, by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

- 7.20—Under the auspices of the New Settlers' League: Mr. J. B. Whitcomb: "Dessolate and its Artifice."
 7.40—Under the auspices of the Department of Agriculture, Mr. N. A. Ewman, Sheep and Wool Expert: "Shod Wool Classing and Packing."
 8—The Ballarat War Memorial Museum Appeal Concert, transmitted from His Majesty's Theatre, Ballarat.
 During interval, A Talk under the auspices of the Luncheon 68,600 League, Mr. H. Webb.
 10.45—British Official Wireless News from Rugby: Announcements; "Argus" News Service; Weather Forecast.
 11—Three-quarters of an hour's dance music by the Le Cassick's Quartette.
 11.45—God Save the King.

3 A R

Morning Session.

- 8.10—The British Official Wireless Press, received from Rugby Super Wireless Station, England, by 3AR's Operator; Express Train Information; The Age News Bulletin.
 8.2—Time Signal Chime from G.P.O. Studio.
 8.30—Indoor and Outdoor Thermometer Readings; 1st Weather Forecast; Events of the day.
 12.3—Musical Selections, relayed from Hoyt's de Luxe, Bourke Street.
 12.35—Stock Exchange news.
 12.38—Market Reports.
 12.40—Musical Selections.
 12.55—Mail Notices; Shipping Movements.
 1—Close down.

Afternoon Session.

- 2.30—Hoyt's Premier Orchestra, under the direction of Miss Ella Brice.
 3—Miss Ansel Evans, soprano.
 3.7—The Melbourne Piano Trio.
 3.23—Mr. Rex Pettifer, violinist.
 2.30—Miss Ansel Evans, contralto.
 3.37—Mr. Ronald Brazier, cellist.
 3.44—Miss Ethel Trenley, pianist.
 3.51—Melbourne Piano Trio.
 4—Time Signal Chime and Weather Report; Hoyt's Theatre.
 Richmond Trotting, 2.500 Cap meeting. Results immediately relayed on each race, and at half-hourly intervals.
 4.45—Evening Amusement Guide.
 5—Time Signal Chime, Studio.
 5.10—Barometer and Outdoor Thermometer Readings. Close down.

Early Evening Session.

Evening Session.

- 6.45—The Children's Corner, by Uncle Rad.
 7.40—Studio Barometer and Outdoor Thermometer Readings. British Official Wireless Press.
 8—Time Signal Chime.
 8.2—Mr. Edward Marks, tenor.
 8.10—Leggett's Ballroom Orchestra, relayed from Prahran (under the leadership of Mr. Harry Nangle).
 8.20—Miss Viola Morris, soprano.
 8.32—Mr. Ernest Sage, baritone.
 8.40—Leggett's Ballroom Orchestra.
 8.45—Mr. Edward Marks, tenor.
 8.52—Miss Viola Morris, soprano.
 9.10—Leggett's Ballroom Orchestra.
 9.25—Mr. Walter Binks, Character Analyst and Vocational Advisor, will give a talk on "Memory Training."

- 9.40—Mr. and Mrs. Ernest Sage, baritone and soprano, in a duet.
 9.48—Leggett's Ballroom Orchestra.
 10—Time Signal Chime from G.P.O. "Age" news bulletin, exclusive to 3AR.
 10.10—Leggett's Ballroom Orchestra.
 11—Time Signal Chime; Close down.

4 Q Q

Midday Session.

- 12.55—Tune-In.
 12.58—Time Signal.
 1—Market Reports supplied by the Council of Australia; Stock Exchange Information, supplied by the Committee of the Brisbane Stock Exchange; Weather Information supplied by the Commonwealth Weather Bureau; News Service supplied by "The Daily Mail." News service supplied by "The Daily Standard."
 1.20—From the Hotel Carlton, lunch hour music by the Carlton Orchestra.
 2—Close down.

Afternoon Session.

- 3.30—A programme of Music from the Studio.
 4—News Service supplied by "The Telegraph."
 4.30—Close down.

Early Evening Session.

- 6.25—Tune-In.
 5.30—The Children's Session—Stories by "The Sandman."
 7—The Farmers' Session. Market Reports supplied by the Council of Agriculture. Lectures: "A Queensland's Impression of Scottish Stock Breeding" No. 4 of a series, by Mr. J. F. F. Reid (Editor Queensland Agricultural High School and Cattle Co.).

- 7.20—News Service supplied by "The Standard." Stock Exchange Information supplied by the Committee of the Brisbane Stock Exchange.
 7.30—From the Studio of 4QQ.
 7.40—Announcements.

Night Session.

- 7.45—Lecture Session: "A Talk by the Officers of the Queensland Preference League."
 8—The Federal Band.
 9—Radio Voice Casted Items.
 9.24—Weather information, officially supplied by the Commonwealth Weather Bureau. Announcements.
 9.30—From the Centennial Hall, Dance music.
 10—From the Studio. "The Daily Mail" News Service. Close down.

5 C L

Morning Session.

- 11.30—G.P.O. Chimes.
 11.31—Featuring a Stock Day Art Number.
 11.40—"Advertiser" News Service.
 11.45—Vocation number.
 12—G.P.O. Chimes.
 12.12—"Advertiser" News Service and Cricket reports.
 12.18—Featuring a Stock Day Art Number; 12.30—C.L. Studio Orchestra will be heard in a series of classical numbers.
 1.65 (approx.)—Ward & Co.'s Stock Exchange Announcements; Weather Reports and Station Announcements.
 2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
 3.1—Relay from "Maple Leaf" Cafe—Orchestra numbers.
 3.15—From Studio—Serial Story.
 4—G.P.O. Chimes.
 4.1—Broadcast from "Arcadia" Cafe—Orchestra numbers.
 4.45—Stock Exchange Reports, General Information, and Station Announcements.
 5—G.P.O. Chimes.

Evening Session.

- 6.30—G.P.O. Chimes.
 6.31—Bedtime Stories, by "Annie Peggy."
 7.30—Market Reports.
 7.40—Mr. W. W. Frederickson will give his weekly motor talk.

- 7.50—Mr. A. E. Dungray will talk on "Cave of the Poets."
 8—G.P.O. Chimes.
 8.1—Relay from the Railways Institute—A programme of band music interspersed with vocal items from the Studio.
 8.20—"Twinkle" by Joyce Club.
 8.40—Concert continued.
 9—G.P.O. Chimes.
 9.1—Weather reports.
 9.2—Band concert continued.
 10.15—"Advertiser" news service and shine with range.
 10.30—Studio concert continued.
 10.35—Station announcements.
 11—G.P.O. Chimes; National Anthem, and close down.

7 Z L

Morning Session.

- 11—G.P.O. Clock Chimes. "The Mercury" news. Stock Market, Shipping, Commercial Intelligence. Weather information and Selections on the Station.
 12—G.P.O. Clock Chimes. Close down.

Afternoon Session.

- 3—G.P.O. Clock Chimes. Musical items from the Studio.
 3.30—Hobart Stock Exchange quotations.
 3.55—Weather Information.
 4—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7—Children's Corner, "Big Brother" claps to his pals.

Evening Session.

- 8—G.P.O. Clock Chimes. "The Mercury" special Tasmania news service. Railway auction produce sales. Weather information.
 8.5—Hobart Stock Exchange quotations.
 8.10—Mr. R. W. Crabtree, B.Sc., Lecturer in Physics, subject: "The History of the Thermionic Valve."
 8.30—Miss Kathleen Pearson, contralto; Miss Ruby Pleace, accompanist; Mr. Hugh Taylor, elocutionist; Mr. Jack Broadbent, baritone.
 8.40—"The Mercury" special interstate news service. Weather synopsis. Station announcements. National Anthem.



Tuesday, Sept. 21

2 F C

Early Morning Session.

- 7—The Chimes of 2FC and Announcements. Time Signals.
 7.5—Music from the Studio.
 7.10—Weather information, commercial news, shipping intelligence, rainfall, temperatures, astronomical measurements.
 7.25—Investment market, including share market, metal quotations.
 7.35—Wool sales, breadstuffs markets, produce markets.
 7.45—"Sydney Morning Herald" news service.
 8—Time signals. Cricket scores. A Chorus Talk by Mr. J. K. Powell.
 8.15—Close down.

Morning Session.

- 9.15—The Chimes of 2FC and Announcements.

PHILCO—"For less worry
 and better results"—
 BATTERIES.

- 9.50—Music from the studio.
- 9.45—Hurling talk.
- 10—"The Chimes of 'Big Ben'."
- 10.5—Late "Sydney Morning Herald" News Service.
- 10.5—Music from the Studio.
- 11—"The Chimes of 'Big Ben.'"
- 11.5—Australian Press Association and Reuters' Cable Services.
- 11.15—A Talk on Home Cooking and Recipes, by Miss Ruth Furst.
- 11.30—Close down.

Midday Session.

- 12—Time Signals; The Chimes of 2FC and Announcements.
- 12.5—Stock Exchange—First Call.
- 12.50—Music from the Studio.
- 12.56—Rugby Wireless News.
- 1.1—"The Chimes of 'Big Ben.'"
- 1.15—"Evening News" midday news service, Professor's Distributing Society's Report.
- 1.20—Music from the Studio.
- 1.30—Stock Exchange, Second Call.
- 1.35—Music from the Studio.
- 2—Time Signals; Close down.

Afternoon Session.

- 2.30—"The Chimes of 2FC and Announcements"
- 2.35—Recital by the pupils of Mrs. Stuart Doyle.
- 3.00—From Farmer's Ten Rooms; The Oak Hall Trio will play (leader, Mr. Horace Keast).
- 3.40—Miss Eileen Crowley, soprano.
- 3.45—From Farmer's Ten Rooms; The Oak Hall Trio.
- 3.5—Music from the Studio.
- 4—Miss Dorothy Benbow, contralto.
- 4.5—From Farmer's Ten Rooms; The Oak Hall Trio.
- 4.55—Music from the Studio.
- 4.58—Miss Dorothy Benbow, contralto.
- 4.55—Stock Exchange, Third Call.
- 4.46—Music from the Studio.
- 5—Time Signals; Close down.

Early Evening Session.

- 5—"The Chimes of 2FC and Announcements.
- 5.5—"Hello Man!" talks to the children.
- 6.40—Story for the Elder Children.
- 6.50—Broadcast from the Hotel Australia, or chrestal items.
- 7.15—From the Studio; "Evening News" late news service, weather information, Dalety's Market Reports.
- 7.40—Close down.

Night Session.

- 7.55—"The Chimes of 2FC and Announcements.
- 8—Broadcast from the Australia Hall, lecture by Father P. J. Sheehy, D.D.
- 8.30—Broadcast from the Royal Naval House, items by the State Military Band.
- 8.45—From the Studio; Mr. Alfred Pulbrook, baritone, in comic opera selection.
- 8.54—Mr. Lionel Lawson, violin solos.
- 9—Items by the N.S.W. State Military Band.
- 9.15—Miss Mabel Batchelor, soprano.
- 9.24—Mr. Wally Baynes, comedian, and Miss Nell McGee, in humorous recollections of old-time comic operas.
- 9.45—Items by the N.S.W. State Military Band.
- 9.55—From the Studio, Mr. Alfred Pulbrook, baritone.
- 10.1—Mr. Lionel Lawson, violin.
- 10.15—Items by the N.S.W. State Military Band.
- 10.20—From the Studio, Miss Mabel Batchelor, soprano.
- 10.25—Mr. Wally Baynes, comedian, and Miss Nell McGee.
- 10.45—Broadcast from the Wentworth Hotel, Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.
- 12—National Anthem. Close down.

- 7.35—Physical Training and Health Exercises.
- 7.45—Broadcasters' Special News Service.
- 7.52—Special News from Busby.
- 7.55—Musical programme from the Studio.
- 8—G.P.O. Clock and Chimes. Broadcasters' Turf Expert.
- 8.15—Close down.

Morning Session.

- 10—G.P.O. Clock and Chimes. Special news service from the "Daily Telegraph."
- 10.10—Music from the "Daily Telegraph."
- 10.26—Special news from "Daily Telegraph."
- 10.45—Musical programme from the Studio.
- 11—G.P.O. Clock and Chimes. Special cricket session.
- 11.5—Musical programme from the Studio.
- 11.15—Markets.
- 11.20—London Metal Quotations.
- 11.25—Broadcasters' Special Information Service, including mail, shipping, weather, rainfall.
- 11.45—Women's Session: Social Notes by Mrs. Jordan, and a talk on Toilet Firms.
- 12.25—A Talk by Miss Helen Jean Begging on Advice for Tennis Beginners.
- 12.30—Shopping Guide.
- 12.35—Sydney Stock Exchange calls.
- 12.45—A Talk by the Musical Quartette, direction "Deryl Castling."
- 2—G.P.O. Clock and Chimes. Close down.

Afternoon Session.

- During the Afternoon recalls of races will be broadcast immediately after each race by courier of The Sun Newspapers.
- 4—G.P.O. Clock and Chimes; Weather Report and Social Notes from "The Sun."
- 5.15—Civil Service Restaurant Trio.
- 5.30—"Talk on Modern Psychology" by Mr. J. M. Pentrice.
- 5.45—Musical Programme from the Studio.
- 4—G.P.O. Clock and Chimes; Civil Service Restaurant Trio.
- 4.15—Musical Programme from the Studio.
- 4.30—Serial Story, entitled, "The Scarlet Cockade," by C. M. Sublette.
- 4.45—Musical programme from the studio.
- 5—G.P.O. Clock and Chimes. Producers' Distributing Society's Market Report.
- 5.10—Shipping information, when available.
- 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

- 6—G.P.O. Clock and Chimes; Uncle Jack and the Kiddies.
- 6.40—Broadcasters' Dinner Orchestra. Special Country Session.
- 7.15—Australian Mercantile Land & Finance Co.'s Stock, Wool and Hides Report.
- 7.20—Weather Report by Courtesy of Mr. C. Mars, Government Meteorologist.
- 7.24—Stock Exchange Reports.
- 7.21—Producers' Distributing Society's Fruit and Vegetable Report.
- 7.25—Fruit and Vegetable Report (Sun).
- 7.30—Fruit and Fodder Report (Sun).
- 7.43—Rags and Poultry Market Report.
- 7.45—"What's On," a guide to the visitors and citizens of Sydney.
- 7.58—Close down.

Evening Session.

- 6—G.P.O. Clock and Chimes; Opera "Lily of Killarney" under the direction of Mr. Roland Foster.
- 9—Lecture from the Studio.
- 9.20—Broadcasters' Miniature Orchestra.
- 9.35—Interval.
- 9.40—Lecture from the Studio.
- 10—Broadcasters' Miniature Orchestra.
- 10.15—Elite old Time Dances, broadcast from the Murrumbidgee Town Hall.
- 11.5—From the Studio; Paragon Dance Band.
- 12—G.P.O. Clock and Chimes. National Anthem.

- Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Service; Shipping Intelligence.
- 12.10—Stock Exchange information.
- 12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia and New South Wales. Ocean forecast. River reports.
- 1—Time Signal.
- 1—Studio Orchestra.
- 1.10—Reginald Bradley, violin.
- 1.17—Daphne Whitehead, altoflute.
- 1.24—Studio Orchestra.
- 1.34—Reginald Bradley, violin.
- 1.40—Daphne Whitehead, altoflute.
- 1.47—Studio Orchestra.
- 2—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 2.30—Close down.

Afternoon Session.

- 3—Studio Orchestra.
- 3.10—Raymond Ellis, baritone.
- 3.17—Au Pair of Messrs. Buckley & Nunn Ltd., with the Fashion Talk.
- 3.32—Gwen Barham, contralto.
- 3.40—Dorothy Roxburgh, viola.
- 3.47—Studio Orchestra.
- 4—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 4.30—Matron Moreland; Infant Welfare.
- 4.40—Studio Orchestra.
- 4.45—"Herald" News Service; Stock Exchange information.
- 5—Close down.

Evening Session.

- 6.45—Children's Hour. Answers to letters and Birthday Greetings.
- 6—Songs for the children by Jessie Smith, then Mary Gimes; poems: Selections from Kidnappers by "Bashwoman"; The Happy Children and the singing Peacock; for the Tilted ones; When Grandmother tells us a story; for the bigger boys and girls, a talk on "How we may help boys to see the Dawn of a New Life."
- 6.40—Reuters and the Australian Press Association cables.
- 6.52—Weather synopsis. Aerial mail information by the Australian Aerial Services Ltd.
- 6.58—Stock Exchange information by J. R. Borrett Ltd.
- 7—Fish Market Reports.
- 7.4—River Reports.
- 7.5—Market Reports by the Victorian Producers' Co-operative Co. Ltd.; Haymarket sales, poultry, grain, chaff, hay, straw, tute, dairy produce, potatoes, and onions.

Night Session.

- 7.20—Mr. R. H. Wilnot, The Air we Breathe.
- 7.40—Under the auspices of the University Extension Board, Mr. A. W. Jessop, M.Agr.Sc., B.Sc., Dip.Ed., Lecturer in Agriculture at the University, Economic Agriculture.
- 8—Newport Workshops Brass Band.
- 8.10—Raymond Ellis, baritone.
- 8.17—C. Richard Chang, flute and strings.
- 8.25—Dr. Flora Gussie Escott, transmitted from St. Paul's Cathedral.
- 8.55—Sir William Irvine, Chief Justice, National Importance of Amateur Sport (Victorian Amateur Athletic Association).
- 9.10—Newport Workshops Brass Band.
- 9.17—Sylvestre and Roderique, entertainers.
- 9.20—Tasma Thorne, "ello.
- 9.36—Raymond Ellis, baritone.
- 9.42—Dr. Loftus Hines, Popular Science.
- 9.57—Madame Zelman, soprano.
- 10.4—Mr. E. Hall, will speak on the Beauties and Attractions of Leake.
- 10.15—Alberta Zelman, violin.
- 10.20—"Arxus" News Service; Announcements, etc.
- 10.54—Newport Workshops Brass Band.
- 10.40—Madame Zelman, soprano.
- 10.47—British Official Wireless News from Busby; Announcements; Weather Forecast.

2 BL

Early Morning Session.

- 7.16—Physical Training and Health Exercises.
- 7.20—Talk on Health and Hygiene.

3 LO

Midday Session.

- 12—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
- 12.30—British Official Wireless News from

BURGESS—"Standard of Comparison"—BATTERIES.

- 10.56—Newport Workshops, Bras Road.
11—Dance music by Le Casseur's Quartet.
11.45—God Save the King.

3AR

Morning Session.

- 11.30—The British Official Wireless Press, received from Rugby Super wireless station, England, by 3AR's operator. Evenings of the day; the "Age" News Bulletin, exclusive to 3AR.
12—Time Signal Chime from G.P.O., lat Weather Forecast; Studio Barometer and Outdoor Thermometer Readings.
12.5—Musical Selections relayed from Hoy's de Luxe, Bourke Street.
12.30—Stock Exchange News; Market Reports.
12.45—Musical Selections.
12.55—Mail Notices; Shipping Movements.
1—Close down.

Afternoon Session.

- 2.30—Hoy's Premier Orchestra, under the direction of Miss Ella Brien.
3—Miss Frances Hamerton, soprano.
3.7—Miss Rosa Kahn, violiniste.
3.15—Mr. Arthur Kempton, baritone.
3.22—Mr. Antony Lucas, bassist.
3.30—Mr. Arthur Kempton, baritone.
3.37—Miss Rosa Kahn, violiniste.
3.45—Miss Frances Hamerton, soprano.
3.52—Mr. Antony Lucas, bassist.
4—Time Signal Chime from G.P.O. and Weather Forecast.
Hoy's Orchestra.
4.55—Evening Amusement Guide.
5—Time signal; Close down.

Early Evening Session.

- 6.15—The Children's Corner, by Uteley Peter.

Evening Session.

- 7.30—British Official Wireless Press, Studio Harcourt Road, Pat Shee and Cattle Report, supplied by Messrs. John McNameara & Co. Pty., Ltd.
8—Time signal Chime from G.P.O.
8.5—Concert relayed from Victorian Softgoods Association.
During interval orchestral items will be relayed from Hoy's De-Luxe Theatre.
10.20—Hoy's Premier Orchestra.
10.40—Close down.

4QG

Midday Session.

- 12.55—Time-in Signal.
1—Time Signal.
1—Market Reports, Stock Exchange, Weather, "The Daily Mail" News, the "Daily Standard" News.
1.28—Lunch Hour Music by the Carlton Orchestra.
2—Close down.

Afternoon Session.

- 2.20—A programme of music from the Studio.
4.15—"The Telegraph" News.
5—Close down.

Early Evening Session.

- 6.25—Time-in.
6.30—The Children's Session, Stories by "Uncle Ben" and "Uncle Jim."
7—From the Council of Agriculture Studio—The Farmers' Session, Market Reports, Lecture "The Science of Breeding," by Professor Goodard (University of Queensland).
7.20—"The Daily Standard" News, Stock Exchange Information.
7.40—Announcements.

Night Session.

- 7.45—Lecture Session, "Photography," by Mr. E. L. South (manager, Kodak Ltd.).
8—Briarbee Apollo Club, from the Briarbee School of Arts.
The Excelsior Band.

- 9.50—Weather Information, officially supplied by the Commonwealth Weather Bureau, Announcements.
9.40—Mr. W. J. Robinson, tenor. Radio Voice Contest Items.
10—From the Studio, "The Daily Mail" news service. Close down.

5CL

Morning Session.

- 11.35—G.P.O. Chimes.
11.31—Featuring a Stock Duo Art Number
11.46—"Advertiser" News Service.
11.53—Vocation number.
12—G.P.O. Chimes.
12.1—"Advertiser" News Service and Cricket scores.
12.15—3CL Studio Orchestra will be heard in a series of classical numbers.
1.55 (approx.)—Ward & Co's Stock Exchange Intelligence; Weather Reports and Station Announcements.
2—G.P.O. Chimes.

Afternoon Session.

- 3—G.P.O. Chimes.
3.15—Ballet from "Maple Leaf" Cafe—Orchestral numbers.
3.46—From Studio—Serial Story.
4—G.P.O. Chimes.
4.1—Broadcast from "Arcadia" Cafe—Orchestral numbers.
4.45—Stock Exchange Reports, General Information, and Station Announcements.
6—G.P.O. Chimes.

Evening Session.

- 6.20—G.P.O. Chimes.
6.31—Ballet stories.
7.40—Milling talk by Mr. Jackett.
8—G.P.O. Chimes.
8.1—Cadenza Quartet, interspersed with
8.15—Home reports.
8.15—Weather reports.
9.3—Studio concert continued.
10.15—"Advertiser" news service and ships within range.
10.30—Studio concert continued.
10.35—Station announcements.
11—G.P.O. Chimes, National Anthem, and close down.

7ZL

Morning Session.

- 11—G.P.O. Clock Chimes. "The Mercury" commercial intelligence, Weather information and Shipping; Salomola Selections.
12—G.P.O. Clock Chimes; Close down.

Afternoon Session.

- 3—G.P.O. Clock Chimes, Musical items from the Studio.
3.30—Hobart Stock Exchange quotations.
3.35—Weather information.
4—G.P.O. Clock Chimes. Close down.

Early Evening Session.

- 7—Children's Corner, "Big Brother" chats to his pals.
7.15—The adventures of George the Hook-shed Cat. The trouble with the Terrible-shed Kitten" by Atal Stella.
Evening Session.

Evening Session.

- 8—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway auction produce sales. Weather information.
8.5—Hobart Stock Exchange quotations.
8.10—Literary Lists and Library Lists, by Mr. W. E. Fuller.
8.30—Musical items from the Studio—special request numbers.
8.—Photography Talk by Mr. Ch. H. Sims, of Kodak, Hobart. "The cardinal points of Photography."
8.55—Musical items continued.
9.20—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. Close down.
National Anthem.

Wednesday, Sept. 22

2FC

Early Morning Session.

- 7—Time Signals, The Chimes of 2FC and Announcements.
7.5—Music from the Studio. Weather information, Commercial news, Shipping Intelligence, Rainfall, Temperatures, Astronomical Memoranda.
7.25—Investment Market, Mining Share Market, Metal Quotations.
7.35—Wool sales, breadstuffs markets, produce markets.
7.45—"Sydney Morning Herald" news service.
8—Time Signals, Critique scores. A Gherio Talk, by Mr. J. K. Powell.
8.15—Close down.

Morning Session.

- 8.15—The Chimes of 2FC and Programme Announcements.
8.20—Music from the Studio.
8.25—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
10.45—A Morning Reading.
11—The Chimes of "Big Ben."
11.5—Australian Press Association and Reuters' Cable Services.
11.15—Cooking Talk and Recipes by Miss Ruth Fairs.
11.30—Close down.

Midday Session.

- 12—Time Signals, The Chimes of 2FC and Announcements.
12.5—Stock Exchange, final call.
12.15—Music from the Studio.
12.30—Hurdy Wireless News.
1—Time Signals, Weather Intelligence.
1.3—"Evening News" midday news service; Producer's Distributing Society's Report.
1.20—Music from the Studio.
1.30—Stock Exchange, Second Call.
1.35—Music from the Studio.
2—Time Signals, Close down.

Afternoon Session.

- 2.30—The Chimes of 2FC and Announcements.
2.35—Broadcast from the Pitt Street Congregational Church; an organ recital by the pupils of Miss Lillian Frost.
2.50—From Farmer's Tea Rooms: The Oak Hall Trio (leader, Mr. Horace Knapp).
3.40—Miss Joan Shorter, soprano; "The Singer in the Night" (Sturman).
3.45—From Farmer's Tea Rooms: The Oak Hall Trio.
3.55—Music from the Studio.
4—Miss Eileen Semple, contralto; "Sainam" (Lang).

- 1.5—A Music Talk by Mr. Ewart Chappel.
4.15—Music from the Studio.
4.20—Miss Joan Shorter, soprano; "The Yellow Hammer" (Lehmann).
4.25—The Oak Hall Trio.
4.30—Music from the Studio.
4.40—Miss Eileen Semple, contralto; "Just a cottage small" (Hanley).
4.45—Stock Exchange, Third Call.
4.50—Music from the Studio.
5—Close down.

Early Evening Session.

- 6—Time Signals, The Chimes of 2FC, Announcements.
6.5—"The Hello Man" talks to the children.
6.40—A story for the older children.
6.45—Broadcast from "The Hotel Australia, Sydney." Orchestral items.
7.15—Delaney's Market Reports.
7.30—"Evening News" news service. Weather information.
7.40—Close down.

Night Session.

- 7.55—The Chimes of 2FC and Announcements.
8—Broadcast from the Adyar Hall, a Violin and Piano Recital by Miss Kathleen Croaknell and Miss Nancy McGehegan; Sonata for 2 violins and piano; "Adagio Canzouso, Andante Allegro" (Purcell).

8.30—The fourth series of the Radio Auction Bridge Session, in which four players, led by Mr. F. H. Master, will play through a selected hand of Bridge. The complete play will be broadcast. Mr. Master, who alone has the key to the perfect playing of this hand, will answer on the phone, and broadcast. Simultaneously, enquiries by listeners concerning the game played. The perfect hand, as played in the Studios, will be available to Bridge enthusiasts each week.

9—Travellography described by Major Sandford-Morgan, D.C.M., in conjunction with Mrs. Dr. Sandford-Morgan, taking listeners in imagination for a trip on the "Ticra." Pictures of the various places visited will be published in this evening's "Evening News." The Talk will be illustrated with descriptive music and realism by the various vocal effects employed. Vocal items will be sung by Miss Marie Segor.

10.10—Broadcast from the Crystal Palace; items by the orchestra under the baton of Mr. Harry Stone.

10.40—Broadcast from the Wentworth Hotel, Sydney, Wentworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.

12—National Anthem; Close down.

2 BL

Early Morning Session.

7.15—Usual Early Morning Session.

Morning Session.

10—Usual Morning Programme.

Afternoon Session.

During the afternoon Race Results will be broadcast immediately after the race.

8—G.P.O. Clock and Chimes; Weather Report and Social Notes from "The Sun."

8.10—Resume of night's programme.

8.15—Special Operatic Session with explanatory talk by Mr. J. M. Frenchie.

8.45—Music from the Studio.

4—G.P.O. Clock and Chimes; Music from the Studio.

4.30—Serial Story, entitled "The Scarlet Cockerel," by C. M. Sublette.

4.45—Music from the Studio.

5—G.P.O. Clock and Chimes; Producers' Distributing Society's Market Report.

5.10—Shipping Information.

5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session.

6—G.P.O. Clock and Chimes; Uncle George and the Kiddies.

6.45—Pavillon Diner Orchestra, under the direction of Geo. Morrison.

Special Country Session.

7.15—Australian Murrumbidgee Land & Finance Co.'s Stock and Wool Report.

7.30—Weather reports.

7.24—Special Country session: Talk on Land Subjects.

7.51—Producers' Distributing Society's Fruit and Vegetable Report.

7.35—Fruit and Vegetable Report (Sun).

7.38—Grain and Fodder Report.

7.42—Rice and Poultry Market Report.

7.45—Country News from the "Sun."

7.05—Close down.

Evening Session.

8—G.P.O. Clock and Chimes; Habersfield Tennis Club Social.

8—G.P.O. Clock and Chimes; Resume of following day's Programme.

9.15—Weather Report and Forecast by courtesy of Mr. J. C. Mares, Govt. Meteorologist.

9.45—Announcements.

9.10—City of Sydney Band, broadcast from Barlow Chambers.

9.50—Sydney Orpheus Society, under the direction of Mr. Penmann.

9.45—Lecture from the Studio.

10.5—Cec. Morrison and the Gloomchasers, broadcast from the ballroom of the Bondi Casino, during the intervals between dances, news reports by courtesy of "The Sun" Newspapers will be broadcast.

11.5—From the Studio: The Palmgrove Orchestra, under the direction of Sina Fotheringham.

12—G.P.O. Clock and Chimes; National Anthem.

2 GB

Evening Session.

7—Talks to Children, by Capt. Balfour Clarke.

7.30—Music from the Studio.

7.45—Announcements.

7.55—Duet solos by Herbert Hiscox.

8—Address by J. J. Van der Lecuw, L.L.B.

8.10—Duet for two violins and piano. Artists: Monica Harder, Lloyd Davies and Betty Smart.

8.20—Vocal Quartette.

8.32—"Ocean Promenade Piers," by Commander Rolleston.

8.37—Violin solos by Dan Seally.

8.47—Songs by Herbert Hiscox.

8.55—Announcements.

9.12—Vocal Quartette.

9.25—"Questions and Answers," by Professor Ernest Wood.

9.37—Chamber Music.

9.47—Violin solos, by Dan Seally.

9.55—Close down.

3 LO

Midday Session.

12—Transmission from Messrs. Allan's stand at the Royal Show Grounds.

12.30—British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services; Shipping Intelligence.

12.45—Stock Exchange information.

12.50—Meteorological information. Weather forecasts for Victoria, Tasmania, South Australia, and New South Wales. Ocean Forecast. River reports.

1—Time Signal.

1.1—Rosa Darcy and Inez Vinnard, entertainers.

1.15—Le Cassick's Quartette.

1.50—Rosa Darcy and Inez Vinnard, entertainers.

2—Transmission from Messrs. Allan's stand at the Royal Show Grounds.

2.30—Result of Murrumbidgee, Geelong Races. Close down.

Afternoon Session.

2.30—First half of Tivoli Programme, by permission of Tivoli Theatre Ltd.

3.45—Result of Novice Handicap, Spring Handicap, and Brush Steeplechase, Geelong Races.

3.41—Mrs. M. Callaway Mahood, Interior Decoration; Floor Treatment.

3.55—Studio Orchestra.

4—Transmission from Messrs. Allan's stand at the Royal Show Grounds.

4.30—Sister Peel, Mochcraft.

4.40—Studio Orchestra.

4.45—"Herald" News Service; Stock Exchange Information; Result of Newtown Handicap, Result of Barwon Welter, Geelong Races.

5—Close down.

Evening Session.

8.45—Children's Hour; Answers to letters and Birthday Greetings.

8—A musical programme arranged by Mr. Fritz Hart.

8.45—Latest Cricket scores, by courtesy of Reuters Ltd. "Argus" and "Herald" news services, Reuters and the Australian Press Association cables.

9.45—Weather Reports; Shipping Movements; Overseas Shipping News.

7—Stock Exchange information.

7.4—Fish Market Reports by J. B. Borrett Ltd.

7.5—River Reports.

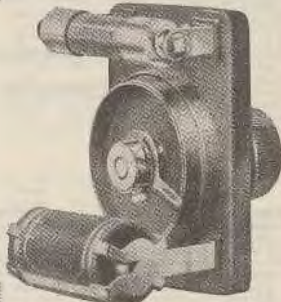
7.8—Market Reports by the Victorian Producers' Co-operative Co. Ltd.; Haymarket Sheep sales; poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Market Prices of oranges and lemons by the Victorian Central Citrus Association Pty. Ltd.

Night Session.

7.30—Under the auspices of the Department of Agriculture, Mr. H. W. Davey, Chief

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- 7.40—Mr. J. H. Scullin, M.H.L., under the auspices of the Victorian Athletic Association; Amateurs in Sport.
7.50—Mr. F. W. Feasby, Physical Culture.
8—First half of Tivoli Programme, by permission of Tivoli Theatre Ltd.
9.10—Captain Peters; Books, Wise and Otherwise.
9.25—Lorraine and Ida Wright, duet.
9.32—Studio Orchestra.
9.42—Charles J. Farman, baritone.
9.48—Ed. Harlett, ball selections.
10.45—British Official Wireless News from Rugby; Announcements.
10.14—Lorraine and Ida Wright, duet.
10.21—Studio Orchestra.
10.31—Charles J. Farman, baritone.
10.40—"Argus" News Service; Meteorological Information.
10.48—Studio Orchestra.
11—Dance music by the Le Cassick's Quartet.
11.45—God Save the King.

3 AR

Morning Session.

- 11.40—British Official Wireless Press, received from Rugby Super Wireless Station, England, by 3AR's operator. Express Train Information. "New Bulletin."
12—Time Signal Chime from G.P.O. Studio Barometer and Outdoor Thermometer Readings. First Weather Forecast. Events of the Day.
12.5—Musical selections, relayed from Hoyt's de Lusa, Bourke Street. Mr. T. L. Campbell at the Wireless.
12.20—Stock Exchange news.
12.36—Market Reports.
12.40—Musical selections.
12.55—Mail notices. Shipping movements.
1—Close down.

Afternoon Session.

- Racing—Cooling Meeting. Results immediately after each race, and at half-hourly intervals.
2.30—Hoyt's Premier Orchestra. Under the direction of Miss Ella Dren.
3—The Three Shadyes Trio.
3.16—Mr. H. Parikh, baritone.
3.23—Miss Alice Davies, violinist.
3.30—Mr. H. Parikh, baritone.
3.37—Miss Jean Ellam, lyric soprano.
3.50—Three Shadyes Trio.
4—Time Signal Chime. Second Weather Forecast; Hoyt's Premier Orchestra.
4.15—Evening Amusement Guide.
4—Time Signal Chime. Studio Barometer Readings. Close.

Early Evening Session.

- 6.45—The Children's Corner by Uncle Rad.

Evening Session.
7.45—British Official Wireless Press; Studio Barometer Readings.
8—Time Signal Chime.
8.2—Mr. Lionel Davies, pianist.
8.5—Miss Dorcas Ryan, contralto.
8.15—The Harmony Trio.
8.26—Mr. Ray Hooper, baritone.
8.32—Mr. Edgar Mayo, the well-known cricketer, will continue his talk on cricket.
8.47—Miss Hazel Guest, violinist.
8.54—Mrs. A. E. Bone, soprano.
9.1—Mr. Lionel Davies, pianist.
9.5—Miss Dorcas Ryan, contralto.
9.11—The Harmony Trio.
9.24—Mr. H. O'Grady, dramatic monologue.
9.31—Mr. Ray Hooper, baritone.
9.38—Miss Fitzhugh Lester, cellist.
9.45—Mr. H. O'Grady, entertainer.
9.52—Mrs. A. E. Bone, soprano.
10—Time Signal Chime from G.P.O. Studio Barometer Readings. "Argo" news bulletin, exclusive to 3AR.
10.10—Hoyt's Premier Orchestra.
10.40—Close down.

4 QG

Morning Session.

- 7—Physical Culture Session, exercises by Mr. Arthur Fisher (Principal, Saxon School of Physical Culture).
7.20—Close down.

Midday Session.

- 12.55—Tune-in Signal.
12.56—Time Signal.
1—Market Reports; Stock Exchange; Weather; "The Daily Mail" News; the "Daily Standard" News.
1.20—From Hotel Carlton, lunch hour music, by Carlton Orchestra.
2—Close down.

Afternoon Session.

- 2.30—A Musical Programme by the Carlton Symphony Orchestra.
4.15—"The Telegraph" News.
4.35—Close down.

Early Evening Session.

- 6.25—Tune-in.
6.30—The Children's Session; Stories by Little Miss Brisbane.
7—The Farmers' Session. Market Reports. Lectures; "Daily" Exhibition and Utility, by Mr. T. Panalar.
7.30—"The Standard" news. Stock Exchange Information.
7.40—Announcements.

Night Session.

- 7.45—Lecture Session, Travogue Talk No. 7—"London to Suez," by Mr. C. V. Woodland. Students' Concert—students of Mrs. Robert Hall, assisted by Savoy Orchestra, The Pacific Trio, Mr. D. K. Smye, and Mr. Claude Walker will assist. Radio Voice Contest items.
9.15—Weather information, officially supplied by the Commonwealth Weather Bureau.
9.25—Popular Items.
10—"The Daily Mail" news service.
Close down.

5 CL

Morning Session.

- 11.30—G.P.O. Chimes.
11.31—Featuring a Stock and Art Number.
11.40—"Advertiser" News Service.
11.45—Vacation number.
12—G.P.O. Chime.
12.1—"Advertiser" News Service and Cricket Items.
12.15—Featuring a Stock and Art Number.
12.30—5CL Studio Orchestra will be heard in a series of classical numbers.
1.25 (approx.)—Ward & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.
2—G.P.O. Chime.

Afternoon Session.

- 2—G.P.O. Chime.
2.15—Relay from "Maple Leaf" Cafe—Orchestra numbers.
3.45—From Studio—Serial Story.
4—G.P.O. Chime.
4.1—Broadcast from "Arcadia" Cafe—Orchestra numbers.
4.45—Stock Exchange Reports, General Information, and Station Announcements.
4—G.P.O. Chime.

Evening Session.

- 6.30—G.P.O. Chime.
6.31—Bedtime stories.
6.32—Market reports.
7.40—Boy Scouts' corner.
2—G.P.O. Chime.
8.1—Programme of dance music, relayed from the Palais Royal, interspersed with vocal items from the studio, by Messrs. E. Hughes and Shepperd, and Misses E. Miller and M. Walker.
8.5—Weather reports.
9.3—Concert continued.
10.15—"Advertiser" news service and ships within wireless range.
10.35—Studio concert continued.
10.45—Station announcements.
11—G.P.O. Chime, National Anthem, and close down.

7 ZL

Morning Session.

- 11—G.P.O. Clock Chime; "The Mercury" news; Stock market, Shipping, Commercial Intelligence, Weather Information and Sporting Anticipations; Salomon Selections.
12—G.P.O. Chime; Close down.

Afternoon Session.

- 3—G.P.O. Clock and Chime; Musical Items from the studio; Story from the Illustrated Tasmanian Mail.
4.30—Hobart Stock Exchange quotations.
8.55—Weather information.
4—G.P.O. Clock Chime. Close down.

Early Evening Session.

- 7—Children's Corner. "Big Brother" chats to his pals.
7.15—Story from Illustrated Tasmanian Mail.

Evening Session.

- 8—G.P.O. Clock Chime; "The Mercury" special Tasmanian news service; Railway auction produce sale; Weather information and sporting results.
8.15—Hobart Stock Exchange quotations.
8.18—Physical Culture talk, by Mr. George Collis.
8.15—Concert Broadcast direct from the City Hall by the Combined Schools Festival Choir of Hobart.
9.00—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. National Anthem.
Close down.



Thursday, Sept. 23

2 FC

Early Morning Session.

- 7.10—The Chimes of 2FC and Announcements.
7.20—Weather Information. Commercial News, Shipping Intelligence, and Markets. Rainfall, Temperature, Astronomical Memoranda, Mail services.
7.35—Investment Market. Mining Share Market. Metal Quotations.
7.35—Wool sales, breadstuffs markets, produce markets.
7.45—"Sydney Morning Herald" News Service. Time Signals.
8—"A Chirch Talk" by Mr. J. K. Powell.
8.15—Close down.

Morning Session.

- 8.15—The Chimes of 2FC and Programme Announcements.
8.25—Music from the Studio.
9.15—Last minute racing information, by the 2FC Racing Commissioner.
10—The Chime of Big Ben; Music from the Studio.
10.45—Late "Sydney Morning Herald" news service.
10.15—Music from the Studio.
10.45—A Morning Reading.
11—The Chime of Big Ben.
11.3—Cables.
11.15—Musical Items from the Studio.
11.30—Close down.

Midday Session.

- 12—Time Signals. The Chime of 2FC and Announcements.
12.45—Stock Exchange, first call.
12.16—Music from the Studio.

BURGESS—"Constant satisfaction assured"
—BATTERIES.

12.50—Rusby Wireless News.
1.—Three Signals. Weather Intelligence.
1.3—"Evening News" Midday News Service; Market Reports.

1.4—Music from the Studio.
1.50—Stock Exchange. Second call.
1.52—Music from the Studio.
1.56—Racing Information by the BFC Racing Commission.
2.—Time Signals. Close down.

Afternoon Session.

2.30—The Chimes of BFC and Announcements.
2.35—A Recital of some H.M.V. Records.

2.39—From Farmer's Tea Rooms: The Oak Hall Trio will play (Leader, Mr. Horace Keast).

2.40—Miss Florence Grant, soprano: "April Moon" (Hatten).
2.45—From Farmer's Tea Rooms: The Oak Hall Trio.

2.55—Music from the Studio.
4.—Miss Annie Sedger, mezzo: "Nymphs and Fawns" (Hemmers).

4.5—The Oak Hall Trio.
4.15—Music from the Studio.
4.20—Miss Florence Grant, soprano: "The Phaces of Arcady" (James).

4.25—The Oak Hall Trio.
4.35—Music from the Studio.
4.40—Miss Annie Sedger, Mezzo: "The Bitterness of Love" (Dunn).

4.45—Stock Exchange. Third Call.
4.46—Music from the Studio.
5.—Close down.

Early Evening Session.

6.—Time Signals. The Chimes of BFC and Announcements.

6.05—"The Hello Man" talks to the children.
6.45—Broadcast from the Hotel Australia. Orchestral items.

7.15—From the Studio: "Evening News" late news service, weather information.
7.30—Daily's Market Reports (wheat, wheat, stock), fruit and vegetable markets.

7.40—Mr. Waller Hunt will talk on "The Art of Speech," No. 7, "The Art of Speaking Vern." Close down.

Night Session.

7.55—The Chimes of BFC and Announcements.
8.—From the Studio: A repeated performance of Vaughan Williams' Song Cycle "On Wenlock Edge" sung by William Dalison, tenor, with a string quartet. (1) "On Wenlock Edge"; (2) "From Far, From Far, and Morning"; (3) "Is my Teen Ploving and"; (4) "Oh, When I was in Love with You"; (5) "Brood on Hill"; (6) "Willow".

8.30—A Talk by Miss Gertrude Mack: First Hand Description of a bull fight in Mexico.
8.50—Mr. Gladstone Bell, tenor solos.

9.—Mr. William Dalison.
9.10—Mr. Lindley Evans, piano solos.
9.20—Items from the concert given by the British Music Society.

9.15—Broadcast from the Lyceum Theatre, Sydney: Orchestra under the baton of Mr. Emanuel Arona.

10.40—Announcements.
10.45—Broadcast from the Westworth Hotel, Sydney, Westworth Cafe Dance Orchestra, under the baton of Mr. Sydney Simpson.

12.—National Anthem. Close down.

2 BL

7.15—Usual Early Morning session

10.10—Usual Morning session.

Afternoon Session.

During the afternoon, results of races will be broadcast immediately after each race, by courtesy of the Sun Newspapers.

8.—G.P.O. Clock and Chimes: Weather Report and Special Notes from "The Sun"

8.3.—Resume of night's programme.
8.15—Da-Lo Jones' Tea Room Trio.

8.30.—Music from the Studio.
4.—G.P.O. Clock and Chimes: David Jones' Tea Room Trio.

4.15—Musical Programme from the Studio.
4.30.—Serial Story, entitled "The Scarlet Cockerel," by C. M. Sibley.

4.45.—Music from the Studio.

5.—G.P.O. Clock and Chimes: Producers Distributing Society's Market Report.
5.30.—Shipping Information when available.

5.15—G.P.O. Clock and Chimes: Close down.
Early Evening Session.

6.—G.P.O. Clock and Chimes: Uncle Jack and the Kiddies.
6.45.—Broadcasters' Dinner Orchestra.

Special Country Session.

7.15.—Australian Mercantile Land & Finance Co.'s Stock and Wool Report.
7.20.—Weather Reports.

7.24.—Stock Exchange reports.
7.30.—Producers' Distributing Society's Fruit and Vegetable Report.

7.38.—Fruit and Vegetable Report ("Sun").
7.39.—Grain and Fodder Report ("Sun").

7.42.—Eggs and Poultry Market Report.
7.43.—Broadcasters' Special Turf Expert will talk on the training operations and horses' form from Randwick.

7.55.—Close down.

Evening Session.

8.—G.P.O. Clock and Chimes: Mr. W. E. Lewis, baritone.

8.7.—Ambassadors' Salon Quartette under the direction of Mr. Claude McElyan.

8.30.—From the Studio: Mr. Roland Foster will talk on Music.

9.—G.P.O. Clock and Chimes. Resume of the following day's programme.
9.5.—Weather report and forecast, by courtesy of Mr. C. J. Mares, Government Meteorologist.

9.5.—Announcements.
9.10.—Sid and Molly Owen in a Musical Act.
9.30.—Interval.

9.35.—Guest—Miss Dorrie Ward and Mr. W. E. Lewis.
9.39.—Miss Dulcie Blair, violin solos.

9.47.—Miss Dorrie Ward.
9.55.—Mr. Les. Shippe, comedian.

10.—The Ambassadors and The Ambassadors Dance Band broadcast from the ballroom of the Ambassadors. During the intervals between dances, news reports, by courtesy of the Sun Newspapers will be broadcast.

12.—G.P.O. Clock and Chimes; National Anthem.

3 LO

Midday Session.

12.—Transmission from Messrs. Allan's stand at the Royal Show Grounds.

12.30.—British Official Wireless News from Rugby; Reuters and the Australian Press Association Cables; "Argus" and "Herald" News Services; Shipping Intelligence.

12.45.—Stock Exchange Information; Meteorological Information. Weather forecast for Victoria, Queensland, South Australia, and New South Wales.

1.—Time Signal.
10.1.—Studio Orchestra.

1.1.—Reginald Bradley, violin.
1.17.—Gwen Barham, contralto.

1.24.—Studio Orchestra.
1.34.—Reginald Bradley, violin.
1.46.—Gwen Barham, contralto.

1.47.—Studio Orchestra.
2.—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
2.50.—Close down.

Afternoon Session.

3.—Studio Orchestra.
3.10.—Raymond Hills, baritone.

3.17.—Mr. C. R. Long, M.A., Talk on the Plays of Shakespeare; Twelfth Night, Part 1.

3.35.—Elsie Davies, soprano.
3.40.—Mary Gumieff: This World of Ours, and some Sonnets to a Red Haired Lady.

4.—Transmission from Messrs. Allan's stand at the Royal Show Grounds.
4.30.—Elsie Davies, soprano.

4.37.—"Herald" News Service; Stock Exchange Information.
4.45.—Evensong, transmitted from St. Paul's Cathedral.

5.30.—Close down.

Evening Session.

6.45.—Children's Hour. Answers to letters and Birthday Greetings; Jessie Smith will sing to the children; Mary Gumieff, poems: Selections from "Kiddies"; "Bubbly-swimmie," the Silberry, Silberry, Lizardy-o and Mother Maggie, and Robla Red Breast's Rule; Story for the little ones: Greenie and Brownie, by Morven Elvyn Evans; Songs by the Waitie Girl and Mary Gumieff; For the bigger boys and girls, Hogler the Dane.

6.40—"Argus" and "Herald" News Services; Reuters and the Australian Press Association cables.

6.52.—Weather synopsis. Shipping movements. Aerial mail information, by the Australian Aerial Services Ltd.; Overseas Shipping News.

7.—Stock Exchange information.
7.4.—Fish market reports by J. R. Borrett, Ltd.

7.5.—Roor reports.
7.8.—Market Reports, by the Victorian Producers' Co-operative Co., Ltd. Hymnmarket Sales, Poultry, Grain, Chaff, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.

Night Session.

7.50.—Dr. Paul Dane, Henry George and his Work.
7.40.—Mr. Ted Collins, Football Talk.

8.—Scottish Concert by the Victorian Scottish Union, transmitted from the Assembly Hall, Collins Street.

9 approx.—Under the Auspices of the Victorian Athletic Association, Brigadier General Brand, Amateur Sport in Military Life.

9.20.—Scottish Union Concert, continued.
10.45—"Argus" News Service; Meteorological Information.

11.—Dance music by the Le Cassick's Quartette.
11.45.—God Save the King.

3 AR

Morning Session.

11.30.—The British Official Wireless Press, received from Rusby Super Wireless Station, England, by 3AR's operator.

Express Train Information. "Age" news bulletin.

12.—Time Signal Chime from G.P.O. Studio barometer and outdoor thermometer readings. First weather forecast. Events of the day.

12.5.—Musical selections, relayed from Hoyt's de-Luxe, Bourke Street. Mr. T. L. Campbell at the Wurlitzer.

12.30.—Stock Exchange news.
12.35.—Market reports.

12.40.—Musical selections.
12.55.—Mail notices. Shipping movements.
1.—Close down.

Afternoon Session.

2.30.—Hoyt's Premier Orchestra, special Birthday Month Programme, under direction of Miss Ella Brien.

3.—Musical Items from the Studio.
4.—Time Signal Chime. Hoyt's Premier Orchestra; 2nd Weather Forecast.

4.55.—Evening Amusement Guide.
6.—Time Signal Chime from G.P.O. Studio barometer and outdoor thermometer readings. Second weather forecast. Close down.

Early Evening Session.

6.45.—The Children's Corner, by Uncle Peter.

Evening Session.

7.45.—The British Official Wireless Press, Special Fire and Call Report, supplied by Messrs. McNeill, Anderson, Pat Sheehy and

PHILCO—"For less worry and better results"—
BATTERIES.

Cattle Report, supplied by Messrs. J. McNamara & Co. Studio Barometer Readings.

8.—Time Signal Chime from G.P.O.

8.2.—The Essendon Citizens' Band. Mr. A. Trahair, conductor.

9.80.—Captain Dutton, V.D., will speak on Stanzas.

9.44.—Mr. Arthur Trahair, cornetist.

9.51.—Miss Vety Landau, entertainer.

9.58.—Mr. C. Donnelly, euphonium.

9.6.—Mr. Rupert Wood, Dictation and Secretary to the Food Education Society of Victoria, will speak on "Fooda Best Adapter to Supply the Needs of the Body."

9.26.—Mr. Frank Pearson, dramatic recital.

9.53.—The Essendon Citizens' Band. Mr. A. Trahair, conductor.

9.47.—Miss Vety Landau, entertainer at the piano.

9.4.—Mr. Frank Pearson, humorist.

10.—Time Signal Chime from G.P.O. Studio barometer and clock on "Barometer readings." "Age" news bulletin, exclusive to S.A.R. Hoy's Premier Orchestra.

10.40.—Close down.

4QC

Midday Session.

12.55.—Time Signal.

1.5.—Time Signal.

1.—Market Reports; Weather Information; "The Daily Mail" News; "The Daily Standard" News.

1.20.—From the Hotel Carlton, lunch hour music by the Carlton Orchestra.

2.—Close down.

Afternoon Session.

8.30.—A programme of music from the Studio.

4.30.—Close down.

Early Evening Session.

8.25.—Tune-in.

6.40.—The Children's Session: Stories by "The Sandman."

7.—The Farmers' Session; Market Reports; Lectures: "Talks on Live Stock Feeding, No. 3," by Mr. J. K. Murray (Principal, Agricultural High School and College).

7.35.—"The Daily Standard" news. Stock Exchange information.

7.40.—Announcements.

Night Session.

7.45.—Lecture Session: A talk on Books, by Mr. W. A. Braiden (McLeod's Book Store).

8.—The Concerts Orchestra.

9.25.—Weather information officially supplied by the Commonwealth Weather Bureau. Announcements.

9.30.—From the Band Practice Room. An impromptu programme of music by the Greater Brisbane Municipal Concert Band, under the leadership of Mr. E. Jackson.

10.—From the Studio. "The Daily Mail" News Service. Close down.

5CL

Morning Session.

11.40.—G.P.O. Chimes.

11.41.—Featuring a Stock Due Art Number 10.40.—"Advertiser" News Service.

11.55.—Vocalian number.

12.—G.P.O. Chimes.

12.1.—"Advertiser" News Service and Orchestral Session.

12.—Featuring a Stock Due Art Number; 12.30.—5CL Studio Orchestra will be heard in a series of classical numbers.

1.25 (approx.)—W. & Co.'s Stock Exchange Intelligence; Weather Reports and Station Announcements.

2.—G.P.O. Chimes.

Afternoon Session.

3.—G.P.O. Chimes.

3.1.—Relay from "Maple Leaf" Cafe—Orchestral numbers.

3.45.—From Studio—Serial Story.

4.—G.P.O. Chimes.

4.1.—Broadcast from "Arrandale" Cafe—Orchestral numbers.

4.45.—Stock Exchange Reports, General Information, and Station Announcements.

5.—G.P.O. Chimes.

Evening Session.

6.30.—G.P.O. Chimes.

6.31.—Bedtime Stories by "Auntie Sybil."

7.25.—Health talk, arranged by Mr. Whittenbury.

7.30.—Market reports.

7.40.—Foultry talk, arranged by Mr. Whittenbury.

8.—G.P.O. Chimes.

8.1.—Studio Orchestra, interspersed with vocal items.

9.1.—Weather reports.

9.3.—Studio concert continued.

10.15.—"Advertiser" news service and ships with wireless range.

10.30.—Studio concert continued.

10.55.—Station announcements.

11.—G.P.O. chimes, National Anthem, and close down.

7ZL

Morning Session.

11.—G.P.O. Clock Chimes. "The Mercury" news. Stock market. Shipping. Commercial intelligence. Weather information. Selections on the Salondo.

12.—G.P.O. Clock Chimes. Close down.

Afternoon Session.

2.—G.P.O. Clock Chimes; Concert broadcast direct from the Lyceum Club, Macquarie Street. Robert; Mrs. E. W. Bailey, I.A.H.B. contralto; Miss Jean Hibbard, mezzo soprano; Miss Bertha Marshall, soprano; Miss Kathleen Pearce, mezzo soprano; Miss Eoid Kitchell, soprano; Miss Guendal Hidescope, mezzo soprano; Miss Katherine Cullinan, alto; Miss Ruby Piesse, accompanist; Mr. Jack Broadbent, baritone; Mr. William P. Harwood, solo.

3.55.—Robert Stock Exchange Quotations; Weather Information.

4.—G.P.O. Clock Chimes; Close down.

4.—Evening Session.

7.—Children's Corner. "Big Brother" chabls to his pals.

7.15.—The adventures of George, the Book-shelfy Cal. "The Fish of the Zoo" by Aunt Stella.

Night Session.

8.—G.P.O. Clock Chimes. "The Mercury" special Tasmanian news service. Railway auction process sales. Weather information.

8.15.—Robert Stock Exchange quotations.

8.18.—Selections by Jones' L.N.L. Band, Conductor Mr. I. M. Barnett.

9.50.—"The Mercury" special Interstate news service. Weather synopsis. Station announcements. National Anthem.

2BE

Wavelength, 216 metres. Power, 100 wats. Every Tuesday and Thursday evening, from 8.30 p.m. to 9 p.m.

6.30 to 7.30.—Mealtime Music, consisting of vocal and orchestral items.

7.40 to 8.—Lectures, orchestral and vocal items.

2BE will be glad to give into touch with artists willing to give their services to this station.

2KY

Wavelength, 250 metres.

MONDAY TO FRIDAY.

Luncheon Hour Session.

12.15.—Tune in to the ticking of the clock; Luncheon Hour session consists of vocal and musical items, news service and Union matters, closing down at 1.45 p.m.

TUESDAYS AND THURSDAYS.

Afternoon Session.

1.15.—Tune in to the ticking of the clock;

The afternoon session consists of popular actions talks by Mr. A. T. Keeble, H.S.A.; Book reviews; House talks and special recitals of new Lincoln records, closing down at 4.45 p.m.

MONDAY, TUESDAY, FRIDAY.

Children's Hour.

6.30.—Tune in to the ticking of the clock; The Children's Hour is conducted by Mr. Thompson, the well-known hospital story teller.

Evening Session.

7.30.—Tune in to the ticking of the clock; The evening session consists of news service; shipping box; industrial lectures; Edison's voice and musical items from the studio and music by the Palais Royal Californians, from J. O. Bendroff's Palais Royal, Walter Robbin (leader).

N.Z. Broadcasters.

The transmissions from 1YA, the Auckland station, which recently went on the air, are as follows:—

Tuesdays and Fridays.—Afternoon session, 3 to 4.30; children's session, 4.30 to 7; news and market session, 7.15 to 7.45; evening session, 8 to 10.

Wednesdays and Thursdays.—Afternoon session, 3 to 4.30; news and market session, 7.15 to 7.45; evening session, 8 to 10.

Saturdays.—Afternoon session, 3 to 4.30; news and market session, 7.15 to 7.45; evening session, 8 to 11.

Sundays.—Evening session, 7 to 9.

There will be no transmissions from the Auckland station on Mondays. The new Christchurch station will be completed about August 21, and its time table will be arranged that it will be working on full power on Mondays.

1YR.—La Gloria Gramophone Co., Auckland. Power, 60 wats; wavelength, 275 metres. Transmits first two Sundays in the month, broadcast from Congregational Church, commencing 6.30. Last two Sundays, gramophone items, 8-10 p.m.

1YC.—N. C. Shepherd, Whangarei. 15 wats; 250 metres. Transmits Monday, Wednesday, and Friday, 8-10 p.m.

1YQ.—L. A. Keith, Auckland. 50 wats, 285 metres. Transmits on Mondays 8-10 p.m. Sunday afternoons, 3-6. Instrumental items. Shortly introducing kiddies' items, 4.20-5 p.m., Sunday.

2YF.—Palmerston North Radio Club. 5 wats, 250 metres. Transmits Monday, Friday, 7.30-9.30 p.m.

1YK.—Radio Broadcasting Co., Wellington. Power, 120 wats; wavelength, 250 metres. Transmits Tuesday, Thursday, Friday, Sunday, 8-10 p.m.

2YM.—The Gisborne Radio Co., Gisborne. Power, 500 wats; wavelength, 360 metres. Transmits Tuesday, Thursday, Sunday, 8-10 p.m.

2AC.—The Radio Broadcasting Co., Christchurch. 50 wats; wavelength, 210 metres. Tuesday, Wednesday, Saturday, Sunday, 8-10 p.m., Friday, 6.45-7.15, 8-9.30 p.m.

4YA.—Radio Broadcasting Co., Dunedin. Power input, 750 wats; wavelength, 350 metres. Regular transmissions, Sunday, Monday, Wednesday and Friday, 7.45-10 p.m.

[All above times are N.Z.M.T., one and a half hours ahead of Sydney.]

Radio Progress in U.S.A.

CAPTAIN P. Manley, of Amalgamated Wireless, who returned this year from a business trip to the United States of America in the interests of that company, offers some interesting sidelights on the radio situation as it exists to-day in America:—

"The magnitude of the industry is extraordinary," he says. "As an indication of sales, one well-known manufacturer of radio valves last year sold 17,000,000, and their estimated sales for this year are placed at 21,000,000.

"In view of the tremendous sales, I asked the question, 'Has saturation point yet been reached?' The reply was to the effect that there are 22,000,000 automobile owners in America, as against 8,000,000 owners of radio sets. This is self-explanatory. In addition, however, it is stated that of the 8,000,000 set owners, 5,000,000 own home-made receivers, and practically all these people will later purchase factory-made sets. It is obvi-

ous, therefore, that the demand has hardly yet set in, as if there are 22,000,000 automobile owners in America, it is only logical to assume that at least double that number are in a position to purchase radio sets.

"Interference is the most difficult problem they have to contend with to-day. Few sets are really selective and the problem is one that is causing the authorities grave concern. The number of stations broadcasting is legion, the wave band, of course, being 200-550 metres. In addition to this, there is Canada in the north, and Mexico in the south, and as they also broadcast on the same wave band, still greater confusion results. It is stated, however, that a conference is to be held shortly, and it is trusted that the three countries will come to a mutually satisfactory arrangement.

"The advertising programmes of the large radio corporations are to-day on a par with those of the automobile manufacturers. Throughout the length and breadth of America, huge posters are displayed on the hoardings advertising receivers, which

for design, attractiveness, etc., equal the best automobile advertisements. One corporation alone last year expended over £1,000,000 in domestic advertising.

"Many complaints are received of 'blanketing'; details could not be obtained, however, as to whether this is caused through crowding too many stations in a given area, or owing to the power of the stations.

"I had the advantage of visiting KGO, at San Francisco, well-known to Australian amateurs, also WJZ, the new 50 K.W. station at Boundbrook, New Jersey, which is operated and controlled by the Radio Corporation of America.

"In authoritative circles it is stated that Australia to-day is the largest foreign purchaser of American radio apparatus, although there is now a growing export trade with Sweden, Norway, and other countries. America is paying very close attention to the Australian market. Although the average American is not well conversant with conditions in Australia, they hold Australians in high esteem. This is most marked

The Best Crystal! The Best Results!!
Now The Best Price!!!

REDUCED TO

1/6



REDUCED TO

1/6

Thousands of Authentic
 Testimonials prove its
EFFICIENCY

LOUD SPEAKER can be operated with
 a Neutron Crystal on your crystal set

Australian Distributors:
LOUIS COEN PTY. LTD.,
 260 Flinders Lane, Melbourne.

**ON SALE at 1/6
 EVERYWHERE**

Carried in stock and distributed in
 New South Wales by
MANUFACTURERS PRODUCTS
Pty. Limited,
 Challis House, Sydney.

throughout the whole of America, and the eager way in which information is sought regarding conditions here is gratifying. This is not merely with a view to exporting to this country, although that factor is, of course, naturally not overlooked, but there is an increasing desire to glean all details regarding population, nationalities, agriculture, pastoral and other industries. Interest in this coun-

try seems to mostly date from the war period. Most Americans appear to be quite conversant with the exploits of the Australian troops abroad; in many cases the writer coming in contact with American officers and men who had actually co-operated with our troops during that period which they held in the highest esteem.

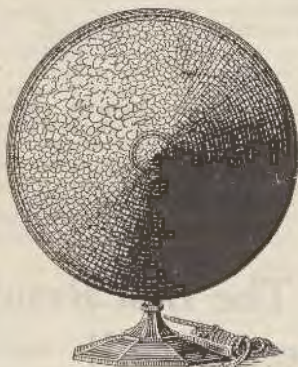
"On May 1st, the radio photographic service was instituted between

America and England. This, as the term implies, being a service for the purpose of transmitting photographs by wireless. The service is highly successful in every respect, and to-day it is possible to hand in for transmission photographs of any size up to approximately half plate. The photograph is measured up and charges made according to the number of square inches.

RADIO ON TRAIN.

Excellent results were achieved with the A.W.A. Radiola Super Broadcast Receiver installed in the sleeping car of the Australian-Made Exhibition Train, on the journey from Sydney to Newcastle. 2BL and 2FC Sydney, 3LO Melbourne, and 4QG Brisbane, were received at good loud speaker strength on five valves, practically throughout the whole of the journey. In view of the fact that the set was installed in the sleeping car within a few minutes—it was transferred from the exhibition car to the sleeping car while the train was held up at Pennant Hills—and all connections were temporary, also considering that nearly maximum loud speaker strength had to be maintained to overcome the noise of the train, the feat of tuning in and receiving direct on the loud speaker, speaks well for the efficiency of the set. The Radiola Super is being utilised on the "Great White Train" in conjunction with the Amalgamated Wireless Exhibit.

THE LOUD SPEAKER THAT WON "3LO'S" SOUND CONTEST!



EMBODYING entirely new principles of acoustic reproduction the "Standard" (formerly Western Electric) "Kone" Speaker illustrated, reproduces speech and all instrumental music with such unusual excellence that Mrs. A. G. Atherstone, of East Kew, Victoria, listening-in to "3 LO's" recent sound contest, was able to recognise more of the puzzling sounds broadcast than any of the 12,000 other competitors, more than half of whom used crystal sets.

Not only does this new type speaker reproduce broadcasting with fidelity, but it does so in a non-directional manner, which dispenses with the necessity for listeners to group themselves directly in front of the instrument. The reproduction is faithful from all angles—even from the rear. Come in and hear this "Kone" speaker before buying any loud speaker.

Standard Telephones and Cables
(Australasia) Limited

FORMERLY

Western Electric Company (Australia) Ltd.,
192-4 CASTLEREAGH STREET, SYDNEY.

OLD FRIENDS AT 3LO.

We all enjoy a "novelty" item occasionally, and this week comes a welcome return to the 3LO programme, in the person of Mr. E. Bartlett, with his delightful bell solos. These solos carry well over the wireless, and range from the sonorous representation of cathedral chimes to the dainty tinkling of the sleigh bells. Some delightful musical numbers are also included in Mr. Bartlett's repertoire—the "Rosary," and other adaptations from well known melodies, specially written for the bells. Other friends back at 3LO are Mr. James Hill, the possessor of a good resonant baritone, who has a splendid selection of new songs for us to hear, and Mr. Archibald Clark, whose droll stories and humorous songs will (he hopes) make our sides fairly ache with laughter.



EMMCO
Rheostat
4/6

EMMCO
Transformer
21/-



Sure of good Results

SWITCH on the valves, twirl the dials, and you have your station . . . quickly and simply. Strong, clear signals, without interference or distortion.

Quick Response. Service at a touch. That stands for good radio results. And it all depends upon the parts hidden away behind the panel.

To know that you have the highest possible quality in your receiver . . . to be always **sure of good results**, use Emmco parts, for you know the consistent quality of all Emmco radio products.

For perfect control of valves, the Emmco Rheostat. For perfect amplification of speech or musical reception, the Emmco Transformer. They are the last word in electrical precision and dependability.

EMMCO PRODUCTS - At All Dealers

Manufactured by

ELECTRICITY METER MANUFACTURING CO. LTD.

SYDNEY, N.S.W.

Gives you more programmes



The REAL Long Distance Valve

DESIGNED specially for powerful long-distance radio reception. Gives you the means to pick up those weak and elusive signals and amplify them to reality.

Secure the valves that are associated with all the great trans-world records.

MULLARD Double Red Ring VALVES

Type D.3 for 2 volt accumulator
EACH 13/6

Type D.06 for 2 or 3 dry cells or
4-volt Accumulator EACH 13/6

HF Amplification.				LF Amplification.				Power Valves.				Detectors.			
Type	Fil. Volts	Fil. Current	Price	Type	Fil. Volts	Fil. Current	Price	Type	Fil. Volts	Fil. Current	Price	Type	Fil. Volts	Fil. Current	Price
HF	2.8	0.6	17/6	LF	2.5	0.6	17/6	DFA.1	5.0	0.35	12/0				
D.06	3.0	0.05	12/0	D.06	0.0	0.00	12/6	DFA.2	5.0	0.50	12/6				
D.3	1.8	0.3	12/0	D.3	1.8	0.3	12/6	PM.4	3.7	0.1	12/0				
DFA.4	5.0	0.25	12/6	DFA.1	5.0	0.35	12/6	DFA.0	3.5	0.33	12/0				
PM.3	3 to 4	0.1	12/0	DFA.2	5.0	0.50	12/6	DFA.4	5.0	0.25	12/0				
				PM.1	3.7	0.1	12/6								

All Mullard Valves are manufactured at Mullard Works, London, England.
OBTAINABLE FROM EVERY RADIO DEALER IN AUSTRALIA.

Mullard

THE MASTER VALVE

(ARKS. 1.)

Races By Radio

By C. C. FAULKNER.

FROM the point of view of a country sportsman unable to attend the big race meeting at Sydney, the recently introduced innovation of broadcasting descriptions of the races as they are being run is the greatest consolation of modern times.

The newspaper reports of sporting events will always retain their popularity, a popularity which has been increased by the fact that before the printed word can be read, a verbal description has been heard by hundreds of thousands through the medium of radio. But to stimulate interest in the sport—and in the reports of the race meeting—nothing, I believe, has yet been thought out to equal the broadcasting as now practised.

In addition to the announcing of race results from all the courses and talks on training by both stations, 2FC and 2BL, fifty-three races have been described this year by radio by "the special Turf Commissioner" attached to broadcasting station 2FC. After listening to some of the descriptions and reading a sheaf of letters from enthusiastic race-goers, compulsorily absent from their favourite course, I visited the place from which the broadcasting expert describes the Randwick races.

Radio listeners who follow the turf are familiar with the work of the special turf commissioner. As the horses come out for their preliminary canter the commissioner comments on their appearance. He announces riders, describes their position at the barrier, remarks on the fractiousness of this or that animal. Listeners are informed of the getaway, and the order in which they pass each furlong post, also the time occupied. Any incident in the running is narrated, and at any point in the race punters can make another little wager if so inclined. As the field flashes past the judge's box, the keen eye of the expert announces the places. Perhaps he adds the admonition, "Don't pay out yet, gentlemen, wait for the flag." On the occasion of the protest against Windbag, listeners knew what was coming before the finish of the race, because the turf commissioner saw Windbag interfere with Heroic and immediately told the radio listeners that there would probably be a protest.

"As Clear as Crystal"

FARMER'S Crystal Receiving Sets

Give the Maximum of Clarity



"Sterling"

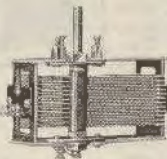
Crystal Receivers

A Special offer

A special offer of "Sterling" Crystal Receivers at remarkably low prices. These receivers are of finest British manufacture throughout, and will give the best possible results. Complete with a pair of "Sterling" Headphones. Price 84/-

"Sensory" Base Sockets

"Sensory" standard American base sockets of genuine bakelite. Price 3/-



"Advance" Condensers

A condenser built for those who desire an efficient and reliable straight line frequency condenser at a low cost. Price 14/-

"Beede" Volt Meters

A pocket type volt meter is a necessity for the owner of a wireless receiver, for with it he can at all times determine the state of his "B" batteries. Price 4/8

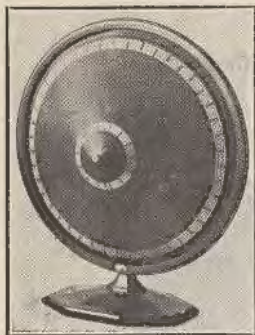


FARMER'S, SYDNEY

BOX 497 AA, G.P.O.

Carriage paid on Wireless Goods to 5 per cent. of cost

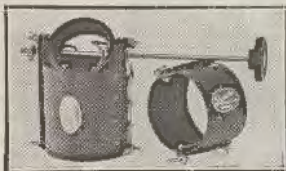
The Crosley Musicone



£4/17/6

FANS NOTE.

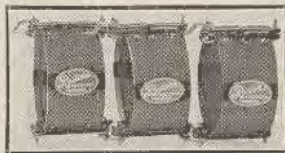
Word just received from Brisbane, states that PRIZE WINNING SET at Queensland Radio Show featuring SENSITIVITY and SELECTIVITY, was built round the new RADIOKES BROWNING-DRAKE R.F. COIL KIT.



£2/2/-

DEALERS NOTE.

These are some of our best sellers, which have created such a NATION WIDE demand for our products. To ensure getting your share of this remunerative business you are advised to anticipate your requirements and order in advance, as orders are being fulfilled strictly in rotation, and the summer demand promises to be heavier than ever.



£1/12/6

Give your set a chance by insisting on Genuine

Radiokes & Gowradio

PRECISION PRODUCTS

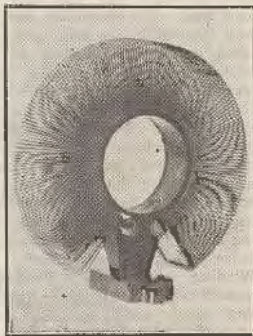
FROM ALL GOOD RADIO DEALERS

Wholesale only from

Metropolitan Electric Co. Ltd.

27 KING STREET, SYDNEY

LATE KEITH STOKES PTY. LTD.



The Crosley Musicone literally revolutionises radio reception, with any set and every set. Its properties and its patented exclusive features are so far superior—its reproduction of all tones, both high and low, is so life-like and clear—that anyone who once hears the Crosley Musicone will never again put up with any "loud speaker," even the best and costliest of previous design. Here in brief, are the advantages of the new Crosley Musicone: Absolutely no distortion of voice or music. No multi-tube set can overload it. Super-sensitivity introduced by the "push-pull" principle. Faithful reproduction over the entire musical scale, from the highest notes to the lowest. No adjustment required for varying conditions. Floating cone and light, balanced armature eliminate chattering. Magnetic circuit formed of permanent laminated magnets. Needs no additional batteries. Eliminates the awkward, unsightly horn, with its directional properties. Low in price—ruggedly built—artistic in its design. We firmly believe that the superiorities of the Crosley Musicone will be so widely recognised by the radio public that it will replace 500,000 "loud speakers" in this, its first year.

THE NEW

Radiokes

RADIO FREQUENCY COIL KITS.

The Heart of all Successful Receivers. These coils are suitable for use in the famous BROWNING DRAKE and NEUTRODYNE Circuits, and have won popularity as a result of their low loss construction, consistent performance and accuracy.

Enjoying a great measure of popular favour the RADIOKES CIRCUOID. 15/- each



Radio Auction Bridge

Game No. 9—Broadcast by 2FC

"Wireless Weekly" has secured from 2FC, Farmer's Broadcasting Service, the exclusive right of publishing the Radio Auction Bridge Games which 2FC commenced broadcasting on Wednesday, 21st July.

There are 24 Bridge Games in the series, and one will be broadcast each Wednesday evening, and the following Friday's issue of "Wireless Weekly" each week will give the game in detail as it should be correctly played. These games were arranged by the United States Playing Card Company of Cincinnati, Ohio, U.S.A., and played by Bridge experts. Some very slight alterations have been made in the original games broadcast in America in order to adapt them to the calling of the Portland Club, which is the most universally followed rule, so far as Auction Bridge is concerned, in Australia.

Mr. W. F. H. Master, an acknowledged expert in the game of Auction Bridge in Sydney, is carrying out the transmissions from 2FC, and if any Bridge enthusiasts, on reading these articles, care to submit any questions or problems arising out of the games as published, arrangements have been made for Mr. Master to answer them through the columns of "Wireless Weekly."

THE complete hands held by each of the players of the Radio Auction Bridge game played on September 16th, were as follows:—

South deals and holds:

Spades: K, 9, 8.

Hearts: 7, 5, 2.

Diamonds: Ace, K, 8.

Clubs: K, J, 10, 8.

North holds:

Spades: Ace, 3, 2.

Hearts: Ace, K, J, 10, 9, 3.

Diamonds: 7.

Clubs: Ace, Q, 4.

North holds:

Spades: Q, 10, 5, 4.

Hearts: 6, 4.

Diamonds: 10, 5, 4, 2.

Clubs: 9, 7, 5.

East holds:

Spades: J, 7, 6.

Hearts: Q, 8.

Diamonds: Q, J, 9, 6, 3.

Clubs: 6, 3, 2.

South (the Dealer) opens the bidding with one No Trump. With a hand of this character, South should unquestionably bid No Trump.

West has an unusually strong hand. It is only with exceptional strength that a player is justified in bidding a suit over an original No Trump on his right. To bid defensively in this position is most unwise. A pass is the best defence. But West with his four heart honors in one hand—worth 64—with six cards of the suit and three side tricks is not will-

ing to tamely play this hand defensively. He could without doubt defeat the No Trump, but with eight probable tricks in his own hand, his chance for a game with a big score is too great for him to be satisfied with a meagre 50 or 100 points as a penalty. The importance of winning a game is so great that a reasonable opportunity to do so should not be neglected, merely because passing it by may produce a small penalty. West, however, realises that by bidding in this position he may drive his opponents from a No Trump, which he can readily defeat, into a spade or diamond bid which might be embarrassing for him, and which it is quite conceivable might produce game for them. If he should bid two hearts, there is no overall which East could make, which he (West) in his turn would not be obliged to overcall with hearts. To double informatory is not advisable because he intends to play the hand at hearts, if at all. It is, therefore, a case in which West could not be benefited by a bid from his partner, and may be injured should the adversaries again declare; or, in other words, it is a situation that calls for a pre-emptive bid.

West bid four hearts. North passes; East passes.

South considers the advisability of doubling. As the bid is four, the double would be business, not informatory. He knows that West must

have a freak hand to warrant a pre-emptive bid of four over an adverse No Trump. West's hand undoubtedly has great length and strength in hearts, strength in some other suit or suits, and shortness in at least one suit.

Moreover, with strength on his left South's king cannot be counted upon to take tricks. South concludes that a double is not justified because there is too great a chance that West may make his contract; he, therefore, passes. West has accomplished his purpose and is the Declarer, with his contract four hearts.

North leads the 4 of spades, the fourth best card of the stronger of his two four-card suits; the proper lead with a hand of this character. East is Dummy; West, upon seeing the Dummy, realises that the king and queen of spades cannot both be in the leader's hand, or North would have led the king. North is manifestly leading his fourth best spade, and West's best apparent chance for game is to make two spade tricks. This he can accomplish if North and South each hold one of the high spade honors, and if South plays his on the first trick, which would make Dummy's knave of spades a winner; Dummy plays the 6 of spades.

South knows that North has led his fourth best spade, and that he must have three spades higher than the card led. South, by using the

The PILOT 10-1 Double Celebrated Vernier Dial

THE PILOT KILOGRAD

Only **7/6**



Pay 7/6 and make
your old
set up-to-date in appearance
and easier to operate

Shows the way to better tuning

Reasons why the Pilot Kilograd Dial is the Best of the New Type Vernier Dials on the Market

None excel it in appearance.

It can be put on any old set now in use and, of course, improve the tuning control.

It is the only vernier dial that will show both clockwise and anti-clockwise calibrations, so that dealers can make no mistake in placing quantity orders.

It has a friction control that prevents the slightest backlash.

Finally, while being as mechanically strong as any offered to the public, it is the cheapest bakelite moulded vernier dial available in Australia to-day.

Sole agents for the Pilot Electric Mfg. Co., the largest manufacturers of radio parts in the world are—

UNITED DISTRIBUTORS LIMITED
(WHOLESALE ONLY)

Sole Australian Distributors of "Ray-o-Vac" Batteries

72 Clarence St., Sydney.
342 Queen St., Brisbane.

Cr. Jervois Quay & Harris
Sts., Wellington, N.Z.

664 Bourke St., Melbourne.
26 Queen St., Perth.

27 Chesser St.,
Adelaide.

66 Charles St., Launceston, Tas.

Rule of Eleven—that is, subtracting the number of pips on the card led from eleven, in this case four from eleven leaving seven—knows the number of spades in West's hand higher than the spade led. The Rule of Eleven shows South that there are seven spades higher than the four that are not held by North. He (South) and Dummy have six of these seven, so that the Declarer has only one card higher than the 4. South also determines to his own complete satisfaction what that one spade is. If North has held the ace of spades, he would have led it, as with the ace he would not have opened his fourth best spade against a suit declaration. South is, therefore, able to mark the ace of spades in West's hand. South with perfect safety, plays the 8 of spades—not the king. West takes the trick with the ace of spades, as no possible gain can result to him from failing to win it; and proceeds to size up his game-going possibilities.

At first glance the prospects do not look encouraging. He must lose two spades and one diamond. If, in addition to these three tricks, he loses the low club, he would not make his contract. The remote possibility that the queen of clubs might also be lost is not worthy of serious consideration because, with the No Trump bid on the right, the king of clubs is almost certainly in that hand; and as Dummy has two entries in hearts, a club finesse can be readily taken. The question is, how can he discard his 4 of clubs? The only way at all possible is by establishing a good diamond in Dummy. He can lead diamonds but once from his own hand. The second diamond lead must come from Dummy, as must the third diamond lead, if diamonds are to be established. To make up a good diamond and to obtain the desired discard, the Dummy hand must have two entries. Fortunately the queen and 8 of trumps constitute these two entries. If South holds the ace, king and 10 of diamonds, Declarer cannot establish one of Dummy's diamonds in two rounds and the discard of the low club is unobtainable. The No Trump bid makes it probable that South has the ace and king of diamonds, but the 10 of diamonds is as apt to be in one adverse hand as in the other. If

North has it, the 9 in Dummy will force the ace or king.

West leads the 7 of diamonds; North plays the 2; Dummy finesses the 9; and South plays the king.

South leads the king of spades; West plays the 3; North the 5; and Dummy the 7. By playing a higher spade than the card he originally led, North shows South that he opened a suit of exactly four cards.

South leads the 9 of spades. West follows with the 2; North wins with the queen; and Dummy plays the knave.

North considers his next lead. If he leads diamonds, he realises that he will establish that suit in Dummy and thus be playing Declarer's game. The lead of a trump may result most disastrously, because it is just possible that South has the once guarded king, which that lead would kill. North is in a most unpleasant position, and he adopts the lead, which seems to him the least objectionable of three undesirable alternatives, that is, the club. He leads his highest from three—the 9. Dummy plays the 2; South the king; and West the ace.

West leads the knave of hearts; North plays the 4; Dummy wins with the queen; and South plays the 2.

Declarer, following his plan of campaign, leads the queen of diamonds from Dummy. South plays the ace. West trumps with the 10 of hearts, carefully retaining the 3 so that Dummy's 8 may be used as a re-entry. North plays the 4 of diamonds. If South had not covered with his ace of diamonds, Declarer was prepared to discard his 4 of clubs.

West now leads the 3 of hearts; North plays the 6; Dummy the 8, and South the 5.

Dummy leads the knave of diamonds; South plays the 8; West discards his 4 of clubs; and North plays the 5 of diamonds.

West now holds nothing but high trumps and the good queen of clubs. He leads a diamond from Dummy, announces that he proposes to trump it, leads his trumps and take the remaining tricks. He lays down his hand. His claim is conceded, and the play of the hand is finished; West making four odd, contract and game.

First note South's typical No Trump hand. Its strength in honors and

their distribution in three suits render a No Trump bid imperative, not only because of the possibility of game at that bid with good support by the partner, but also as the initial step towards arriving at the best game bid between the two hands.

Passing to West's exceptionally strong hand, it should be noted that, even with such great strength, he was only able to make game by the cleverest manoeuvring. This emphasises the importance of not bidding a suit over an original No Trump on the right, unless the hand be exceptionally strong. West's pre-emptive bid of four hearts was justified by his four honors and unusual length in that suit, together with his side strength. Frequently, when sitting over a No Trump, an informative double is much wiser than a bid, but in this instance West knew that no declaration his partner could make would offer as good a chance for game as the heart suit. As a bid by his partner could not be of service, and as adverse bids might prove injurious, the situation was clearly one in which to make a pre-emptive bid.

West's bid of four, thus contracting to take ten tricks, was one trick in excess of the trick-taking probabilities of his hand, but was in accordance with the best practice. A bid of three hearts might not have shut out a spade or a diamond bid by the opponents—on the contrary, it would encourage such a bid. As West has but a singleton diamond, it was probable that the opponents were very long and strong in that suit; possibly strong enough to bid four over a three heart bid. His opponents may conceivably have had a game between them in spades or diamonds, in spite of West's strength. Therefore, to prevent, if possible, such a bid from being made, West's high pre-emptive bid was justifiable, although it was quite possible that West, with the assistance of East, might have been able to make only three hearts, and not able to make four.

The usefulness of the fourth best lead, and the information quickly given by the Rule of Eleven, are well illustrated by the inferences drawn by South from North's opening lead of the 4 of spades. The convention lead of the fourth best, when leading low

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Radiotron 200A. (Detector)	1 13 6	Amplion AR14, Junior De Luxe	3 15 0
Radiotron 112 (Power valve)	2 5 0	Amplion AR111 Junior	3 10 0
Radiotron 120 (Power)	0 17 6	Brown H1	7 10 0
Phillips B406, 100, 106, 500	0 13 6	Brown H2	3 5 0
Cossor, W1, W2	0 13 6	Brown H3	4 2 6
Cossor W3 (Power valve)	0 17 6	Brown H4	2 0 0
		Geco	6 15 0
RHEOSTATS		SUPERHETRODYNE KITS.	
H. & H., with dial, 6, 20, 30 ohms	0 5 9	Igranic	23 10 0
Pilot Engraved Knob	0 4 0	All-American	10 5 0
Bradleystat	0 15 0	Precise Multiformer	6 5 0
SOCKETS		NEUTRODYNE KITS.	
Benjamin Cle-ra-tone UX	0 5 6	Col-mo Special	1 15 0
Filkostate	0 10 6	Radlokes	1 12 6
H. & H. Porcelain	0 4 9	Airzone	1 12 6
H. & H. Bakelite	0 4 9		
Pilot	0 2 0	BROWNING DRAKE KITS.	
CONDENSERS, VARIABLE		Airzone	1 5 0
Igranic, .0005	1 15 0	Radlokes	2 2 0
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Kellog .0005 Low Loss Vernier	1 3 6	1 Valve, complete with "A" and "B" Batteries, Valve, Etc.	2 19 6
Kellog .00035 Low Loss Vernier	1 2 0	CRYSTALS.	
Precise Syncrodenser, .0005	1 10 0	Carborundum, fixed	0 11 0
Precise Syncrodenser, .00025	1 7 6	Carborundum, with stabilizer	1 7 6
American Brand, S.L.F. .0005	0 17 6	K.H.M., No. 1	0 1 6
American Brand, S.L.F. .00035	0 15 0	N.H.M., No. 2	0 1 0
Quam, .0005	2 9 0	Neutron	0 2 3
Quam, .00035	2 5 0	SWITCHES.	
CONDENSERS, FIXED.		Marco 5, 7, 9, 11, point	0 3 6
2 MFD, TCC	0 9 9	Rotary	0 0 9
1 MFD, TCC	0 7 3	S.P.D.T. Porcelain	0 2 6
.5 MFD, TCC	0 6 6	D.P.D.T. Porcelain	0 4 3
.05 MFD, TCC	0 5 0	LOOP AERIALS.	
.01 MFD, TCC	0 5 0	Igranic, Collapsible	3 15 0
.008 MFD, TCC	0 3 9	B Battery Eliminator, Philips	9 15 0
.002 MFD, TCC	0 3 9		
Westless, .0025, .001, .002, .0003, .0001	0 1 6		
Electrad, .0001	0 2 0		
Electrad, .0025, .0003	0 2 2		
Electrad, .002	0 2 6		

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from a long suit, was inherited by Bridge from Whist; as was also the Rule of Eleven.

I will state the Rule of Eleven for the benefit of those who may not be familiar with it: When the fourth best card of a suit is led, deduct the number of pips on the card led from eleven and the balance will be the number of pips on the card led from eleven and the balance will be the number of cards higher than the card led that are not in the leader's hand. As an example, suppose the 7 is led. There are seven cards of the suit higher than the 7, namely, the 8, 9, 10, Jack, queen, king and ace. Three of these higher cards are in the leader's hand so the other four higher cards are in the hands of the other players; and the number obtained by subtracting 7 from 11 is 4.

By reason of the fourth best convention, the lead of 2 when it is a fourth best, shows that the leader held exactly four cards of the suit. Similarly a lead of the 3, if the 2 appears in Dummy's hand or if the partner holds it, shows partner that the leader held exactly four cards. If the 3 is led and the leader subsequently plays the 2, his partner knows that the leader held five of the suit originally. In fact, if the fourth best is led, the partner can generally determine the length of the leader's suit from the cards of the suit held by him and by Dummy. This lead is usually used in a No Trump bid with more frequency than in a suit declaration.

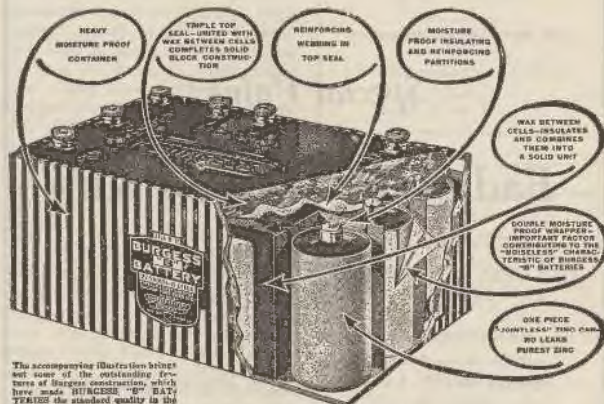
Game should be the object of the Declarer when playing his hand. He should at once plan the cards which should be played on the first trick, and, if that trick be won, which suit should be led. At the same time he should go further, and scheme how he is to handle most advantageously the 26 cards which compose the combined hands. A few seconds taken then to formulate his plan of play are apt to put Declarer on the right track, and may save minutes of deliberation after some thoughtless mistake has been made, when it is too late to ob-

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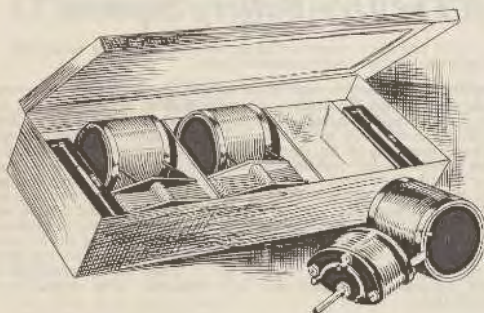
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TESTING RADIO BATTERIES.

By W. B. SCHULTE, Chief Research Engineer Burgess Battery Company. "A" Batteries.

"A" batteries should be tested with a voltmeter. It is true that dry cells are usually "flashed" to show the short circuit amperage, but this is no indication of their capacity—in fact, some of the highest capacity dry cells have only a nominal flash of 25 to 30 amperes. When the closed circuit of the "A" battery is below the "end point" voltage of the tube it is no longer useful. The battery voltage will probably have dropped to 1.25 open circuit volts, but it can still be used for ignition and bell service.

A low voltage "A" battery usually results in weak signals. It is also indicated by the filament control which must be kept near the "on" position to obtain desired volume.

"B" Batteries.

The correct test of a "B" battery is the voltage test. While battery users and dealers are in the habit of testing dry batteries with an ammeter, this test is worthless on a "B" battery. The amperage indicates, to a certain extent, the internal resistance of a battery, but since the resistance of a 22.5-volt battery is about 5 ohms, and the resistance of a vacuum tube is from 10,000 to 30,000 ohms, it is apparent that an increase of, say five ohms, in the battery resistance will have no appreciable effect on the combined "B" battery and tube circuit. In other words, a drop in the amperage of a "B" battery, so long as the voltage is still satisfactory, means little regarding the usefulness of the battery.

The important thing to know is the voltage which the battery will deliver to the plate, and the voltage test is of real value only when made with a high grade, high resistance and accurate voltmeter. It is certain that when a "B" battery indicates a given voltage on a voltmeter of the latter type, it will deliver at least as much voltage to the tube.

While the nominal voltage rating of a fifteen-cell "B" battery is given as 22.5 volts, the actual voltage of a satisfactory "B" cell is slightly under 1.5 volts. Consequently the complete battery, when tested on a voltmeter, will not test quite 22.5 volts, but it should not be considered defective for this reason.

"C" Batteries.

These batteries, like "B" batteries, should be tested by a high grade voltmeter, and when their voltage has dropped to about 1.0 volt per cell they should be replaced.

A low voltage "C" battery usually produces distorted signals.

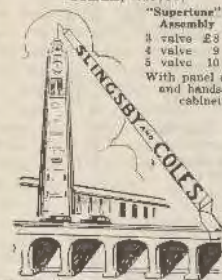
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Radio Auction Bridge

(Continued from Page 45.)

tain the maximum result from the play of the combined hands. No other characteristic more readily and quickly marks the Auction expert than the fact that, when Declarer, he always plans a campaign. As soon as he can see what his opportunities are, he carefully determines upon the method he will adopt to make his contract, his game, or his slam.

The advisability of planning a campaign with the definite object of making game if there is the remotest possibility of so doing, could not be better illustrated than by West's masterly treatment of this hand. Had he not stopped to reason it would hardly have occurred to him that the only possible way to go game was by a successful finesse against the 10 of diamonds. You can see that had he played the knave of diamonds from Dummy instead of the 9, Dummy, when next in, would have had to lead low from the queen, 9. South would have played low and unless West trumped North would have taken the trick with the 10; and if West trumped he would subsequently lose a club trick and not win the game.

I suggest that you play this deal over just as it was played from 2FC Studios.

QUERIES ANSWERED.

J.C. (High Street, Granville):—

1. The American system of bidding, where 3 tricks of anything beat 2 tricks of anything, is not common in Sydney Clubs. There is what might be termed a hybrid system in vogue, i.e., bidding according to the Portland Club, but not scoring simple honours.

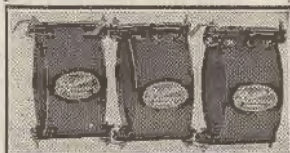
2. The way you have put this question is rather ambiguous. What exactly do you mean by a false call? For instance there are bids out of turn; illegal bids; and under bids, which might all be termed false calls. If you mean an "under bid," i.e., when a player fails to bid a sufficient number of tricks to overcall the previous bid there is nothing official published to date setting out the new penalty. I am making further enquiries. In the meantime there have been no alterations by the Portland Club up till March, 1926. Have handed your suggestion to the Editor. Many thanks.

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Insulators: Eggshape, doz.	0	0	11	Rheostats: Ajax, 6 or 30 ohms	0	2	1
Bakelite Sheet: Polished, 1/2 in., per sq. in.	0	0	3	Metal Frame Rheos: 30 ohms	0	2	6
Ebonite Sheet: Matt, 3/16 in., per sq. in.	0	0	4	Super Rheostats: 6 or 30 ohms	0	3	6
Spring Aerials: For indoors	0	5	9	Atlas Stator: Vernier all the way	0	10	6
Arresters: "Beano"	0	5	9	Bradleystator: Vernier all the way	0	15	0
Lead-in Insulators: Ebonite, 6 in., 1/-; 9 in., 1/3; 12 in.	0	1	6	201A Valves: "Rader"	0	6	9
Porcelain Bent Tubes, each	0	0	3	199 Valves: 199, UX, or 201A base	0	3	0
Variable Condensers: .001	0	10	9	Ediswan Valve: R type 2 amp.	0	13	6
Sterling Brass V. Condensers: 21 plate	0	13	6	De Forest Valves: DV3, .06 amp.	0	13	6
Straight Line Frequency Condensers: .0005	0	14	0	Valve Sockets: English, 8d. and	0	1	3
Dials: 2 in., 1/4; 3 in., 1/6; 4 in.	0	2	4	201A Sockets: 1/11, 2/7 and	0	3	0
De Luxe Dials: 4 in.	0	3	9	Porcelain 201A Sockets: H. & H.	0	4	0
Emmco Vernier Dials: Metal	0	6	9	Amperites: .06 or .25 type	0	8	0
Emmco Vernier Dials: Bakelite	0	9	6	Valve Sockets: For 199 valves	0	1	6
Vernier Buttons: Rubberbod	0	1	2	UX Sockets: The new universal	0	2	9
Vernier Attachments: Including dial	0	3	0	Buswire: Square tinned 2 inch length, doz.	0	0	10
Midget Low Loss Condensers	0	3	0	Copper Lugs: Tinned, doz.	0	0	2
Neutralising Condensers	0	3	8	Brass Lugs: For battery leads, each	0	0	2
Wetless Condensers: Fixed	0	1	6	Twin Flex: Rubber insulated, yard	0	0	7
.001, .002, .0003, .0005	0	1	6	Glass Enclosed Crystal Detectors	0	2	6
.006, 3/6; .01	0	5	0	Russell's Hartatts: With catswhisker	0	1	6
By-Pass Condensers: 5 mf., 5/4; 1 mf.	0	6	6	Neutron: "Valve Power"	0	2	3
Headsets: "Canonball"	0	12	6	Carborundum Detector: Fixed	0	11	0
K. & C. Headsets: 2000 ohms	0	15	6	Boxes Mixed Crystals	0	1	3
Jacobi Headsets: 4000 ohms	0	12	6	Spider Former: With pins	0	1	3
Phone Cords: Double	0	2	3	Browning Drake Kits: With blueprint	1	5	0
Karas Harmonic Transformers	1	19	6	Neutrodyne Kits: With blueprint	1	12	6
Crescent Push Pull Transformers, pair	1	15	0	R Battery Eliminators: No hum	2	15	0
Dry Cells: Columbia, 2/3; Ever-Ready B Batteries: Fresh Ever-Ready, 80 volts, 18/-; 42 volts, 12/6; 30 volts	0	3	0	Philips Radio Chargers	6	0	0
Large Capacity 42 volts Ever-Ready	1	1	0	Phonograph Adaptors	0	4	3
"Volton" 45 volts Triple Life B Batteries, each	1	2	6	Potentiometers: 400 ohms	0	3	0
C Batteries: Ever-Ready 4 1/2 volts	0	2	9	Phone Plugs: Double	0	1	0
C Batteries: "Volton" 4 1/2 volts	0	3	0	Phone Plugs: Single, patent	0	2	6
Exide Accumulators: Glass	0	3	0	Single Circuit Jacks: Fantail	0	1	9
20 amp. hour, 4 volts, 17/-; 6 volts	1	5	6	Double Circuit Jacks: Fantail	0	2	4
45 amp. hour, 4 volts, 32/-; 6 volts	2	8	0	Improved Jacks: Non-solder, single circuit	0	2	6
Exide Accumulator B Batteries: 2,500 M/A. hours, 40 volts, 90/-; 80 volts	6	0	0	Improved Double Circuit Jack	0	4	3
Terminal Boards: For valve sets	0	2	6	Burndept Loud Speakers	2	17	6
				Amplion Dragon Fly Speakers	1	5	0
				Browns Small Speaker, H4	2	0	9
				Browns H3 Speaker	4	2	6
				Steravox Cone Speaker	5	5	0

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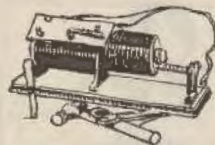
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Beginners' Problems



C.W. (Manly). "I have an eight-valve super which has given excellent service for over 18 months, but just recently the volume on Interstate stations has become considerably weaker. I am using the dry cell types of valves, but have both "A" and "B" accumulators, which are always kept fully charged. Can you advise me how I can rejuvenate my valves, as I think this is the cause of my reduced volume?"

A.: It not infrequently happens that, with dry cell valves which have thoriated filaments, the electronic emission gradually decreases after considerable use, so that the volume and sensitivity is gradually reduced with old age. Under such conditions, it is usually possible to subject the valves to a treatment that will improve them to a very marked degree.

This treatment is called reactivation, or rejuvenation, and is quite easily accomplished by the broadcast listener with a few very cheap parts that can easily be assembled into a suitable instrument. The parts needed to make up this rejuvenator are as follows:—

One Bell ringing transformer, fitted with various voltages from 2 to 12 volts.

One American type holder.

One English type holder.

One holder suitable for 199 type valves.

The following is the suggested method of treating the 199 type valves: With the F clip on the 8 volt terminal, turn the rheostat dial full on (viz., all the resistance cut out), then immediately bring the dial back again to the half-way position. Leave it there for one minute. Next, place the F clip on the 6-volt terminal, and with the rheostat still in the same position, leave it for half an hour. Repeat this process with all valves.

To reactivate a 201A or English type valve, the same procedure should be followed, except that the F clip should be connected to the 10 volt

tapping for preliminary flashing and to the 8 volt tapping for the half hourly cooking. The writer has used the above methods with considerable success with all types of valves, and can thoroughly recommend it to readers who are in the same boat as C.W. (Manly).

T.R. (Ultimo, Sydney) writes: "I have built the 3-valve Up-To-Date Rehnartz Receiver which was published in 'Wireless Weekly,' dated July 9th, 1926. As you have asked for reports, I am writing to you. I have built quite a number of receivers that have been described from time to time, but this is by far the best of them all. I am situated 250 yards from 2KY, and with this receiver I can entirely eliminate him. I have received stations that I have never heard before, due, no doubt, to the head locality of my aerial. Is it possible to add another valve, as I have all the necessary parts?"

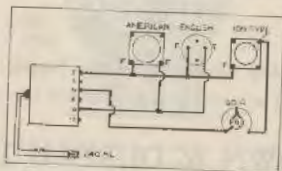
A.: We do not advise a stage of radio frequency amplification with this receiver, and as two stages of audio amplification are already used, it is not practicable to add a third stage.

C.W. (Drummoyne). See "Wireless Weekly," dated February 19th, 1926.

A.E.R. (Moss Vale) writes: "I wish to report that on Friday, Saturday and Sunday last, I received IYA, Auckland with a receiver described in "Wireless Weekly." Can you inform me the wavelength of this station?"

A.: 420 metres.

C.J.W. (Brookston, W.A.) writes asking advice concerning the semi-fixed series condenser used in "Wireless Weekly" Receiver No. 2.



A valve rejuvenator.

A.: The semi-fixed condenser is made up of two pieces of brass or aluminium, bent at right angles, so that the two faced sides have each a surface area of 1 x 1 inches. A slot is cut where they are secured to the panel, in order that the distance apart of the two plates can be varied. If you have not handled a short-wave receiver before, it is necessary to explain to you that the tuning is far more critical on the short waves than it is on the present broadcast wavelengths.

E.D. (Epping) writes: "I have constructed as per your issue of 23rd July, the two-valve reflex. I have gone most carefully over all connections, and have tested all parts, but still find in operation that the second condenser gives no control. Reception from 2FC and 2BL under these conditions is quite loud and clear. Can you suggest the cause of my trouble? I feel sure that, if the tuning can be made sharper, I shall be more than pleased with the clarity of reception. P.S.—Reaction does not operate on either couplings."

A.: We fear your fault is in one of the following, reversed reaction or defective "B" batteries. The receiver employs feed-back regeneration as well as the tuned plate method of regeneration. If, however, you have the coils mounted haphazardly, the magnetic reaction may be reversed, and opposing the regeneration caused by tuning the plate coil. We would suggest that you carefully check over the coil connections, and, if regeneration is still not obtained, try reversing the leads connecting the tuned plate holder and increase the plate voltage on the first valve.

**BURGESS—"Power!
Harmony! Endurance!"
—BATTERIES.**



The Key to Better Reception

GREATER VOLUME — INCREASED DISTANCE RECEPTION AND PURITY are at your disposal with the use of Radiotechnique Valves. Manufactured under scientific conditions at Europe's largest purely valve factory, only by actual use can their outstanding qualities be appreciated.

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SCIENTIFIC SUPER VALVES

Chosen by leading English and Continental amateurs, and used throughout the French War, Navy, and Post Departments, broadcasting and commercial stations.

IN TYPES TO SUIT EVERY REQUIREMENT

Fit English or American Socket

RADIO MICRO. Dull Emitter, Detector, and Amplifier. 3-3.5 volts, .06 amps. 13/6	SUPER AMPL. 201A type, 5 volts, .25 amps 13/6	RADIO AMPL. Bright Emitter, 3.8 volts, .7 amps 8/6
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Any Reliable Dealer Can Supply

Should you experience any difficulty in securing supplies, please communicate with Factory Representatives for Australasia,

BROWN & DUREAU LTD.
BROUGHTON HOUSE, CLARENCE STREET, SYDNEY
And at Melbourne, Perth, Brisbane, Wellington and Auckland, N.Z.



PHILIPS B.105.

These valves, which are designed specially for use as detector and high-frequency amplifiers, or as general purpose valves, are unsuitable for last stage low-frequency amplification. Low-frequency amplifying valves can, however, be used with good results as detectors.

A suitable low-frequency amplifying valve has to meet following conditions:—

1. Ability to cope with an amount of energy necessary to work a loud-speaker.

2. The alternating current which it



supplies to the loud-speaker has to be a faithful amplified reproduction of the modulated transmitted waves.

3. The plate voltage necessary to obtain these results should be within the reach of every amateur.

4. The filament consumption should be a minimum.

To obtain an undistorted loud-speaker reproduction the undermentioned negative grid bias should be applied:—

3-4.5 volts at 60 volts plate voltage.
4.5-6 volts at 80 volts plate voltage.
6-7.5 volts at 100 volts plate voltage.
7.5-9 volts at 120 volts plate voltage.

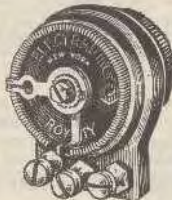
New Radio Apparatus

While it is comparatively easy to meet these conditions in the case of valves taking 4 or 5 volts on the filament, it is more difficult to manufacture valves for use with one dry cell having suitable characteristics for low frequency amplifying. Philips Radio, however, have now introduced the B.105 Valve, which entirely meets these demands, as it is an ideal low frequency valve, and is, in addition, extremely useful as a detector.

The B.105 has a filament voltage of 1.0 to 1.3, and therefore one dry cell only should be used. Do not use a two-volt accumulator cell, as thereby the filament runs a risk of 100 per cent. overload, which would seriously impair the emission. The amperage of the B.105 is only 0.1, which is extremely small for a valve of this class. A grid bias should always be used to secure a faithful reproduction, and best results will be obtained with a grid condenser of .0002 to .0003 M.F., and with a grid leak of 0.3 to 2 megohms. The B.105 can be supplied with either English or Standard American Cap.

ELECTRAD VARIABLE HIGH RESISTANCE.

In spite of the fact that resistance is a menace to the free-functioning of oscillatory circuits, there are many points—external thereto—where a properly graduated resistance is of the greatest importance. There are



many well-known systems of radio frequency amplification that depend for stability upon the nice adjustment of some resistance of pre-determined

maximum value. For example: The De Forest R5 Receiver use one between the secondary and grid of each R.F. amplifier, other systems use one in the B supply line to the plates of the R.F. Valves. But, in each case, it is imperative that the values should be standardised and that the adjustment should be smooth.

"CARBONCEL" BATTERIES.

The problem of high and low tension batteries, especially for the country users of radio, has now been solved to a large extent by the placing on the market by Amplion (Australia) Ltd., of the new "Carboncel" batteries. The strongest feature of these batteries is that they may be recharged at home in a few minutes without the aid of any electrical appliances. With each battery is supplied a quantity of sal ammoniac,



which is simply added from time to time to the battery to maintain it at an even voltage. The low tension battery, which is illustrated here ("Carboncel" No. 222), is a large cell for high semi-continuous discharge. Voltage is 1.45, and it has the extremely high capacity of 500 ampere hours, at one ampere for 8 hours a day, thus making it ideal for use by radio users who wish to dispense with accumulators or dry batteries for filament lighting.

In addition to this cell, the Company has other types which should prove extremely popular in Australia, and which by virtue of their rugged construction should be capable of very long life.

Karas Harmonic Transformers

The Audio Transformer Supreme
Maximum Volume
Reproduction equal to Resistance Coupling

Price **39/6** all stage ratio

The Karas is without doubt the finest
AUDIO TRANSFORMER OBTAINABLE

ONLY A SMALL SHIPMENT AVAILABLE

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British Made **CLARKE'S** **ATLAS** *British Made*

GRID CONTROL

(VARIABLE GRID LEAK AND FIXED CONDENSER)

Capacity of Leak $\frac{1}{4}$ to 10 megohms



Condenser Capacity .0003 mfd.

Combines the dual functions of a variable grid leak and fixed condenser. Uniform adjustment from $\frac{1}{4}$ to 10 megohms. Absolutely noiseless. Brings in those long distance stations. Silent in working. Unaffected by atmospheric conditions. One hole fixing. Only finest ruby mica and best copperfoil used in the condenser.

Price: Grid Control (variable grid leak and condenser combined) 6/9 each

If you cannot obtain from your dealer, please communicate with:—

THE GENERAL TRADING COMPANY

"Wingello House," Martin Lane (near Martin Place) SYDNEY.

Telephones: BW 6938; B 4917.

Sole Australian Distributors.

Listeners' Point of View*(Continued from Page 12.)*

come on the scene. It will be possible for listeners to see the actual performer as the song, the talk, the play, whatever it may be, proceeds. This, of course, will add to the interest and the appeal of the number. I am doubtful as to the effect it will have on concerts and theatres, when the last obstacle to perfect enjoyment, short of physical presence, is thus swept away. Possibly theatres will cease to broadcast.

Its usefulness in the ordinary relations of life will be tremendous! Already the Continental police are using it for broadcasting descriptions of wanted persons. Sketches, photographs, as well as the actual presence of people at the microphone, may be sent. Explorers wirelessing from North or South Poles will be able to project their own images into civilisation, whence by careful relaying they may be brought into the homes of subscribers. Wonderful as this sounds, 3LO will in all probability have made it as commonplace a thing as ordinary wireless now is. Races may be seen in actual process of being won, by an extension of the invention, and a person in the comfort of an easy-chair may see pass before his eyes the pomp and circumstance of life, its gladness and joy. He will be able to switch off the tears and the sighs. A wonderful world, my masters!

3LO Prize*(Continued from Page 8.)*

Entries for the competition must reach 3LO by September 22. A schedule of transmissions will then be arranged, and entrants will be required to send in copies of the programmes they will transmit. The programmes may consist of gramophone music only, or artists may be employed to assist in providing the programmes. The wavelengths on which the competing stations will transmit will be announced as soon as the entries have closed.

**BURGESS—"Standard
of Comparison"—
BATTERIES.**

Wireless De Luxe

Arriving

SEPTEMBER 10th

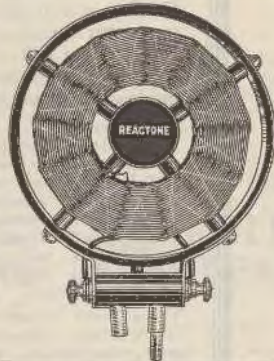
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7 Valves

**THE WORLD'S MOST
WONDERFUL RECEIVER****FOR THE HOME — FOR THE CAR — FOR THE LAUNCH**
Interstate Loud Speaker Reception without Aerial or Earth Wires**Reactone
Low-Loss Coils**

Superior to all others for long distance. Being air-spaced, tension wound, and free from shellac means lowest loss, sharper tuning, better reaction. All sizes, 25's to 50's

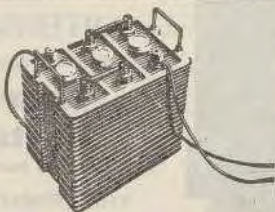
If your dealer cannot supply,
write or see us.**To users of Dry Cell Valves**Replace your Dull Emitters
with**"TRUE BLUE"
POWER PLUS TUBES**

They fit your small sockets, will take up to 6 volts, give increased volume and much longer life. The only full power small socket tube made, and the only valve free from microphonic noises.

**To Short Wave Operators****HEATH'S "00025 NON-DIELECTRIC STRICTLY LOW LOSS
CONDENSER STANDS ALONE****W. MALING & CO.**

(Successors to Radio Department of Parsons & Whittemore)

30 Market Street · SYDNEY



Omelettes and Optimism

Quality, in an omelette, depends upon what comes out of the eggshells. You get no more out of a battery than the maker puts inside it. Stuffing counts.

When you see "P. & R." outside a battery, you know that inside it's crammed full of energy. Get a P. & R. and you get capacity—real, valve-working capacity, not somebody's cheerful optimism in amp-hours: you get a battery which stands up to its work: you get the kind of battery which Rolls-Royce fits as standard equipment.

You get, too, a "Dagenite" case which is leak-, shock-, acid- and heat-proof: anti-splash and anti-spray vents: terminals protected from corrosion by petroleum glands: you get a BATTERY. And one which costs no more than the ordinary kind.

P AND R
PETO & RADFORD
ACCUMULATORS
The beginning and the end in,
POWER

D6

ALFIE AND AGGIE.

"Reggie and his orchestra will now play a selection from Faust," would be the way some of the studio announcements would read if a youthful 3LO correspondent of Mary Gumleaf's had her way. "I hope you won't think it cheeky of me," she writes, "but at home we get so much pleasure out of the programmes of 3LO that we feel that all the regular people are just like one of the family. We always refer to Miss Agnes Fortune as Aggie; Mr. Bradley is Reggie; and Mr. Andrew is Alfie, and we get such a lot of fun out of it." It might be alright up to a certain point, but Mary Gumleaf's friend's system might be criticised if the announcer stated, "Stan will now speak to you on the Referendum question." Mr. Bruce might be annoyed.

OSCAR WILDE POPULAR ON THE AIR.

"Lady Windermere's Fan," broadcast from the 2FC recently, was greatly appreciated, according to the letters received following the programme. Prior to this, Oscar Wilde's story of the "Selfish Giant" was broadcast, and as this also met with general favour, the "Happy Prince" will be included in an early programme.

OLD TIME NIGHT.

The whole of Saturday evening, September 18, will be devoted to old-time music at 2FC. From the Paddington Town Hall, at intervals during the night, will be transmitted old-time dance music. Then from the studio artists will sing songs in keeping with the character of the programme.

A SECRET EXPOSED.

Here's a secret of Billy Bunny's that we will expose to all the little boys and girls. When children are shown over 3LO Melbourne by Mr. Bunny on Sunday evenings, he usually asks them what is wrong with a picture on the wall of the Studio. It depicts a little child listening in bed with headphones on her pretty curls. "What's wrong with it?" asks Billy Bunny, and only about half the boys and girls guess correctly. Well, the ear-phones are the wrong way round, so the next time Billy asks the question he should get a lot more correct answers.

Subscription Form

The demand for copies of "Wireless Weekly" has so far exceeded the supply from the printing presses, despite increased output each week, that many listeners-in have complained that news-dealers were sold out before they could obtain their copy. In order to ensure delivery, fill in this subscription form and forward to the Editor, "Wireless Weekly," 51 Castlereagh Street, Sydney.

Please forward "Wireless Weekly" for a period of
for which I enclose for (add exchange
to country cheques).

Name

Address

Subscription Rates: 12 months (52 issues), 13/- post free; 6 months (26 issues), 6/6 post free.

MUSIC HATH CHARMS.

When 3LO, Melbourne, recently broadcast a selection of Chinese gramophone records, the studio created considerable interest and amusement. To most listeners they were a humorous novelty, the difference between Eastern and Western ideas of melody being decidedly emphasised. One, however, was so enthralled that he wrote congratulating 3LO, and offering a further selection of records. Here is his letter: "For variety, interest and quality, your programmes would be hard to beat. When I switched on my set last night I could hardly believe my ears, I thought I was back again in Siam, or at least listening to a station in Siam or Japan. When the announcer made the remark about the revolutions in China, I concluded I must have been listening to a record. I am still wondering if it was Chinese, for it sounded more like Siamese to me — I spent 3 years in Siam." In offering a selection of Siamese records, the correspondent stated that the instrumental records were quite har-

monious, but that the vocal solos and duets would be all right as an imitation of a cat's concert. There was another side to the Chinese evening; a Chinese resident of Melbourne protesting against the announcer's remark connecting Chinese music with the cause of the revolution. He was assured that no slight was intended.

DON'T BE SHOCKED.

Could you stand a shock from 2,000 volts of direct current and be in a condition to tell the story immediately afterwards. In most instances it would be a case for the coroner, but Mr. H. Johnson, chief engineer of 3LO, only shows a slightly singed finger as a result of such an experience. A few days ago he was inspecting a powerful transmitting set from which the power had been cut off. Everything went well until the power was accidentally turned on again. The full force of 2,000 volts sent Mr. Johnson reeling, but luckily the current had run across his fingers and not through the body.



Registered Trade Mark.

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MUSIC

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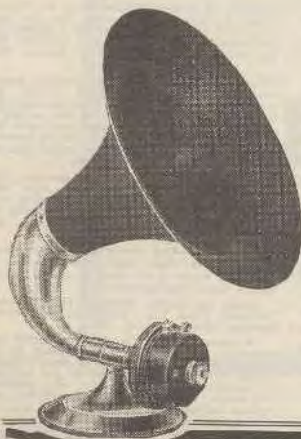
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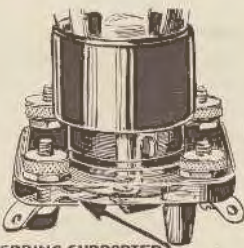
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Nickel-plated Arm and
Stand. Black Crystal Bell **£4**

14 inch Bell, 21 inches high. Nickel-
plated Arm and Stand.
Mahogany finished Bell **£4/5/-**

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First in Quality and Performance

BENJAMIN CLE-RA-TONE Push Type Socket.



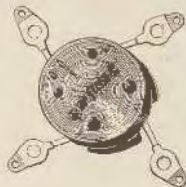
SPRING SUPPORTED SHOCK ABSORBING

Some of the outstanding features of this socket are:

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2. Side wiping contacts, insure perfect electrical connection to the tube prongs.
3. Suspension spring and contact member are made in one piece, thereby eliminating the high resistance joints.
4. All metal parts are heavily nicked.

By replacing the old type of socket in your set with the Benjamin Cle-Ra-Tone "Push" Type Socket, you positively eliminate tube jar and resultant microphonic noises.

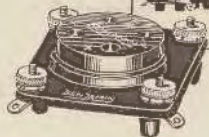
No. 9049 is without lower mounting base and is intended for direct panel mounting. They include a drilling template and four machine screws with nuts for attaching.



Description.

No. 9040 with mounting base. Price 5/-

No. 9049 without mounting base (for direct mounting to 1/8 inch panel). Price . 3/6



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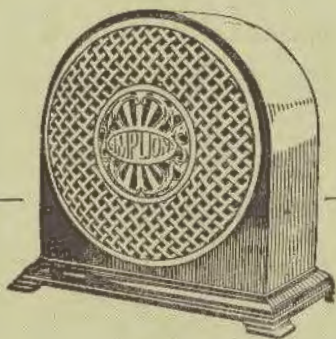
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