

Detailed Broadcasting Programmes a Week in Advance

Wireless Weekly 3^d

INCORPORATING "RADIO IN AUSTRALIA & NEW ZEALAND"

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In the Days of the Roman Empire

How To Go About BUILDING A RADIO RECEIVER

By ROSS A. HULL
(Technical Editor)

BROADCASTING EDUCATIONAL LECTURES

By Dr. Loftus Hills

QUESTIONS ANSWERED
IN RADIO INFORMATION
DEPARTMENT

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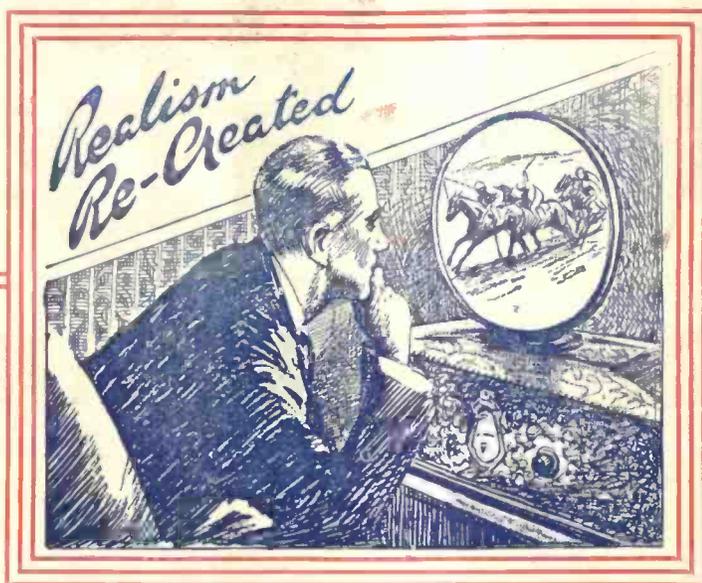
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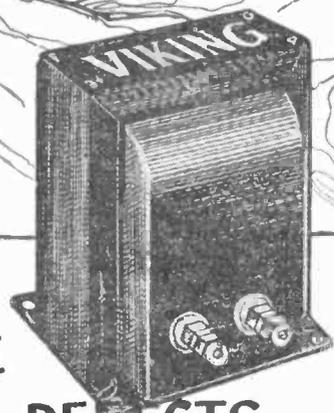
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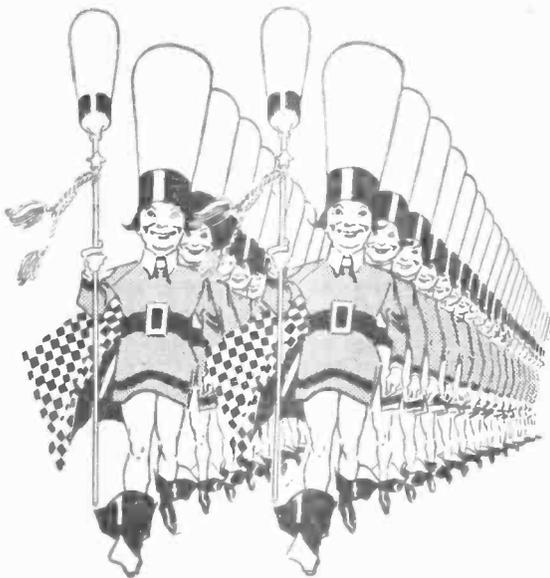
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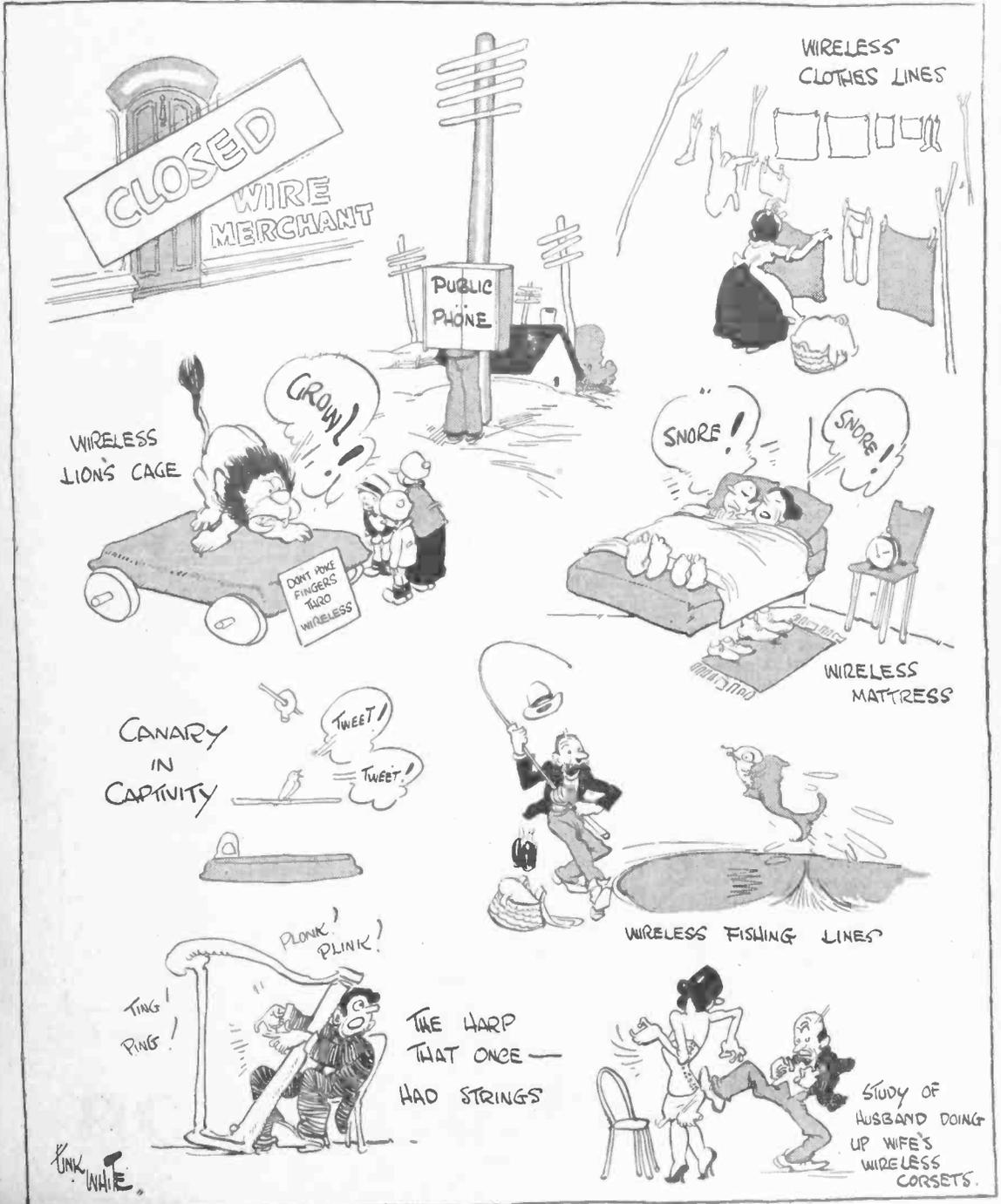
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A PEEP INTO A REALLY "WIRELESS" FUTURE



BETWEEN YOU AND ME AND THE MICROPHONE

We Are Attacked!

Letter received.

Dear James,—Will you please tell me what the *Between You and Me* and the *Microphone* page means? I don't know why the Editor allows you to write it. I never saw so much nonsense in my life. You are all the time making references to Keats and Pope and Sterne. Beyond showing off your own knowledge, it doesn't mean anything, especially in a wireless paper; besides, I don't think you know much about any of these authors—you are just writing to make people think how superior you must be. What use is it? You never say anything intelligent, and you never talk about anything that has anything to do with wireless. You surely don't think anyone takes any interest in anything you write. Personally, I think you are one of those people with pretensions to being literary. Well, it may wash with other papers, like the "Herald" on Saturday morning, but I suppose you aren't good enough to get it in there. You take my tip—being clever never got anyone anywhere. You've got to work and give facts and have plenty of the right stuff to talk about before you can be clever in papers. Take my advice, and give us something interesting in the *Between You and Me* and the *Microphone* page for a change.

Yours faithfully,
COMMON-SENSE.

Of course, we knew it would come to this. We wrote this page every week in fear that it might come to this. And now it has come to this.

Oh, Death, where is thy sting?

Oh, Mr. Editor, where is thy pruning knife?



Oh, Anthea (our housekeeper), where is our bread and butter?

Come on, where are they? Where, indeed? said jesting Pilate, and did not stay for an answer. Probably his wife was keeping dinner waiting.

But we did expect to get by with our reference to Pope and Keats. We heard quite a lot about them at school, and have since become really interested in their works through reading the book reviews. If our editor does his worst, and removes us from our page, we may even read some of the poems of Keats and Pope, in between looking round for a new job, and explaining to our soul why we didn't get one in town to-day. The thing that really breaks our heart is that our correspondent didn't think we knew anything about Lawrence Sterne. Because, if we know anything about anybody, it is about Lawrence Sterne. Go-bless-our soul! We've got him at home in six volumes, and we read



right through the introduction to him! Also we read a poem about him by an Australian, Mr. Slessor. What more could we do, outside reading something actual-

ly written by Sterne? And no one does this nowadays—Sterne's writing is so old-fashioned. Modern people have told the world more about Lawrence Sterne than he ever knew about himself.

We are also hurt that Commonsense should brand us with pretensions to being literary. The one thing we don't want it to be thought we are is Literary. As Arnold Bennett says, being literary is all clap-trap. You ought to read some of Arnold Bennett's stuff. He's SUCH a clever man, but rather a misanthrope. We always preferred H. G. Wells, Warwick Deeping's not a bad author, either. He is a very HUMAN writer. And Galsworthy. People say they can't stand Galsworthy, but we simply IDOLISE him. Of course, he's a sentimentalist; you can't get away from the fact that Galsworthy's a sentimentalist: but he's so HUMAN. You feel What Nice People His Characters Are, and when you close the book you say: "Oh, I am so sorry they've gone away." We always did admire natural, creative work. We'd like to tell you what we think about the Bulletin's serial stories, but there isn't space, and Commonsense says we never make an intelligent statement.

This shows Commonsense doesn't know



what he's talking about. If Commonsense knew us as we know ourself, he would know better than to expect it from us. He gets right over the fence when he talks about us contributing to the "Herald's" Saturday Morning page. This is too funny for words.

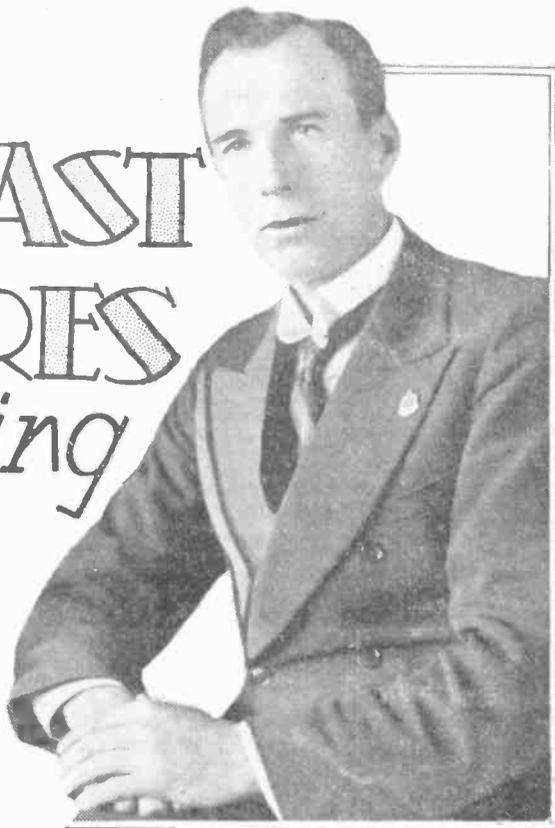
The nearest we ever got to getting anything in the "Herald" was when we wrote an answer to a letter in the "Herald's" letter column, by a clergyman. He wrote on "The Soul versus the Soviet," or something like that, and proved something or other which our letter disproved. The "Herald" didn't publish our reply, which shows how silly it was—the "Herald." Anyhow, we didn't try again.

So far, we've answered Commonsense's letter pretty well. But the last outburst is really too much for us. The fact is, we haven't much time for facts. They annoy us. If ever we stumble in an argument, you can always depend upon it, our stumbling block is a Fact. It's a fact! Yet, we suppose, if we want to continue this page (and we do—it's so easy to write, and doesn't take any thinking about), yes, if we want to continue this page, we ought to put in a fact or two, just to justify ourself, somehow, with our large circle of readers. So next week we shall open a Broadcasting Query Column.

Just like the Query Page at the back of this book, only not quite the same. We shall answer such questions as, "Are Announcers Human?" or "Do Broadcasting Artists Really Mean It?" or "Can Mr. Doyle Play the Oboe?" The answers to such questions are sure to be interesting. If anyone has a question to ask about broadcasting artists or arrangements or anything at all connected with the studios, let him write to James, c/o WIRELESS WEEKLY'S Box at the G.P.O. Number—Number whateveritis! We promise to attempt to answer all queries that arrive, and if we don't know, we'll make up something which will satisfy anyone, although we shall be able to answer most questions properly, because we're always poking about the studios, and what we don't know about artists and others is only their good points; while what we do know wouldn't bear repeating in a respectable journal. Read WIRELESS WEEKLY next week!

James

Making BROADCAST LECTURES interesting



The newly appointed Director of Talks for 3LO and 3AR, who is himself one of the oldest and most popular Melbourne broadcasters, here outlines the policy which will direct the educational side of radio from the southern stations.

By DR. LOFTUS HILLS

HOW many people in Australia appreciate to the full the true significance and function of broadcasting. How many realise that, in broadcasting, the human race has been presented with the most efficient and effective medium for entertainment and instruction ever yet devised? It was the full realisation of the almost limitless possibilities presented by broadcasting as an educational medium, which influenced the Australian Broadcasting Company in creating the position of director of the educational and instructional phase of broadcasting in Victoria.

Just remember for a moment, that a great part of our present troubles, social, industrial, and national, are due to intolerance. Then remember that such intolerance is due to lack of knowledge and understanding, and you must realise what tremendous good will result from increased knowledge.

There are, in existence and active preparation, the two media for education—primary and secondary schools as the first, and technical schools and the university as the second. Important as these two are, they have definite limitations, in that they only deal with youth, and finish therewith at ages ranging from 14 to a maximum of about 25. With adults, these two media do not deal excepting in a very limited way, through the University Extension System and the Workers' Educational Association. In other words adult education has been almost non-existent in Australia.

And here to our hand is broadcasting,

ready to be used as the third great medium of education—the medium through which the adult may be reached under ideal conditions. But let us beware how we proceed to use it, for it is easy to spoil it all by not using it properly. Don't run away with the idea that you are going to educate adults by throwing at them a series of haphazardly suggested lectures delivered without adequate attention to method of compilation and delivery. Neither will the other extreme of closely following what the B.B.C. is now doing, be any more successful, for it must be realised that, although our pioneers of broadcasting in Australia have laid a splendid foundation on which we can now build, we are only where the B.B.C. was about three or four years ago.

And now, of course, you ask "How is it to be done, then?" Well, in answering that question, it must be pointed out with emphasis that broadcast lecturing calls for a special technique. What is successful in a lecture room can be a most dismal failure over the air; a man most learned in his subject can be incapable of imparting any of his knowledge in a manner acceptable to the listener-in; a lecture containing technical terms and phraseology may be eagerly

followed by a student of the subject, but will be unintelligible to one who, unaccustomed to the terms and phrases, is yet no less eager than the student to understand and benefit; a lecture delivered by one speaker may be followed with absorbed interest by all who hear it, but exactly the same lecture delivered by another speaker, may cause tuning in to another station by unimpressed and wearied people; a talk otherwise good and entertaining may miss its full audience by chasing many away through the absence of gripping or arresting sentences.

Just as there is a special technique demanded of the lecturer, so there is necessity for design and care in the building up of the programme of lectures. And here one encounters the ever-present problem as to what standard to attain to in designing and building up broadcasting programmes in general.

It is not desirable to attempt to satisfy everybody all the time. The British Broadcasting Corporation have, as their idea, the satisfying of 75 per cent. of the people, 75 per cent. of the time. This, of course, applies to the programme as a whole, including music, entertainment and instruction.

Assuming this to be the ideal for programmes in general, then follows the necessity of deciding what ideal to set in regard to that part of the programme devoted to lectures, lecturettes, or talks, as they are variously called. This is one of the fundamental questions which we have had to answer in our initial activities. Let it be said at once that the answer is different from the B.B.C. ideal, as stated above, for it is this; "Interest everybody at some time with the objective in view of progressively increasing the frequency of the times."

At present we are endeavoring to take a fortnight as the basic time period, although the ultimate objective will be one day. It must be remembered that at present in Aus-

An "Introduction-to-Radio" Number of WIRELESS WEEKLY will be published next week. Special articles designed for the listener who has not previously found any interest in the technical side of radio will be published.

tralia the general public are regarding broadcasting mainly as an entertainment. Of course, there are exceptions, and it would be easy to cater for the educational requirements of these keen searchers for knowledge, if we did not have to prevent the outbreak of resentment from those who either could not understand or had no desire to listen to lectures designed for such students. It is thus necessary to present instruction and information in a manner so suggestive of entertainment as to claim attention on its own merits in that respect. Once attention has been thus attracted, we are well started on the path towards adult education. People will listen where they previously turned off the loud speaker, and, provided the lectures are of the right type and properly graduated, progress can be made in the study of any subject.

Herein lies the secret of success in the development of broadcast education in Australia—the successful combination of entertainment and information. No complete recipe can be given for this, as the ever-present personal equation enters very largely indeed. The following fundamental points will be interesting and instructive:—

- (1) The subject must be indicated by a pleasing and catchy title, which will attract attention.
- (2) The first few sentences must be arresting and even startling in character, and in some subjects deliberately provocative.
- (3) Lectures in general should contain more explanation than facts.
- (4) The speaker must be of such standing that his statements will not be questioned. He must be a recognised or unassailable authority.
- (5) The maximum duration of a lecture should be fifteen minutes.
- (6) The speaker must possess personality. It is not generally realised how broadcasting betrays colorless character. The speaker must "punch" rather than "pat."

Even assuming that all these requirements have been met, it cannot be said that the complete programmes of broadcast lectures have been devised. Provision will not

have been made for the keen student of any subject, for such a receiving licence holder has just as much right to expect help as his fellow who demands and expects entertainment. In the ideal broadcasting programme provision must be made for these students—a step which calls for skill and cunning in catering for them, and yet not antagonising the general listeners-in.

So you see the task is not an easy one, but it is well worth while, as the ultimate objective is something which is almost beyond us to visualise correctly. We have just completed the arrangements of the lectures for the first complete week of the conjoint operation of 3LO and 3AR by the A.B.C. The programme of lectures contained therein will be improved as time goes on.

It will be noticed that practically all tastes are provided for, ranging from talks that will

help the schoolboy and schoolgirl, to lectures which a practical mechanic will find helpful, through ranges of interest which include the average person who is quite willing to "Come with us round the world" (providing the guide is stimulating and not boring) as well as the woman folk who want to hear interesting sidelights on the lives of "Famous Women" in addition to, or instead of, hints in regard to various phases of household activities.

Finally it may be said that perhaps almost the whole idea may be grasped by realising that in our programme we would not dream of providing for a talk on history, but have initiated a series of talks on "Boy and Girl Life of Other Days," neither would we provide a lecture on international politics, but Professor K. H. Bailey will give a weekly talk entitled "The World's Kaleidoscope."

C. N. Baeyertz Replies to Sonya Michell

M^R. C. N. BAEYERTZ, who criticised Mme. Sonya Michell's "Ban on Beethoven" in a recent issue, replies again to Mme. Michell's defence against his criticism. He writes to the Editor:—

"When I expostulated mildly with Madame Michell, I had not then heard her play. I have now 'outlived that crime,' and hasten to say that the lady has an exuberant technical equipment, and her cultivated pianism is equalled by her courteous generosity as an antagonist.

"But Madame (così fan tutti) begs the whole question. If, in the original interview, Madame Michell had confined herself to those statements in regard to which she now expresses penitence, I should not have trespassed upon your valuable space.

"In her second Obitier dicta, Madame neither attempts to justify, nor does she even refer to, the four remarkable contentions in the former treatise, which follow:—

1. "Some people have simply got the Beethoven habit as others have the opium habit?"

2. "A great modern school of composers is at work to-day. Some of them will outlive Beethoven?"

3. "Why should we cram Beethoven down the throats of our students, when we can give them Stravinsky, Petroviev, Schoenberg, and Ravel? It is like teaching a modern soldier to shoot with a crossbar?"

4. "Beethoven's symphonies, sonatas, quartets, and trios are so overdone as to become positively revolting?"

"These unfortunate and intemperate statements, as I conceive them to be, were responsible for my reply. I am encouraged to believe that Madame Michell wrote in her haste what she will not subscribe to when 'seated and clothed'—"

"I may say that I should like to meet Madame, and feel sure that our differences, fundamentally more apparent than real, would readily be composed. This, in despite of her gratuitous and erroneous assumption that I have had no first-hand acquaintance with modern music in Europe."

REVIEWING THE RADIOLA SUPER EIGHT

WE have had a most interesting time during the last few weeks in the process of making prolonged and detailed comparison between the performance of a number of modern receivers of both Australian and American origin. In this, the second of the series of commentaries on present-day radio sets, we discuss the second receiver submitted for our examination and test. It is the A.W.A. Radiola Eight. Though possessing the modern features of single control and full operation from the light socket, this receiver differs in a great many respects from the set discussed last week.

(a) MECHANICAL AND ELECTRICAL DESIGN

Essentially the receiver is an eight-valve set, designed for single control operation from a 200 to 240 volt a.c. supply. Of these eight valves, five are of the UX-226 type (directly heated for a.c. operation). These are used in the four stages of radio frequency amplification, and in the first stage of the audio frequency amplifier. The detector valve is of the UY-227 type (indirectly heated), while the output audio frequency valve is the UX-271-A. The eighth valve is the UX-280 rectifier tube located in the "A.B.C." power unit.

In the four-stage radio frequency amplifier "binocular" type inductances are used for inter-valve coupling, these being tuned by four condensers "ganged" to the one control by the "steel belt" drive system. No shielding is employed to isolate the units of each radio frequency stage, this apparently being made unnecessary by the type of coupling inductances and valves used. The amplifier is fitted with a "local-distance" switch, to avoid overloading during the reception of near-by stations. This feature apparently is to be common in receivers capable of high radio frequency gain.

The detector and audio frequency unit would appear to be conventional in most respects, the standard A.W.A. "Ideal" transformers being incorporated. In the manner of most "a.c." receivers the power supply unit is separate from the receiver proper (though located in the same cabinet), and coupled to it through a bunch of "cabled" leads. This construction permits a compact arrangement of the apparatus, and yet avoids the possibility of serious direct pick-up of

Continuing the series
on modern A.C. models

By ROSS A. HULL

hum from the power unit. It is also of value in facilitating any servicing operations.

With an understanding of the absurd line voltage fluctuations which we are obliged to tolerate in many parts of this country, the designers of the receiver have fitted it with a plug-switch affair, which could be used to advantage in compensating for any drop in line voltage. Unfortunately, of course, the average listener will have no means of telling whether the line voltage is low or normal, and in consequence will not usually be able to reap the full benefit of the fitment.

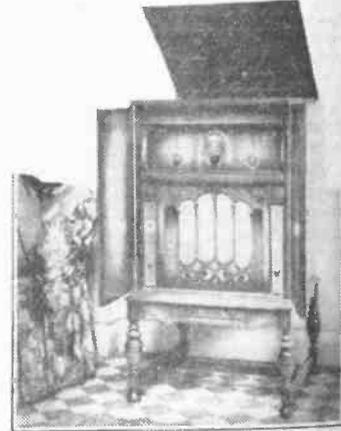
The power unit is, with the exception of the rectifier valve, completely enclosed in a metal box, and it would appear that only a painstaking searcher after an electrical shock could ever get one.

(b) EXTERIOR APPEARANCE

Due consideration has been given in the design of the receiver to the necessity for maintaining an effective and symmetrical arrangement of the controls. In accordance with the present vogue, the panel is of wood. The escutcheon plates of the single tuning control, the volume control, and the main switch are of pressed and oxidized metal. At the side of the cabinet is the "local-distance" switch, while behind it is the switch used to isolate the amplifier for gramophone pick-up work.

(c) OPERATION

By this time we must have had the receiver in operation for periods amounting to many dozen hours. As might be expected, the four radio frequency amplifiers provide ample sensitivity and selectivity for any conceivable requirements. In any similarly sensitive outfit, the reception range is limited chiefly by the characteristics of the location, together with the level of the "background" noises. The musical reproduction of the receiver tested was of a high order, though the hum produced in a moving-coil speaker (with particularly good response to the low frequencies)



could be considered more noticeable than one might wish. When using the excellent magnetic speaker supplied with the receiver, however, no such criticism would be in order. Also, it must be admitted that the hum level is much lower in this receiver than in many other outfits we have heard in which the UX-226 valve was used. All in all, we would classify the receiver as a soundly-engineered and highly satisfactory outfit, which would not suffer comparison with the best American receivers of its particular type. We cannot resist the temptation to mention that the designers of the receivers very evidently were close students and followers of American technique.

Assembling the parts
for the receiver.



How to Go About BUILDING a RECEIVER

A practical article on the important factors to be considered when planning and constructing a radio receiver. Why it is essential for the builder to follow exactly every detail of the instructions.

A STUDY of correspondence from set-builders in trouble has made it increasingly evident that a few sincere words might well be spoken on the subject of set-building in an endeavor to explain just what are the important factors to be considered in the planning and building of receivers. In the words to follow we will give particular consideration to radio enthusiasts of two types—those who know so little about the game that they are terrified to depart in the slightest detail from the description given, and those who think they know so much about it that they can rearrange things to suit their own fancy. Both of these types usually run into trouble.

In any receiver there are a great many features which are of little consequence—a great many respects in which the lay-out or the wiring could be changed without any drastic influence over the performance. On the other hand, particularly in the modern types of receivers, there are many design features which do not appear to be of great consequence to the man who knows but little about radio—even if he has built sixteen sets—but which, in reality are of the greatest possible importance. The chief difficulty would appear to be a lack of understanding concerning the relative importance of the various features of any receiver.

CIRCUITS

The strange thing about set construction at the moment is that everything appears to rotate around the circuit.

If the circuit is a "Marco," then the success of the receiver is assured. Should the circuit be any other sort of thing—particularly if it has no fancy name—then there is some doubt about the possibilities of the receiver. This attitude, as we have said before, is quite foolish. In the same way that a qualified man could get similar results

with a half dozen "circuits," so could a half dozen inexperienced enthusiasts get radically different results from any one circuit. We insist that provided reasonable common sense is expended in the drafting of the circuit design is then relatively of no consequence.

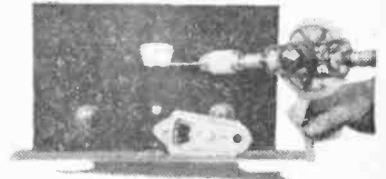
The things that do matter are the choice of components, their arrangement with respect to each other, the wiring between them, and the manner in which the complete receiver is adjusted. As examples illustrating the truth of this we could take a few dozen selected commercial receivers made overseas. The circuits in them would be found to incorporate a host of variations in the method of coupling the aerial; in the system used to couple the radio frequency amplifiers; in the neutralising arrangement; in the mode of detection; in the audio frequency amplifier, and in the general disposition of the valves. These selected combinations of circuit features could well be called by a group of crazy names with possibly more justification than is usually to be found. Even so, they are all capable of a somewhat similar performance when the mechanical and electrical arrangement of the components is well engineered.

We believe that the few dozen selected receivers could be put through their paces one after the other and no differences in the selectivity or sensitivity would be detectable by the average observer. In such a case, the consistent high standard of performance is obtained, in spite of radical differences in the circuit, simply because the components, the lay-out, the wiring, and the adjustment are matters given similarly intelligent treatment.

In some of the simpler circuits the components used do not have a great deal of influence over the performance. For

instance, in a two-valve receiver comprising a detector and audio amplifier, any good valves, any well-made tuning coils, and almost any decent audio transformer would give a degree of satisfaction. In some of the more complex circuits, however, the choice of components is of the greatest possible importance, as is the lay-out and general mechanical arrangement. In the "all-electric" receiver, in which bias resistors are self-contained, the type of valves used bears a definite relation to the value and rating of the resistors. For this reason, valves cannot be interchanged in the same way as is possible in the usual battery set. Then, in cases where screen-grid valves or pentodes are employed, the constants necessary in the inter-valve coupling circuits are quite different from those with which the enthusiast accustomed to "battery" work is familiar. Neither the constants of these items nor the valves themselves may be changed without very careful rearrangement of circuit conditions.

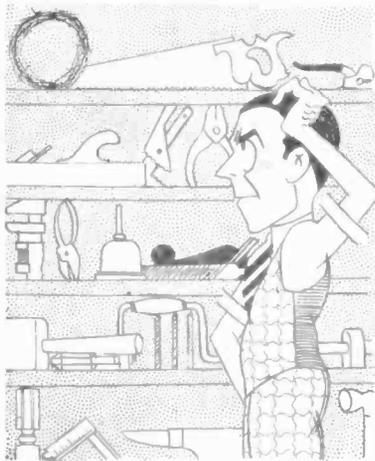
On the other hand, even in the most complex receiver, there are components which are not at all critical in their values. Such



How the hole for the condenser dial is drilled out.

things as by-pass condensers, radio frequency filter resistors in screen-grid and control grid leads, and the fittings used for mounting components often can be changed around and varied in value without any particularly dire consequences. Unfortunately, it sometimes takes extremely careful study to determine just which are the important and which are the unimportant items. Over confident set builders, for this reason, are prone to leave out some item specified in a description or change its value when in reality they had no right to do so. We have run across highly experienced set-builders who thought they were so well up in the game that they could leave out the variable bias arrangement in receivers equipped with European A.C. screen-grid valves—apparently thinking that the r.f. bias played as little a part in such a receiver as it did in the old three

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An elaborate kit of tools is not necessary to the radio fan. With a large number of tools he is likely to become confused, and possibly use the wrong one. Complete knowledge of the applications of a few faithful tools is better than half knowledge of the vagaries of many.

element valve amplifiers. And when they yelled because their set failed to operate.

Others, as a result of their experience with the old battery sets, have taken all sorts of liberties with the shielding specified for the screen-grid radio frequency amplifiers. Almost without exception they have run into serious trouble.

Of course, discussion of this type is really futile since it can never be made sufficiently comprehensive in any one article to provide rules which would cover all possible cases. In brief, however, it can be said that the enthusiast would do well to use the apparatus specified in "constructional" articles right down to the last detail unless his radio knowledge is sufficient to provide him with a very definite idea of the purpose and operation of every piece of apparatus in the set. If, by any chance, the specified apparatus is not available, the greatest care should always be taken to see that the gear used has the same or very similar electrical characteristics.

MECHANICAL CONSTRUCTION

As distinct from the lay-out or disposition of the parts, the construction of the set—the manner in which the parts are held together—is not usually of great importance.

In other words, when we say in articles that the panel is screwed to the base or that the shield is supported from both the panel and base we leave it to the common sense of the reader to assure him that it does not matter a "hoot" whether six or sixty-six screws are used. Then, if we should happen to specify a wooden base it is not necessarily impossible to get results with a bakelite base, or even one of metal, providing the necessary insulation between apparatus and wiring is provided.

In commercial receivers of to-day it will be noticed that the old panel and baseboard method of construction has been forgotten in most cases. The reason for this is not that the new pressed metal mountings and fittings provide a better electrical performance, but merely that they are more suited to modern manufacturing methods. For the home builder of radio sets the old stunt of screwing everything to a baseboard is still one of the most effective and practical of all. The appearance of the receiver usually suffers if all wiring is carried above the base, but this disadvantage can be overcome

Set Builder Does Not Require Elaborate Tools

readily by running all the battery supply leads (and all other wires not carrying radio frequency currents) below the base. At one time a great deal if not all of the apparatus was mounted on the panel. This construction, however, makes it impossible to maintain any satisfactory external appearance and somewhat complicates the apparatus-mounting process. It is much better, we consider, to mount as much as possible on the base, leaving only the control shafts to project through suitable holes in the panel. In many receivers this arrangement facilitates adjustment, since the panel can be removed completely and the receiver operated without the hindrance of it for experimental work.

In the more complicated receivers, particularly those in which the screen-grid valve is used, shielding is quite the most important constructional consideration of all. In most receivers of this type the shielding is exactly of the same importance as the valves or the transformers. In other words, one might just as well expect results with a valve or two missing as with the shielding incomplete or imperfect. For this reason we are tempted to suggest that even set-builders who consider themselves capable of making variations in published circuits should endeavor to avoid introducing changes in the shielding systems, unless such changes are to mean still greater effectiveness in that regard.

WIRING THE SET

Many hundreds of thousands of words have been written about set wiring and the

important points to be watched. Even so, there are apparently few set-builders who have a sufficiently solid grasp of the requirements to make an entirely satisfactory job of it. The one purpose of wiring, of course, is to carry currents to the required points throughout the set. In the audio amplifier or in the battery wiring, where radio frequency currents are not or should not be present, the only requirement is that the wires should make good connections where they are supposed to and are well insulated where they are not.

In practical terms this means that audio frequency wiring is entirely satisfactory if carried out in rubber-covered flexible wire running in any criss-cross manner that happens to be convenient. In the radio frequency circuits, however, where the currents in one wire can induce unwanted currents in others near it, a very different procedure must be followed. It is this that introduces the necessity for careful lay-out of the apparatus in the radio frequency section of the receiver. The tuning condensers, grid valve socket terminals, and coil connections must all be arranged with due consideration of the wires which are to connect them. In screen-grid radio frequency circuits this is tremendously important. The screen-grid valve has an extremely low capacity between the control grid and plate, and this is one reason why it can be used with such great effectiveness as a radio-frequency amplifier. How-

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Testing the wiring of the completed set with a voltmeter. A voltmeter and a battery connected in series are used to show continuity in coil windings, chokes, rheostats, and valve filaments. It is a wise plan to make this test before the first trial in order to avoid an accident.



Follow Circuit Diagram When Wiring Up

ever, its successful operation is dependent upon the external capacity across these elements being kept at an extremely low value. Careful shielding becomes essential. Shielding in a receiver employing these valves is of no use whatever if both the grid and plate wiring is to be contained within any one shield. Its usefulness is very considerably reduced if even an inch or two of plat-

lead is included in the shield which contains the grid circuit.

To facilitate the isolation of radio frequency circuits in this manner it is our practice to run all radio-frequency wires directly between the terminals involved and above the baseboard or sub panel. Then, no lead is permitted to run beneath the base into the jungle of battery wires unless it has first been by-passed and fitted with some radio frequency choke or resistance filter. Then, with suitable shielding, one can be reasonably certain that radio frequency currents are circulating only in the wires provided for them. Unless there is some very definite reason for doing otherwise, these leads are all made of solid insulated bus-bar. The radio frequency leads are then no longer able to shake around in the neighborhood of wires with which they have no right to be on close terms.

And in this manner we could ramble for years and years. Let us instead just reiterate the thought that set-builders lacking a very thorough grounding in electrical and ra-



One of the most confusing things about radio set building is the large number of circuits to choose from. The enthusiast is advised first to decide upon a circuit that is well engineered, then spending all his efforts in the lay-out and wiring of the apparatus. These matters have a most profound influence over the performance of the receiver.

dio principles might well give serious thought to proposed changes in published receiver designs irrespective of how insignificant the modification may appear to them.



Soldering the connections.

H. W. Johnson Crosses Swords with Correspondent

In a letter to the Editor Richard M. Rees Coogee, considers Mr. H. W. Johnson's article "Where Are the Broadcast Listeners?" ("W.W.", Aug. 2), to be inaccurate. "Your correspondent first talks of relative costs of crystal and valve sets," he writes referring to Mr. Johnson's statement that:—

"A suburban listener can have much more enjoyment with a thirty-shilling crystal set every night throughout the year than his country cousin obtain on a sixty-pound valve set. During some months of the year the valve set will reproduce the music clearly and pleasingly; but there are other months when the atmospherics take more noise than music. The country listener set is thus compelled to invest in an expensive valve charge, and the output from the loud-speaker is more noise than music. The country listener set, with the costs and uncertainties already mentioned. And if the conditions are such that battery charging is not to be obtained, unless at great expense, the result is that no set is installed at all. There does not appear to be a satisfactory set on the market which will operate on primary batteries that have long lives, primary batteries, being incapable of renewal, must have long periods of service for such purposes."

"Let me say first," continues Mr. Rees "that I would not care to merchandise an efficient crystal receiver complete at his figure, i.e. 30/; and, secondly, these days, battery receivers, suitable for country use, do not cost anything like £60. Static is no respecter of crystals or valves, and when static is received with a modulated signal both signal and static are amplified equally and, therefore, headphones and speaker outputs have equal amounts of signal and atmospheric in proportion.

"I wonder if your correspondent has heard of valves consuming .06 amps on the filaments, and then worked out what service could be obtained from a bank of good dry cells, or carbon cells, if, as he says, battery charging is so expensive for country listeners. Certainly, the country B.C.L. is at a disadvantage compared with the city B.C.L., but I think your correspondent gives more stress on these disadvantages than is necessary—probably, from a lack of knowledge."

To which Mr. Johnson replies:—

"The comments of Mr. Rees are a very useful contribution, and I am glad he has

drawn attention to some points of importance. Perhaps I may be permitted to enlarge on the subject at a later date, whilst in the meantime replying shortly to the objections raised by Mr. Rees.

"His objections fall under three heads:—

"1. The cost of crystal sets and valve sets is understated.

"2. Reference should have been made to batteries for low consumption valves; and

"3. Omission to note that static and signal are both amplified in valve receivers containing amplifiers.

"There is not much merit in the first objection; a crystal set suitable for suburban reception CAN be assembled for 30/, and, in fact, many of them are in use. Whether they can be merchandised at that price does not affect the matter. Similarly, my statement that valve receivers in the country have cost £60 is not incorrect; many of them cost more than that during the last three years, and are still in use.

"Mr. Rees has a good point when he refers to the use of the dull emitter valve, and the primary batteries suitable for their use. For some reason or other that type of battery is not widely used. Both the Leclanche cell in various makes and the caustic soda cell are suitable in certain circumstances, but the fact remains that their use has not been favored as widely as might be expected by Mr. Rees. And as the valve calling for the greater current drain is more popular, my statement is not misleading.

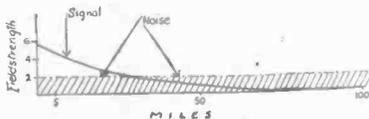
"The third objection looks the soundest, but actually is the weakest of the three

It is true, of course, that valve amplifiers do not discriminate between signal and static, and consequently when multi-stage amplification is adopted the interference of the static is magnified. But the really important point here is the RATIO of signal to static. In fact, it is the basis of design of station location and field strength distribution; the higher the ratio of signal to noise the better the service to listeners in the given service area.

"In the sketch it will be seen that the level of noise of atmospherics over an area of one hundred miles from the transmitting station is fairly constant, while the field strength falls off according to the distance. Near the station the field created by the energy from the transmitter is necessarily highest, falling off gradually according to well-known laws as the distance from the station increases. Thus we might have the noise level equal to 2 units and the signal level equal to four units at a distance of five miles. At 50 miles the noise level is still 2 units while the signal level has fallen to one unit; at 100 miles the noise level is 2 units and the signal level is down to practically nothing.

"Now, it is evident that at five miles the ratio of signal to noise is such that the signal is able to dominate the situation; it is louder, and any amplification will preserve that ratio, with the signal predominating. And at 50 or 100 miles the noise predominates, and will always be greater than the signal with any amplifier. It is thus evident that the suburban listener, even with a crystal set, is able to set more signal in ratio to the noise than the man who uses a multi-valve set at 50 or 100 miles distant from the station.

"The conditions might be improved slightly by using costly methods of barrage or limiting atmospherics, but as the ordinary set of conditions must be studied it will be apparent that the country listener is at a disadvantage of the character stated by me."



SPRING'S IN THE AIR



Marjorie Alomes
The beautiful NZ soprano who will be heard on the air on August 27



Louis Shifreen
conductor of the choir singing Jewish melodies at 2FC

Spring is manifest in the freshness of these programme features--many completely new items will be on the air next week.

more short plays and dramas, comedies, and reviles. Six new churches will be added to the September list, making a total of 22 distinct services broadcast during the first three months of the new control. More will be used in October making the total number of broadcast up to thirty. The Sunday feature talk will be 7.40 p.m. after August, to those to whom the earlier hour is convenient.



Bryson Taylor
popular tenor broadcasting next week



Molly Mackay
coloratura soprano



Eleanor Ross
poetry recitals from 2FC

ON Sunday, August 25, from 7 p.m. till 8, there will be the first Australian broadcast of "An Hour of Jewish Music." Mr. L. Shifreen, a noted English conductor, will have charge of a choir of sixteen picked voices from the Jewish Cultural Club (Sydney), which will sing Jewish melodies. Mr. Shifreen has been engaged on a similar broadcast from the British Broadcasting Company. He is, amongst other things, the choir-master of the Great Synagogue, Sydney, following Dr. Arundel Orchard and Mr. Mote. He is an authority on Jewish folk songs. Very few of these have been published; but have been handed down orally. Mr. Shifreen made an intensive study of them, and has collected hundreds of melodies. He had one volume published in England two years ago, and is at present engaged in compiling another.

Bryson Taylor
MR. BRYSON TAYLOR, tenor, belongs to the original broadcasters, for he appeared on the first programme to be transmitted in Australia. He also appeared on the first programme transmitted by 2BL. This artist will sing from 2FC on Friday.

Mollie Mackay, Victorian Soprano
MISS MOLLIE MACKAY'S career began at a concert in Gippsland, where Mr. Walter Kirby heard her sing, and instantly recognised her possibilities. He offered her a chance of a public appearance in Sydney, where, as a coloratura soprano, she won appreciation from the leading critics. Since then she has steadily progressed from one success to another, and was warmly praised by Dame Nellie Melba. She has made a special study of broadcasting, and will be heard from 2FC on Tuesday, September 3.

Mr. Norman Jansen
MR. NORMAN JANSEN claims to be one of the oldest broadcasters in Australia. He went over the air before there were any recognised studios, as he was heard from Paling's Concert Hall before broadcasting became what it is to-day. On December 5, 1923, he was on the opening programme of 2FC, and was on the second or third programme that was broadcast from 2BL. He specialises in operatic trios and ballet work, and will be heard from 2FC on August 27.

The Ra, Ra, Ra's Revue
IT certainly is a queer name, but it does not take away any of the merit of this bright little show of Robert Roberts, which will be broadcast from 2FC on August 23.

Sectionalised Programmes

From the first week in September the programmes will be sectionalised as follows:

Monday Night: 2FC, orchestra, instrumental solos, leading artists, a talk, and dance music. 2BL, popular items and a description of the wrestling.

Tuesday Night: 2FC, Radio Dance Night, 8.15-11.30. 2BL, semi-classical (sic) concert, 8-9.15. A talk, Revue from 9.30 to 10.30.

Wednesday Night: 2FC, Theatre presentation, 8-9. A mystery play. A pianoforte recital, instrumental quintet and soloists, 9.15-10.15. Dance music to 11.30. 2BL, Brass Band and Wireless Singers. Later, excerpts from comic operas, popular items, instrumental solos.

Thursday Night: 2FC, Twenty-minute sections, concerted, vocal, and instrumental. A prominent speaker. Dance music, 10-11.30. 2BL, Theatre presentation, 8-9. Plays, etc., from 9.8.

Friday Night: 2FC, Organ recital till 8.30. Male Quartet, novelty instrumentalists—piano, saxophone, balalaika, 8.30-8. Relay from 3LO of Band Music, 9-10.15. Dance music to close. 2BL, Ballad Night, popular old-time and modern songs and orchestra, 8-9.45. A talk, A mixed programme.

Saturday Night: 2FC, Revue, 8-9. Dance orchestra till close. 2BL, Popular songs, a sporting item, and dance music.

Sunday: Church services, 2FC and 2BL in morning; 2BL at night. Noon to 3 p.m., reproduced music. 2BL, A semi-classical programme during the afternoon from 2FC. Children's service, 6 p.m., till night church, 2BL, during which period 2FC will continue its semi-classical programme to 7.40, when the featured prominent speaker will speak till 8.

Sunday Night: 2FC, Concert programmes arranged by conductors such as Will Prior, Ted Henkel, and Albert Cazaob, 8-10. 2BL Church service till 8.30. On alternate Sundays a relay from 3LO, Melbourne, of its concert programme. On other Sundays, a semi-classical programme.

A STATEMENT issued by the A.B.C. indicates several new features and rearrangements of programmes from 2FC and 2BL. From 2BL every day at 10.45, there will be a fifteen-minute religious service, conducted by the Council of Churches, which is to supply the speaker for "the very short daily message which is to be given." Letters received, says the statement, indicate public interest in the educational and popular sessions during the day.

At the "expressed wish of many correspondents," the series of talkings is being extended into the night sessions. (See our article on talks.) In future there are to be

This Week's Programme Personality

FRED JOHNS

— A tactful description of the new described wrestling tactics!



"WHAT are wrestlers generally like?" we asked Mr. John Holland, in the hallway of 2FC, with the air of one who didn't care what wrestlers were generally like. "How do you mean?" asked Mr. John Holland. We elaborated. "Well, it's like this; we've got to interview the new wrestling announcer, and he's a wrestler himself, and we've never interviewed a wrestler before." "YOU'RE going to interview a wrestler!" said Mr. John Holland. "Good-bye! Good-bye!" And he passed into the rehearsal room with an air of pleased finality, as one who says, "And now, thank heavens, I've seen the last of THAT."

We reflected on Mr. Holland's statements, and grew more and more melancholy. The fact is, we were not feeling so well that bright spring morning. We had a sinking sensation in our stomach, which we attributed to an overdose of marmalade at breakfast time. Besides, we were just recovering from an attack of influenza, brought on by our foolishness in leaving off our heavy woolen underwear on the previous week. To say nothing of the attitude of our editor that morning just before we left the office. He called US in and asked US to explain our Theory of Capital Letters. Very icy he was; and informed us that if we spelt an abstract noun with a capital any more he would file all the capitals from our typewriter. Then he gave us a harsh glance. So you could scarcely expect us to be cheery. We were growing more and more melancholy, and had just arrived at the

decision that the Gap was better, and more firmly established in public opinion, than the cliffs of Bondi, when Mr. Fred. E. Johns strode round the corner

We knew he was Mr. Fred. E. Johns, because we had seen his photograph; but we would scarcely have taken him for a wrestler or a wrestling announcer. True, he was over six feet, and seemed to have a capacity of between fourteen and fifteen stone; and this capacity seemed to be filled with bone and muscle and very little else; but our first impression was of a business man. You know—one of these really-true business men, who get photographed for the house-journals: "Our Sales Manager, Mr. E. Doo'm, checking the morning's orders"; "Our Staff Superintendent, Mr. Sackhem, presiding at a meeting of the House Service Committee"; "Our General Manager, Mr. Dineham, personally attending to Complaints and Correspondence in his magnificent office on the third floor." Smartly, but carelessly dressed; fine hair brushed hard down from a sunburnt cranium; plenteous blond eyebrows; clear, firmly set blue eyes; and a closely-clipped moustache, completed the general aspect of ruthless, clean fitness and efficiency, so prevalent nowadays among our prominent business men.

Mr. Johns became interested in wrestling in 1921, when he was in Melbourne, where he was a member of an athletic club. He weighed fourteen stone at the time, and was one of the strongest boys in the club; but some of the smaller members could throw him about at will. "Not liking this," said Mr. Johns, "I decided to learn, quietly, and saw Billy Meeske, and mentioned my trouble to him. He promised to do all he could, and set me to training, and muscle-building, but very little wrestling. When I was properly fit, I studied casually the elements of wrestling until 1924. During this time I won several local championships. In 1925 I trained specially to compete for the Victorian State championship. During this period I trained with, and studied under, Ted Thyne, Walter Miller, Karasick, and Meeske. I came to New South Wales in the same year, before the Victorian State championship was wrestled for, but competed in the New South Wales State championship, which I won. During that period, I trained with Sam Clapham, who took the world's championship title from Thyne, and with Stanilus and Zybisco, world's heavyweight champion. I competed for the State championship again in 1926, but only succeeded in running-up. Since then I have been too busy with business to regard wrestling and training as more than a hobby."

Mr. Johns paused. "Now, I want to say, specially—let me see. Yes. Go on!" We went on.

"Wrestling is a Battle of the Survival of the Fittest in Brain and Brawn. I want to specially impress upon the many listeners in that the men who participate in wrestling contests are specially trained to stand up to the gruelling strain. I mean, for example, that an executive in an office would find it rather discomfoting to go out into a workshop and do heavy manual labor without being prepared or acclimatised to it. The knocks, jolts, and pain from holts in the wrestling ring is similar to the knocks, cuts, and bruises an artisan gets during his daily work. Just as the artisan takes these as part of the day's work, so the wrestler takes his knocks in a bout."

Mr. Johns looked up to see if we caught the point. "You see what I mean," he said. "You wouldn't like to go into a wrestling ring and get your ear pulled off just now, would you?"

We trembled. We were sure the breakfast marmalade HAD disagreed with us. "No, not at all," we replied, as carelessly as we could. "Ah—now what else can we



Walter Miller showing his famous splits hold

"Isn't that enough?" asked Mr. Johns. "We want to make a full page of it," he answered.

"Good heavens!" "Well, perhaps you could tell us something more about wrestling?"

"Yes Well, while I was in England I recollect learning, in the British Museum, that wrestling was very popular in the Roman period."

"The Greeks used to wrestle too," we said, eager to show our sporting knowledge. "We have heard ("WIRELESS WEEKLY" always has the latest information), we have heard that the Grecian women used to wrestle naked in the arenas with the Greek men. And thought nothing of it," we added.

"Hmmin," said Mr. Johns disapprovingly. "Wonderful thing," we continued, realising our faux pas, "but it will never happen again." We sighed and resumed our notebook.

"Wrestling, of course, has been modified down through the ages," Mr. Johns went on; "and it was well known in the thirteenth century. During the eighteenth century, there were various styles of wrestling, the Graeco - Roman Jiu-jitsu, Catch-as-catch-can, and many other styles, including those of the English provinces—Northumberland, Lancashire, and Devon. The Catch-as-catch-can style, as seen in Australia, is a combination, with certain exceptions, of Graeco-Roman, Jiu-jitsu, and certain American holds. The exceptions in Jiu-jitsu are chopping—

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"That's at the back of the neck?" "Chopping anywhere with the side of the hand is barred. Chopping, strangling—" "Yes, that ought to be out." "And gouging." "Gouging? Oh, that's pushing out the eyeballs?"

"Yes," said Mr. Johns. "Like this." He raised his hand—the wrist was heavy and black with hair—and pointed the thumb to our right eye. We shrank back into our seat. Mr. Johns looked at us with faint surprise. We said: "Yes, yes; gouging. It's a good thing that's out! You were saying something about England, Mr Johns?"

"Oh, yes; I've been all over the world. I was with the naval forces during the war. After the cessation of hostilities, and having tasted travel. I kept going till 1922."

"And how do you like broadcasting?"

"Well, I'm quite a novice to broadcasting. My first experience was Monday night. It seemed very weird to me. You know, you're right up on a perch above the ring, and, as you look down, there are people all around you, yelling and hooting. You can hardly hear yourself speak; and you're not speaking to anyone you can see; and you've got to keep on speaking through the noise into the microphone in front of you, while you watch the movements of the chaps below. When I have had one or two more attempts I hope to convey the doings of the ring with more efficiency. I am taking a keen interest in the training and movements of the various wrestlers, and I hope this knowledge will be of service to listeners-in."

Mr. Johns will be better known to the people of northern New South Wales, where he wrestled in every big town; and should be remembered as Reo Motors' country sales organiser.

At present he is associated with National Cash Registers—very interesting little pieces of mechanism.

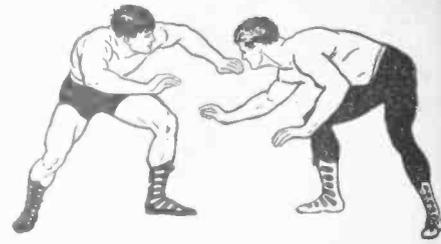


Fig. 1. Sparring for a Hold

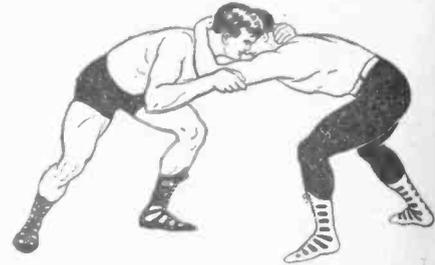


Fig. 2.—Referee's Hold

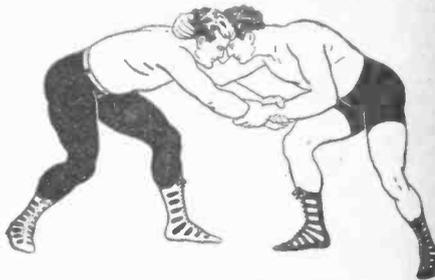


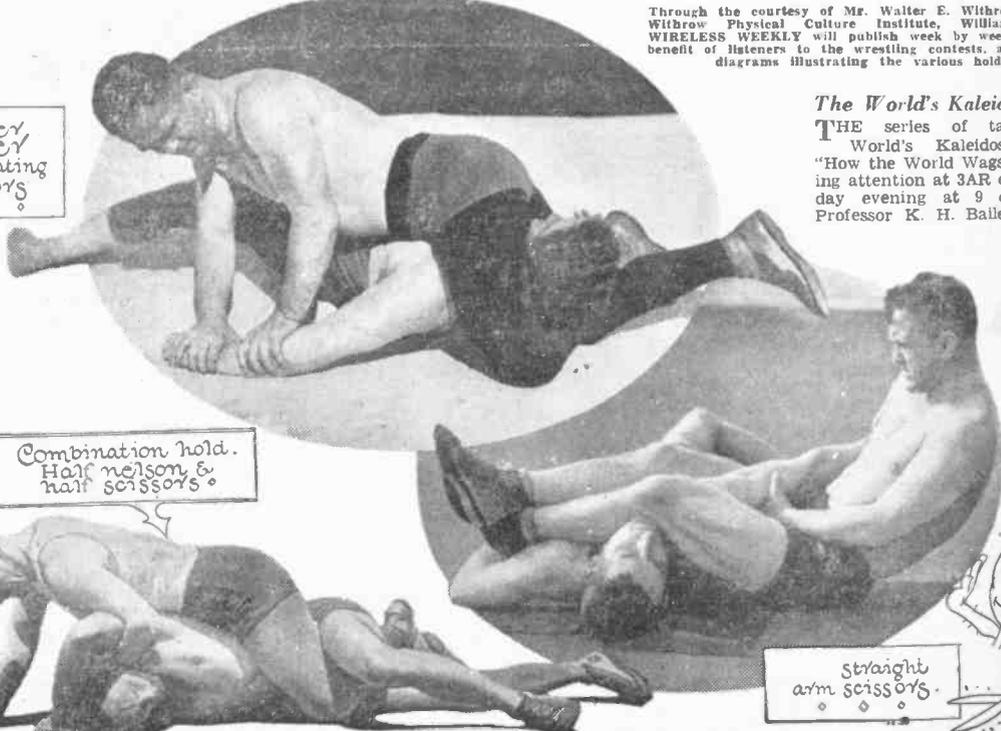
Fig. 3. Wrist Hold Opposed to Neck and Wrist Hold

Through the courtesy of Mr. Walter E. Withrow, of the Withrow Physical Culture Institute, William Street, WIRELESS WEEKLY will publish week by week, for the benefit of listeners to the wrestling contests, a series of diagrams illustrating the various holds.

The World's Kaleidoscope

THE series of talks, "The World's Kaleidoscope," or "How the World Wags," is creating attention at 3AR every Monday evening at 9 o'clock for Professor K. H. Bailey.

Walter Miller demonstrating scissors



Combination hold. Half nelson & half scissors.

straight arm scissors.



Melbourne Programme FEATURES

Do not miss these programmes from 3LO and 3AR

A.B.C. Takes Over 3AR

THE Australian Broadcasting Company began supplying programmes to 3AR at 8.15 a.m. on August 8, when the first item was broadcast. That was nearly two hours earlier than the time at which the station previously went on the air. The object of starting at that time was primarily to establish co-ordinated services from 3LO and 3AR. The former station commences at 7 a.m. and carries on with news, market reports, and breakfast music until 8.15, at which time 3AR starts operations with items of interest and morning music. Thereafter until 11.30 at night the programmes from the two stations are dovetailed or co-ordinated, giving listeners a wider choice of items, particularly when both stations are broadcasting at the same time. 3AR will be off the air for only about an hour and a half from 8.15 a.m. to 10.30 p.m., but on Saturday nights a special late dance session will continue until midnight.

Walter Kirby Broadcasts

AS a concert artist, Walter Kirby's fame has spread throughout the world, but efforts to get him to broadcast have always failed until The Australian Broadcasting Company prevailed on him to face the microphone at 3AR recently for the first time. He is a veritable radio find, so to speak, and he has that elusive broadcasting charm that makes his singing stand out with rare distinction. Mr. Kirby will be heard again from 3LO.

A Distinguished Pianist

ON August 29, Edward Goll, the distinguished pianist, will give a recital from 3AR. It will be remembered that Mr. Goll has just returned from a tour round the world, with fresh impressions, gained in the musical centres of Europe and the Continent. Edward Goll is regarded as one of the artistic forces of Australia, and has created much enthusiasm on both side of the Atlantic. Listeners should not omit to grasp the opportunity of enjoying the work of this master musician.

Donald M'Beath

MUSIC-LOVERS are always pleased to see the name of Donald M'Beath on the programmes for 3LO and 3AR, for his well rendered violin solos are an undoubted success. It is interesting to remember that before he reached the age of four teen,

Mr. M'Beath had passed all possible exams, securing the gold medal in each division. He toured for many years throughout England and America as assisting artist to John McCormack, but while on war service he injured his little finger with a gun, which necessitated every piece of music in his wide repertoire having to be re-fingered. Since his return to Australia, he has appeared with many visiting celebrities, and has given several successful recitals.

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DONALD M'BEATH
the well-known
Violinist who is
Broadcasting
from 3LO

KATHLEEN SIMMS
2nd Prize winner
Jubilees Musical
Comedy Competition
who is to sing for
Broadcasting by 3LO

Senia Chostiaff
the celebrated Russian
Tenor of the Don
Cossacks who is broad-
casting from 3LO and
3AR

Negro Spirituals

AN excellent programme of "Negro Spirituals" and plantation melodies will be given from 3LO on August 27. Among a budget of good things may be mentioned the favorite spirituals, "Tis me, Oh Lord," and "Heaven," rendered by the popular Harmonists Quartette; while Marion Lightfoot, with her banjo, will be heard in many familiar plantation numbers.

Apostle of "Pep"

TO give a touch of comedy to the radio programmes comes Gordon Ireland, who will be heard from 3AR on August 27, in the latest and popular hits. Commencing his career as a pianist, Mr. Ireland soon became convinced that it is a sense of humor that makes the whole world kin, and quickly decided to devote his undoubted gifts as a pianist and vocalist to the broadcasting of the lilting fox-trot.

French by Radio

SPECIAL provision has been made for the continuance of the French talks from 3LO during the Education Hour, which will now be given under the direction of Monsieur Theodore Rouel, B.A., of the Paris University. Listeners who are interested, should remember that this series has been carefully graduated, with the object of appealing to everyone—the beginner as well as the more advanced student.

"Cobbler's Shop"

"COBBLER'S SHOP," a diverting little one-act comedy, by Charles Forest, will be broadcast from 3LO on August 26, by members of the Melbourne Repertory Company. The action of the play is set in a village in the south of England, and the period is shortly after the Battle of Waterloo.

Chelsea Old-time Dance Night

K EEN advocates of the old-time dance nights should make a note that an old-time dance programme will be transmitted from Chelsea by 3AR on August 29. No pains have been spared to make this night an outstanding success, and it is safe to assume that hundreds of listeners throughout Victoria will be dancing to the excellent music provided by the Donnington Smith Orchestra.

Russian Programme

IT is fortunate that such celebrated Russian artists are available at the same time to broadcast a special Russian programme from 3LO as Senia Chostiaff, the famous tenor soloist of the Don Cossacks Choir; Mina Heseleva, the celebrated soprano, and Vasilli Ilster, the distinguished pianist, of the Imperial Russian Trio. Their programme will be broadcast by 3LO on Thursday night, August 22.

"Show Boat" Tenor

WILLIAM PERRYMAN, a fine tenor, of much experience, will be broadcasting from 3AR on August 26. This artist has appeared in many of the leading musical productions of J. C. Williamson, including "Ma Mie Rosette," and has supported Amy Castles, the distinguished Australian vocalist, in grand opera. Mr. Perryman is now appearing in "Show Boat."

A product of John Brownies
native town, Geelong—Ernest
Wilson—Baritone broadcasting
from 3LO and 3AR





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

Voice of St. Louis

Dear Sir,—On July 27 and 29 at about 6.30 p.m. I picked up a station operating on about 275 metres and announcing itself as "The Voice of St. Louis." It was fair 'phone strength and between musical numbers (records) progress reports were given on the flight of the St. Louis Robin, which was then engaged on its 400-hour flying record. This transmission was easily followed till well after 8 p.m. in spite of rather bad fading. I would very much like to hear from any other reader who heard this station so that we can compare results.

I might mention that KNX was also heard working on 285 metres at 6.15 p.m. on the 25th and 27th July. It closed down at 7 p.m., and varied from R2 to R4. Receiver used here is a three valve, detector, and two audio.—Yours, etc.,

West Wyalong. T. O'MALLEY.

News Wanted

Dear Sir,—I travel through the country and have a six-valve set with me. I am glad of getting the early morning news to which I look forward. To my great surprise, I do not get any early news since the new company has taken over. The country people are forgotten, and the city people are the ones that are catered for. Mr. Stuart Doyle told us over the air that he would cater for all, but, seemingly, he does not care how the country folk, who cannot get a paper for days, fare for news. It is all right for the city folk who get their paper delivered every morning.

Then, through the days they do not keep to their printed programme. At 2BL they advertise news service for 1 o'clock. Instead of news they ram gramophone records down your neck. And if you turn your dials you may fluke some couple of items from the paper between records. I am not the only howler. I meet dozens of listeners-in through the country, and I can assure the footlight proprietors and crotchet publishers that if they do not cater better for the country people they will find a big decrease of licenses in a short time. If they left the news session the same as it was with 2FC and 2BL it would have been fair to all. I would like to see some more letters from the country people giving their views.—Yours, etc.,

Wellington, N.S.W. G. M. HAMILTON.

No System

Dear Sir,—From a country listener's point of view the new programmes of 2FC and 2BL are most disappointing. There does not seem to be any system or sequence in them. There is little or no news broadcast, and the same applies to the weather forecasts. What little news we are supplied with is generally broadcast when the country people are well away from home. Apparently it is considered that we require a feast of music by day and night. If the experts who compose the weekly programmes think we should have still more music perhaps a few minutes more might still be cut off the news service in the mornings for light bathroom lectures with shaving obligatos and bed-time music for Baby Austins at night.—Yours, etc.,

COUNTRY LISTENER.

Country Listeners

Dear Sir,—Mr. H. W. Johnson's article on the distribution of licenses (August 2) does not take into account a very important factor. He remarks that the country residents have not taken full advantage of the facilities provided by wireless, and I can support this statement, for one finds farmers and others who would not think twice of spending large sums in other directions jibbing at a wireless set. It is not the want of a better service. We can get 3LO and the Sydney stations with beautiful clarity without difficulty on inexpensive sets. Country folk have not the opportunities of hearing demonstrations. Though living for some time in a city with a population of over 10,000 I never heard a wireless programme before the first one came through my own set. I attended seven demonstrations and every one was a failure. This was over a period of three years, and each failure made me postpone my own purchase of a set. I took the risk, however, and have only had three "off" nights in four months. Another think which put me back six months was the unsportsmanlike attitude of dealers. Failure to purchase a set after inquiries are made at the dealers' involves one in unpleasantness in a small community. Metropolitan folk have not these worries. I only found one dealer who admitted merits in rival models. Others malignd them so badly, telling me of instances where costly sets were practically "given away" to purchase "one of mine" that my slender purse strings were closed again. In a trip to New South Wales I did not find this kind of thing, and I did find more sets in a community of seven hundred people than in some Queensland cities. Dealers might take a friendly tip from my grouch. Perhaps radio exhibitions in provincial cities would help to increase the number of licenses in this State. People do not know what entertainment can be provided through the instrumentality of a set costing about £20.—Yours, etc.,

Cedar Pocket, Q. "EUDLO."

S.O.S. Answered

Dear Sir,—I thank you for your kindness in inserting my S.O.S. for certain copies of the "Weekly," and wish to state that I have been ir-undated by replies from good Samaritans from all quarters, including Toowoomba, Q. I find that owing to the good-heartedness of your readers I have now a good few copies of the WIRELESS WEEKLY more than I wanted, and I would be glad if you would insert a par stating that any reader in need of copies can have them. I will be only too pleased to send them on gratis, provided postage is included.—Yours, etc.,

North Sydney. NORMAN HEAD.

Maiden's Prayer

Dear Sir,—Being a reader of the WIRELESS WEEKLY do you think you could have the "Maiden's Prayer" broadcast for me? The last time I heard it was in England, and I should like to hear it again over the wireless.—Yours, etc.,

Cootamundra (Miss) M. HEWLETT.

On the Other Hand

Dear Sir,—At last we listeners-in are in paradise; anyway, I'm satisfied at last with New South Wales stations. Fancy the Government having such brains—"Who'd have thought it!" Now what about the waste of time spent on 4QG—its everlasting fading, and slow in-between items. Yet the programmes are good. What about closing it up and shifting it, as most listeners there say? Hasn't Queensland got men with brains like New South Wales to make a decent job of 4QG? There are very few who bother about 4QG on account of fading and waste of time. Anyway, 2FC and 2BL show that Australians are equal to any country where broadcasting and brains are concerned. At last we've got a good Sunday broadcast now the Government is on the job; let's hope that 4QG will follow.—Yours, etc.,

Gympie, Qld. LEWIS HAZELL.

Unsuitable Times

Dear Sir,—"Cockle's" letter (July 22) in my mind details to a nicety the times most suitable to broadcast the different news items that he enumerates as being the greatest necessity of the man on the land. At present the times given are most unsuitable. As, in the country districts, the man on the land is not so fortunately placed as his Sydney confreres who, if out of bed early enough, can listen to the morning news while enjoying his breakfast.

The farmer, on the other hand, would be out in the field by five o'clock, and before that on a summer's morning, and would have to leave machinery or horses to rush home to hear the news. This, in a great majority of cases, would be most inconvenient, as the works may be carried out at some considerable distance from home. Should the times mentioned by "Cockle" be carried out by you it would be a great benefit to the man on the land, besides encouraging more farmers to interest themselves in wireless.—Yours, etc.,

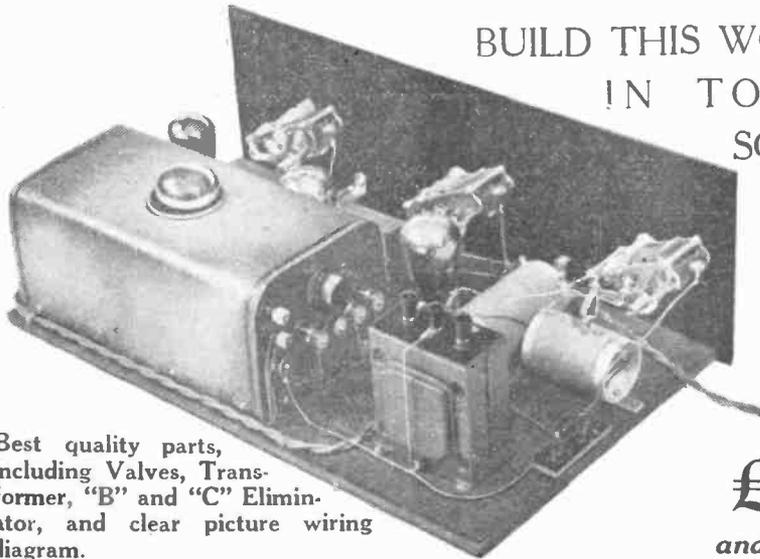
Neilrex. O. E. WINTER.

Japanese Station

Dear Sir,—As I am a constant reader of your weekly I would like to point out that I hear the Japanese station that S.L. of Queensland speaks on on a wavelength just below that of 4QG. The announcer says JOACK very distinctly, while another lap comes in below 2BL, and the announcer of this station says JOAK, so I am sure there is such a Jap as JOACK. I get JOACK and JOAK at 7.30 any night at speaker strength that could be heard half a mile away so I don't think I am making a mistake.—Yours, etc.,

Jones Island. D. R. GILL.

£17/15/- Will Buy ALL the Parts to Build Yourself The Wonderful New "All Electric" Interstate "RENOWN Three"



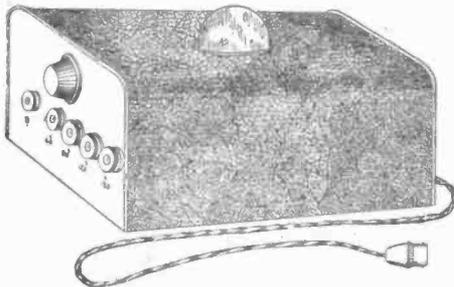
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SOCKET and hear a per-
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most sets at double the
price. No batteries at all
And---YOU can build it

Best quality parts,
including Valves, Trans-
former, "B" and "C" Elim-
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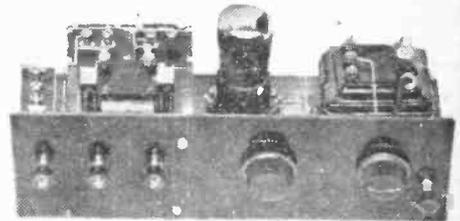
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Hunter Street West.
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and
Macquarie Streets,
Phone, UW 9601.

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

PUTTING UP AN EFFECTIVE AERIAL!

Screen grid valves and multi-valve receivers have greatly reduced the need for large receiving aerial systems. Nevertheless, there are still many receivers being sold and built which cannot possibly give good service unless they are fed from a satisfactory aerial. It is fine to be able to operate one's receiver from a piece of wire across the room, but a small "pick-up" of that type requires high sensitivity in the receiver itself. To get the same results with a small indoor aerial as one does with a good affair rigged above the roof usually means the addition of one or more valves. Since valves and their associate equipment are much more costly than a length of copper wire, it is certain that the big outside aerial will be justified in a great many instances for years yet to come.

THE strange crisscrosses of wires that may be seen on the roofs of many apartment houses cause one to wonder why reception results are as good as they are. The "weeping willow" effects of sagging aeriels that touch one another at points or continuously, are the cause of countless radio griefs that many enthusiasts are at a loss to explain. Quite frequently good sets are blamed for poor results, and tinkered with and overhauled continuously, when a little care in erecting the aerial would have saved all the trouble in the beginning.

In the past two years various aerial kits have been placed on the market, containing the necessary parts. The items which should be included in such kits, for the erection of the ordinary single-wire aerial, are as follows:—

- 100 feet of aerial wire, either stranded, plain, or enamel covered;
- 50 feet of lead-in wire and 25 feet of ground wire;
- 3 insulators of glass, porcelain or bakelite;
- 3 wall insulators (the best type is the eyelet with a porcelain insulator in the middle of the eye);
- 1 lead-in insulator;
- 1 lightning arrester;
- 50 feet of guy wire (iron);
- Large nails, tacks, etc.;
- 2 poles, pipes, or 2-by-4 studs, 10 feet long (these are usually purchased locally).

The erection of an ordinary aerial requires only a few simple tools; a saw, a hammer, a screw driver, drill and bit, and a pair of wire-cutting pliers. In addition, soldering material and a roll of electricians' tape will make for a neater and more efficient job.

It is well to consider, in the beginning, that an aerial is simply a collector of the energy necessary to operate the radio receiver in a satisfactory manner. Therefore, it is of the utmost importance that the aerial collect as much of this energy as possible and then, having collected it, conserve it and deliver it to the radio set. Radio energy induced in an aerial continually seeks the shortest path to ground; hence, it is necessary that due precautions be taken to prevent any leakage or losses that will impair or lessen the reception.

Having made sure that all the necessary material is on hand for the proper erection of an aerial, this material should be taken to the roof, with the exception of the lightning arrester the lead-in insulator and the tacks which will be used when we have finished our work on the roof.

With about two feet of aerial wire, fasten one of the insulators to the pole, with not less than two turns of this wire, to prevent it slipping down at some future date. About two feet lower than the aerial support which you just made, you may now wrap two turns of the iron wire around the pole, making sure that you cut this wire of sufficient length to reach some suitable support. These

supporting wires should extend in a direction opposite that to which the aerial will extend. In some instances three guy wires are necessary. They are for the purpose of assuring the necessary back support for the pole. One end of your aerial wire may now be connected to the free end of the insulator which is already fastened to the pole. Now unwind no more than about twelve feet of the coil, for where a stranded wire is used there is a strong tendency on the part of the wire to become badly snarled unless kept under control.

In some instances long spikes driven through the pole and into a suitably placed chimney, together with a little wire reinforcement, is all that is necessary to hold the pole upright. In other instances a projecting pipe may give the necessary support. In the event that there is no available support at hand, it will be necessary to supply a small base which may consist of a plank about two feet long, a foot wide, and an inch or more thick. A spike may be driven through the middle of this board into the bottom of the pole. The pole may then be raised and held in position by means of three iron guy wires. It will not be necessary to nail the plank support to the roof because of the pulling effect of the guy wires.

The position of the second pole having been previously determined, it may be securely fastened to some suitably strong projection from the roof, as before mentioned, or the guy wire and foot plank method previously described may be used for the second pole. It will be necessary to use an insulator with its attendant short piece of wire

to fasten it to the top of the pole. With both the masts erected, the free end of the aerial wire should be threaded through the free end of the insulator. With the free end of the wire make several turns about the aerial wire proper, close up to the insulator, so as to prevent looseness of the aerial.

It will now be necessary to cut off the remaining wire at a distance approximately four feet from the roof. To this free end the lead-in wire should be attached. It is preferable that this connection be soldered. If soldering is inconvenient, a joint of approximately six inches in length should be made and this joint should be tightly wound with electric tape to a point extending an inch or two beyond the joint proper. One of the wall insulators should be fastened in the top of the coping at the edge of the building where the lead-in wire is going to be brought down the side of the building. If possible, it is advisable to utilise one of these wall insulators at a distance of about every twenty feet of the lead-in length. This is necessary because of the fact that in wet weather the brick wall makes a much better ground than in dry weather; and any slight swinging of the lead-in wire tends to change the capacity of the aerial, with a corresponding difference in the tuning. This might produce a slight fading effect of signal strength in wet weather.

The method of bringing the aerial into the house will vary with the type of window used. In the event of metal casing, it will be necessary to utilise a lead-in strip. This consists of a flat piece of copper with a suitable attachment at each end and with the centre of the strip insulated. The window may be closed upon this strip after the lead-in wire has been fastened to the outside terminal of the lead-in strip. The inside terminal of the terminal strip may be fastened to a suitable insulated wire running to the set. This wire should be led along the baseboard in the direction of the radio set with double tacks at two or three foot intervals to insure it staying in position. The ground wire may be fastened to the ground binding post on the radio set and then led around the baseboard in a manner similar to that used with the lead-in wire. In the event that these two wires go in the same direction for even a short distance, they should be separated about 6 inches from one another. One wire may be led along the top of the baseboard, while the other may be led along the baseboard next to the floor. The ground wire should be soldered to a ground clamp, which is a short piece of strip copper suitable for clamping around a water pipe.

Remember this: "A good aerial hitched to your set is like an extra stage of radio-frequency amplification." You will get better distance and more reliable local reception if you do a good job in the beginning.

ON BEING A RADIO FAN

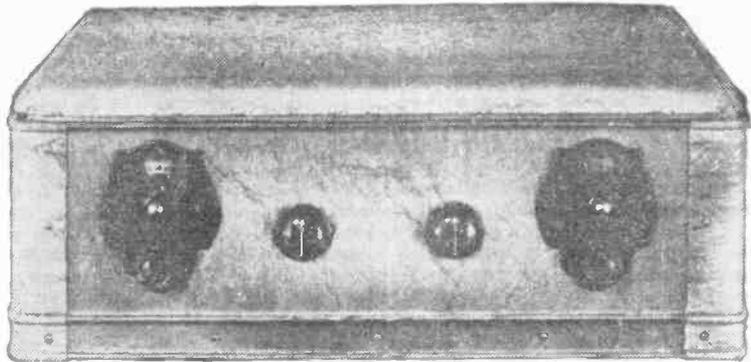
Building your own radio receiver is still the most fascinating hobby in the world. Because the unknowing call him a "crank," the radio fan is sometimes regarded in a humorous light, but he is still the happiest kind of listener. The knowledge of how his receiver works adds greatly to his enjoyment of broadcasting, in addition to helping hear better.

It is not too late to learn about your radio. Science has not removed the lofty receiver from the plane of simplicity. Even an A.C. set is easy to build once you have been initiated into the apparently mysterious symbols of the circuit.

In the next issue of "Wireless Weekly" we plan to do this and to give elementary information for prospective set-builders. It will be a special issue designed for the radio beginner. Do not miss this number—order your copy now.

RADIOKES QUALITY COMPONENTS

are employed in the construction of most modern receivers—whether the set is designed for local or distant reception, RADIOKES products are a necessity if maximum efficiency is your aim. Many recent Receivers, as well as the famous D.C.3.33, specify and employ Radiokes quality coils, shields, condensers, etc. The Standard A.C.4 and the well-known A.C.3.33 Power-operated Sets insist on the employment of many Radiokes Quality Accessories—these are acknowledged as being of undisputed merit.



Radiokes Knock-down Steel Cabinet is specified for housing some of these excellent receivers, and is quite suitable for accommodating many other types of sets.

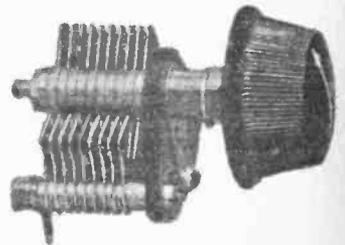
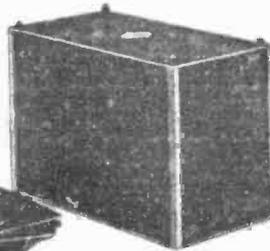
The modern vogue is for this bronze ripple finish metal cabinet, which will so easily blend with any scheme of room decoration.

This gives to your home-constructed set an appearance equal to a high-grade factory-built product—a permanent and durable cabinet and an external shielding which is so necessary in modern Radios.

PRICE FOR CABINET £2/2/6 each



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Radiokes Midgets are made in several sizes, sufficient to cover most ordinary requirements.

Ask your dealer to show you one of these little condensers, feel its velvety action, study the precision of its workmanship, and notice the high-grade finish. Radiokes thereafter will be your choice.

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RADIO Proficiency

We conclude our remarks on battery sediment, sulphating, evaporation, charging, gassing, electrolyte, and specific gravity, then pass on to electric fields, lines of force, dielectric strain, electric field density, uniform fields, magnetic fields, direction of field, the "Corkscrew Rule," "positive direction," solenoids, "Clock Rule," etc.

THE sediment in an accumulator will nearly always be present, though not in large quantities. Normal sediment is of a brown color.

The simplest treatment for sulphating is oft-repeated and prolonged charging at a low rate, say half normal charging current, and when full gassing occurs, at quarter usual charging rate.

The water in the electrolyte gradually evaporates, especially after charging, mainly owing to the heat generated, and to the bursting of the gas bubbles. The electrolyte does not evaporate, and for this reason distilled water only should be added, unless

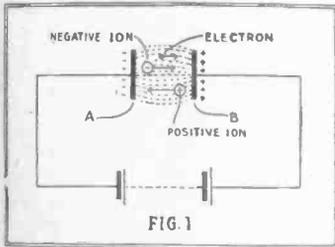


FIG. 1

some of the acid has actually been spilled. In this case the cell should be emptied, and replaced with fresh electrolyte.

The specific gravity is measured by means of an instrument known as a hydrometer, which consists of a glass tube containing a weighted bulb and graduated stem, which floats in the acid. As the cell discharges, the specific gravity will fall, but the cell should not be discharged to less than 1.770. The specific gravity is recovered on recharging.

Acid of 1.22 specific gravity contains about one part of concentrated pure acid to about three or three and a half parts of water by volume. In mixing this, slowly add the acid to the water (and not the water to the acid, otherwise an explosion is likely to occur), and wait till the solution is cold.

The average value of capacity for an accumulator with pasted plates is about ten ampere-hours per square foot of positive surface of both sides of the plate.

Magnetism

As was explained in "Proving Radio," parts 1, 2, 5, and others, like charges repel one another, and unlike charges attract one another. This, together with experiments performed in "Proving Radio," parts 2, 3, 5, and 6, shows that one electric body can influence another one at a distance. We learned that the cause of this was that magnetic lines of force extended from the primarily charged body, and influenced the other body. (See galvanometer experiment. P.R., part 6). These lines of force are streams of electrons, which are conventionally supposed to terminate in a charge of opposite sign (as, for instance, a positive ion in some neighboring conductor), the reason being that the electrons are particles of negative electricity.

The space occupied by these lines of force is termed an electric field. These lines re-

present the direction in which the charged body attracts other charged bodies of unlike sign, and repels bodies of like sign.

Suppose two plates of copper are joined up as in Fig. 1 to a battery. Plate A will have a surplus of electrons, i.e., a negative charge, and plate B a deficit of electrons, i.e., a positive charge. There will be an electric field between the plates, as indicated by the dotted lines.

If a free electron or a negative ion be introduced between the plates, it will be attracted towards the positive plate, and repelled from the negative plate. The air between the two plates is known as a dielectric, and in it the electrons will not be free, but will be strained (as in the case of a condenser) and the dielectric is said to be in a state of strain. The same happens when the dielectric is mica, wood, china, or any other insulator. The greater the E.M.F. used across the plates, the greater will be the dielectric strain.

As is the case with all insulators, the electrons are locked up in their atoms, and cannot move out of them except at a very high electrical pressure (voltage), but will only be strained in one direction under the influence of an electric field.

The E.M.F. between the plates is equivalent to a field acting at every point of the dielectric. This is called the electric field den-

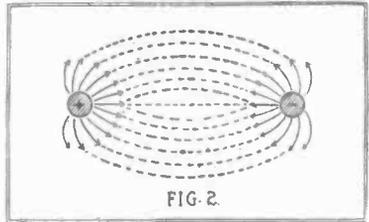


FIG. 2

sity, and is defined as force per unit charge of electricity. The value of the electric field density at any point between the plates is the ratio of the voltage between the plates to the distance between them. Electric field density (represented by the symbol D) is thus given by

$$D \text{ equals } E \text{ over } d.$$

where E is the E.M.F. between two points in the dielectric, a distance of d cms. apart. One inch equals 2.54 cms. D is commonly ex-

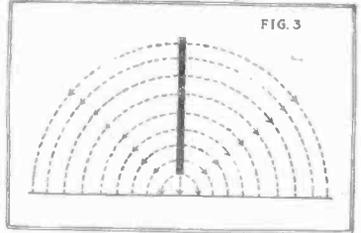


FIG. 3

pressed in volts per centimetre. It is of considerable importance in connection with electric waves.

The electric field shown in Fig. 1 is some everywhere. This is called a uniform field. The electric fields about two small unlike charges are shown in Fig. 2, whilst the electric field about a charged vertical rod is depicted in Fig. 3. This represents the form of field in the case of a wireless aerial.

When an electron current is flowing through a conductor, under the influence of an applied E.M.F., the electric fields due to each electron set up a sort of "swirl" in the ether just as when a ship is moving through water with her propeller stopped, a swirl is set up in the water. This swirl is termed "magnetic field."

A single conductor carrying a current thus has a magnetic field surrounding it (see P.R. No. 6). The motion or flow of the electrons sets up a magnetic strain in the ether. The magnetic lines of force are in the form of concentric circles, both inside and outside of the conductor, as illustrated in Fig. 4 (a and b); (c) indicates how the direction of the magnetic swirl depends on the electric current. The left hand figure illustrates a current flowing away from the reader, in which case the positive direction of the lines of force is in a clockwise direction. The right hand figure illustrates a current flowing towards the reader, in which case the positive direction of the lines of force is in a counterclockwise direction.

The whole of the magnetic field is filled with lines of force, and there is a magnetic force at any point in the field. The difference in the distance apart at which the lines are drawn indicates the difference in strength of the magnetic force at various points.

In this case the strength is greatest at or near the surface of the conductor, both within and without.

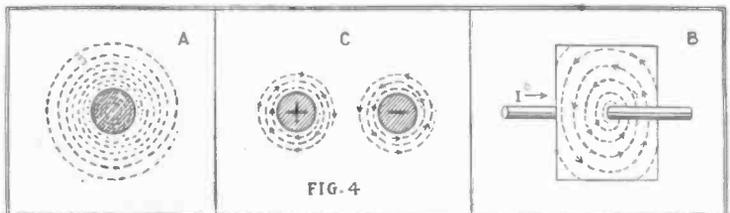


FIG. 4

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you can place it just where you want it.

A new device---

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---are fitted as standard (Patent
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Set on a table or a cabinet you can
dispense with the legs in a moment.



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"DE LUXE"
TABLE
MODEL



SALONOLA
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AMPLION CONE LOUD
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Salonola "Threes"

	CASH		or	TERMS
	£	s.	d.	
All Electric "Standard"	27	10	0	6/9 wkly.
All Electric "De Luxe"	31	0	0	7/9 "
Battery "Standard"	25	0	0	6/3 "
Battery "De Luxe"	26	0	0	6/6 "

Salonola "Fives"

	CASH		or	TERMS
	£	s.	d.	
All Electric "Standard"	42	0	0	10/9 wkly.
All Electric "De Luxe"	43	10	0	11/- "
Battery "Standard"	32	10	0	8/- "
Battery "De Luxe"	34	0	0	8/6 "

Salonola "Sixes"

	CASH		or	TERMS
	£	s.	d.	
All Electric "Standard"	47	0	0	12/- wkly.
All Electric "De Luxe"	48	10	0	12/3 "
Battery "Standard"	42	10	0	10/9 "
Battery "De Luxe"	44	0	0	11/- "

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Short-wave Broadcasting From Austria

EXPERIMENTERS interested in short-wave working should welcome the opportunity for further reception from Europe provided by the transmissions from the short-wave station at Vienna. Advice has been cabled from the Austrian station to Dr. N. H. Lang, of Austria, at present in Sydney, to the effect that the station, using the call-sign "UOR2," will be transmitting on Tuesdays and Thursdays from 1000 to 1200 Greenwich time (8 to 10 p.m. Sydney time), and on Wednesdays and Saturdays from 2200 to 2400 Greenwich time (8 to 10 a.m. Sydney time). The wavelength used in all transmissions will be 49.4 metres.

Dr. Lang, whose present address is care of Elliott Bros. Ltd., Balmain, would be glad to receive reports from experimenters receiving the Vienna transmissions.

Trends in Receiver Design

FOR those who are interested in radio progress to the extent of watching the modern tendencies in receiver development, the recent issues of the American monthly radio publications should be of genuine interest. Many of their pages are filled with reviews of the recent Radio Trade Show at Chicago, together with comment and discussion concerning the very decided trends made evident by the equipment exhibited. Greater changes would appear to have been made in America's receivers than has been the case for several years past. Certainly, far greater technical advances are indicated.

The outstanding change, of course, is in the incorporation of the screen-grid valve in a great many receivers. Considering that there was hardly a single receiver using this tube last year it is surprising to find that approximately half of the receivers exhibited are featuring it. Of equal significance is the almost general adoption of the moving-coil speaker. Out of approximately 214 receivers only six made use of speakers other than the moving-coil.

A further idea of the attention which is being paid to musical reproduction can be gained from the fact that only four out of about 200 receiver types used the UX-112 power valve—all the others employing the UX-171 or valves of still higher rating. More than 150 of these 200 receivers were fitted with the new UX-245 power valve—two of them being used in push-pull in most cases. As a matter of fact only three receivers out of more than 200 were not fitted with a push-pull audio frequency amplifier in the output stage.

This means that the majority of receivers, fitted with UX-245's in push-pull, were designed for a maximum undistorted output of 4.5 watts. The "undistorted output" rating of the majority of present-day Australian receivers probably is about one-twentieth of this value.

Other data of interest gleaned from the

"Show Numbers" of the American magazines are that the average price of the table models was of the order of £18; that the average price of the console models—fitted with moving-coil speakers—was of the order of £48; that approximately 45 per cent. of the sets contained eight valves; and that more than 95 per cent. of the receivers were designed for full a.c. operation.

Unusual Results

MR. C. D. ROBERTS, VK2JV, of Greenwich, writes:

"The letter of Mr. A. T. Keeble, published in "Curves Ahead" on July 26, raises some rather interesting problems. Particularly do I refer to the rather unusual results he gained on replacing his normal outdoor aerial by a short indoor one.

"Mr. Keeble says that he is wondering 'why 2FC should lose 60 per cent. in strength whilst 2UW gains, if anything, on the shorter aerial.' It is worthy of note, however, that his indoor aerial was 8 feet long to the ceiling, and could be connected to the outdoor one by about 2 inches of wire.

"It appears to me as if the natural wave of the aerial, which includes the primary coil, was being lowered to a point nearer 2UW's wave than formerly, and, vice versa, to a point further from 2FC. Likewise, with reference to the increased selectivity of 2KY, I would hazard that the natural wave was previously nearer 2KY than on the shorter aerial.

"It might be argued that to change from a 45ft. outdoor aerial to an 8ft. indoor one would create a greater divergence between the natural waves than the above considerations would allow. However, it should be

remembered that the indoor aerial described is, in reality, connected to the outdoor one through a fair-sized capacity, and, anyway, the primary coil has a far lower natural frequency than the actual aerial proper.

"Consequent on these theories, I would suggest that Mr. Keeble should try connecting his outdoor aerial through a small series variable condenser, say a 50 or 100 micro-microfarads induct condenser. It would interest me to know if this gave the usual maximum strength on 2FC when the capacity was at minimum, and when the capacity was decreased, gave the same or even improved, results on 2UW. This would obviate the present desirability of changing the aerial.

"I note that Mr. Keeble does not set much value on Inter-State reception, owing to interference from static. He might be interested to know that I have found that the vertical aerial will increase static to a greater extent than signal strength. I think this can be explained by the fact that the vertical affair is directional towards those regions from which static is generally supposed to emanate.

"Hoping to hear more from Mr. Keeble and others,

"C. D. ROBERTS. VK2JV.

"Greenwich." * * *

The Exponential Speaker

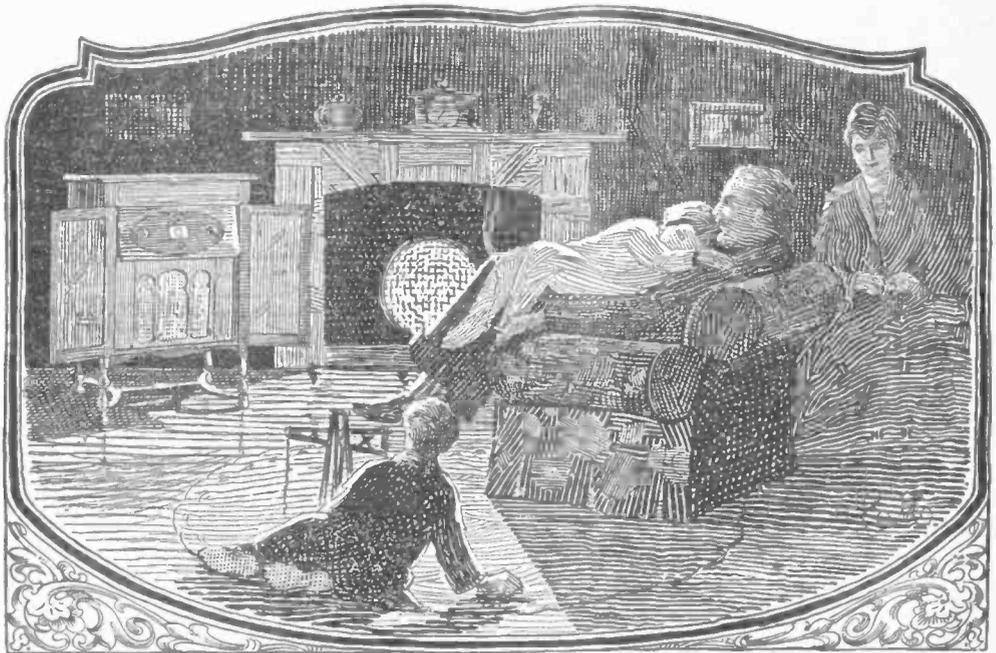
MR. CALVIN A. WALTERS, of Eastwood,

writes: "I note that you are endeavoring to find an experimenter who has built an exponential horn loud speaker. There does not appear to be a great number of experimenters who have built a logarithmic horn in New South Wales. In fact, other than myself I have heard of no one who has tackled the job. The one I have been in constant service for 12 months, and has been subject to a great number of severe comparisons. It has a cut-off frequency of 128 cycles, doubling its cross-sectional area every 6in. The mouth is 2ft. across. It is square in section, and made of cardboard 3-16in. thick, well glued together, and covered with five coats of varnish.

"Originally I built it up as a gramophone using one of the new tone-arms, conforming as closely as possible to the logarithmic principle. Coupled with a good make of 'sound-box' the results were remarkable. I use my arrangement as a loud speaker by placing an 'Amplion' loud speaker unit in place of the gramophone sound-box. Here again the results are remarkable. I have a radio set of my own construction, which gives a good reproduction. Coupled with this type of speaker one could wish for no better performance. No notes are missed. Even the elusive speech sibilants—the 'esses'—are clear and distinct. I have had comparisons made with moving coil speakers, horn speakers, and cone speakers of every description, including the latest Western Electric 'Kone,' which, in my opinion, is superior to most moving coil types. The conclusion I came to was that, given a good amplifier coupled with the exponential horn, results are equal to any moving coil or 'Kone' speaker. The exponential horn is worth making. It is not much trouble if you know how."



This is Phil, the radio dog, one of the quaintest scientific devices in Sydney. Shine a light in his eyes and he will approach. If the light shines in one eye only he will turn to right or left. If the light is more than a certain intensity he will bark. According as his "master" uses the light, Phil, the radio dog, will perform all manner of strange antics. The secret lies in the photo-electric cells which are his eyes. Behind them amplifiers are concealed, and these are connected with motors, which make Phil capable of almost human actions.



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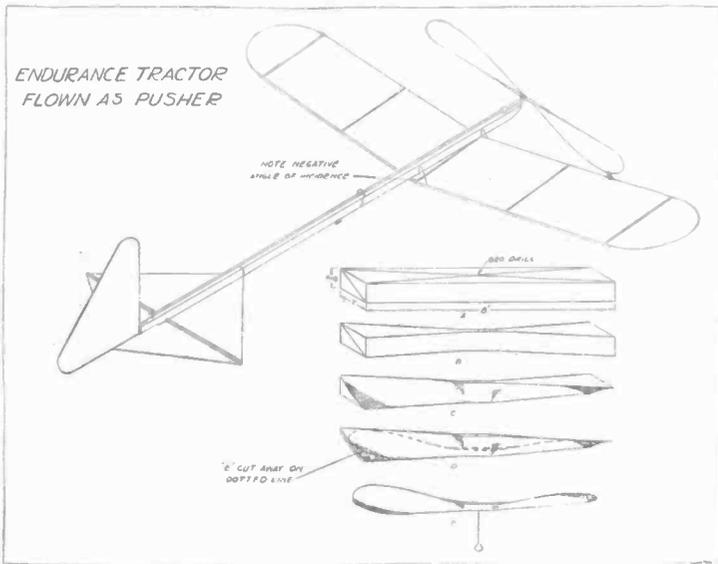
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Turn Your INDOOR TRACTOR Into A PUSHER

Some alterations to the Indoor Tractor which carry the model 'plane enthusiast one step further on the aeronautical path.



The indoor endurance tractor, with very few changes, will fly as a pusher. Build a pusher propeller for it, as shown above, and fly the tractor, tail surface to the front.

2. You can try it out for altitude as well as duration.
3. You can determine its speed and the distance it will travel.
4. You can make it loop the loop, turn in short circles, or fly straight, or you can build a landing gear so it can rise from the ground.

Turning your tractor into a pusher isn't hard at all. Just move your wing toward the propeller, wind your propeller THE OTHER WAY, and launch your pusher with the tail to the front!

It may not fly perfectly the first time. If it climbs too rapidly, set the wing back toward the propeller; if it climbs too slowly set it forward. Give the propeller at least 300 turns—to the left as you look toward the tail, remember—and your transformed indoor tractor will give your indoor pusher a contest!

Of course, the propeller on your tractor can't be expected to be as efficient as a pusher propeller. Its blades are scooped out a little, you recall, so that the propeller will get a better hold on the air as the edge cuts its way through. Naturally, when you wind your propeller up the other way, this "camber" helps the air to slide off the blades—it's a hindrance instead of a help. So if you want your tractor to perform as well as a pusher, you'll make a pusher propeller for it.

The propeller for the transformed tractor should be carved from a block 8 by 1 by 5-8 inches in size. Start by squaring and sanding the block on all sides. Draw diagonals on the surface that is 8 by 1 inches as shown in A of the drawing. Draw similar diagonals on the opposite face, and then drill a hole at the intersection by pushing a pin through the block.

Now carve the block along these diagonal lines until it resembles B. Be sure to leave the middle at least 1-8 inch thick, so the propeller won't break while you're working on it.

Your next step is to carve the block to the shape indicated in C. Notice how the two lines at the end of the block are drawn—they are in opposite directions because they run from different corners. These lines indicate the slight curve, or "camber," given each blade. You get this curve with sandpaper, after carving a flat surface with your knife. The last step is to cut away the wood opposite the cambered surfaces, until you have two blades, each about 1-16 inch thick. With fine sandpaper finish the blades to 1-32 inch thick, except at the hub, where

the thickness should be 1-16. Cut away part of the blade on each side of the hub, as in D, round off the ends, and the propeller is finished.

Don't forget, when you put this pusher propeller on your transformed tractor, that it is a "right-hand" propeller. That means that it must turn to the right to push your plane, and, therefore, you must turn it to the left to wind it. With this pusher propeller, your improvised pusher should fly at least half as long as it will fly as a tractor.

If you restore the original propeller to your tractor, and re-set the wing so that it will fly with the wing to the front again, more, you can try out your tractor for altitude. A well-made tractor will spiral up to 100 feet. Remember, if you fly your "bird out-of-doors," select a very calm day.

Even though your tractor flies in a circle, it isn't hard to find out how far it will fly. Suppose you have the fin set so that your plane will fly in a circle with an average diameter of 30 feet. (A good model will follow the same path around and around). If the diameter is 30 feet, then the circumference is 30×3.1416 (pi), or 94.25 feet. Now time your tractor during several flights, until you have a good average figure representing the number of seconds your model takes to fly once around its circle. Now, knowing the distance represented by the circle and the time required to fly it, you can find the "feet per second" speed of your plane. Once you've done that, all you have to do to find the distance your model will fly is to multiply the number of seconds it stays in the air by the number representing the speed.

For example, suppose your tractor flies around a circle 30 feet in diameter in 15 seconds. That means it is travelling about 95 feet in 15 seconds, a rate of 6 1-3 feet a second. Now suppose your tractor stays in the air 120 seconds. To get the distance it flies, multiply 120 by 6 1-3, and you get 760, and number of feet the model flies.

As for making your tractor loop-the-loop, you can do that by putting the wing far forward and winding up your rubber until you have a double row of knots. If you have enough motor power—perhaps you'll have to add a double strand of rubber to your motor—your ship will climb steeply, turn over on its back, and describe a pretty loop!

By experimenting with washin and wash-out on the wings, you can make your tractor fly right or left or straight, although you may need to warp the fin to help. (You've already learned that by bending up

THE indoor tractor aeroplane model, described last week is a mountain of fun, and the hundreds of boys who have built tractors have been sitting on top of that mountain.

If you've built your tractor according to direction, you have a 'plane that flies smoothly and well. Probably you've timed it—have found that it will fly two minutes or more. If you have done as well as that, you can perform all sorts of interesting stunts with your tractor. This article tells you what to do, and how. But if your tractor follows a path resembling an ocean wave, or a series of connected 's, you will want to improve it until it behaves. Or you may profit by your very valuable experience and build another.

There's something to be said for both plans. If you try to rebuild your tractor you're sure to find out what was wrong with it in the first place. Maybe your motor stick was too heavy, maybe your wing spars weren't well balanced, maybe your propeller was too thick, or badly curved, or maybe your fin was set crooked. Any deviation from the standard will affect the flight of your tractor, and probably, with a little extra work, you can convert it into a first-rate ship.

If you decided to build a new model entirely, more than likely you'll want a new kit. WIRELESS WEEKLY, remember, has arranged with the Boy Scouts' Association Shop, 258 George Street, Sydney, to supply you with the indoor tractor kits, at cost.

Whether you rebuild your ship or construct a new one, get your parts down to size! Remember that the motor stick for the tractor is 15 inches long, 1-8 inch wide and 1-4 inch deep. It can be tapered down at each end, and it can be sandpapered to still smaller dimensions, but those given are best for beginners. Remember that your wing spars are 16 inches long, 3-32 inch wide, and 1-16 inch thick. Remember that the blades of your propeller should be no more than 1-32 inch thick in the centre and no more than 1-64 inch thick at the tips.

Above all, remember that care does the trick. A rough, uneven motor stick; a loosely constructed, flimsy wing; a crooked fin; a wavy elevator surface—such things don't go toward making a model that will break records.

All right, then, that's over. Now you have a tractor that will rise slowly in large circles until it reaches a height of 50 feet or more, and will then come down slowly to a perfect landing. Here are the things you can do with a tractor like that:—

1. You can turn it into a pusher that should fly from 60 to 75 seconds.



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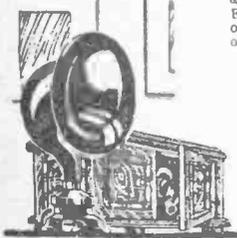
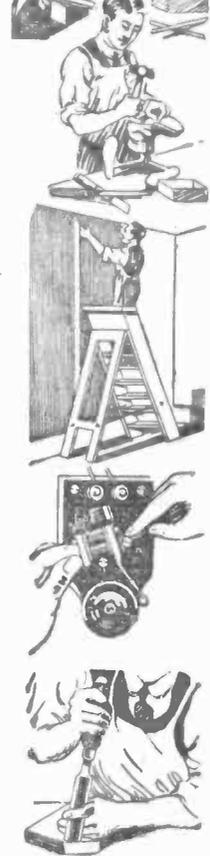
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"THE GIANT'S VOICE"

Some technical details of a high-powered amplifier recently heard around Sydney.

The contestants can assist greatly in the smooth running of a tournament by making sure that each individual is ready every time he is due to appear. Each will be given a number at the outset of a contest; this he should keep in mind. For instance, if one is No. 17, when contestant No. 14 is called upon to fly No. 17 should begin to wind his model, so that by the time 15 and 16 have flown their models he is ready to launch without delay. When the judge calls name or number he should answer "Here!" and proceed immediately with the launching. If the model sets out for a long flight he should get in one of the motor-cycle sidecars and follow the model, promptly regaining it at the end of the flight and returning to the fliers' area, where he should start preparations for his next flight.

The main item that delays contests is the preparation of models, therefore each boy should see that he is equipped to put his model in order quickly; furthermore, he should be prepared to make repairs rapidly. When contestants become experienced they will carry with them spare parts for their models, such as extra frames, wings, propellers, etc. Rubber strands already made into hanks for attachment to the hooks, and the model frames to have marks on them so that the wings can be placed in the best position without need for trial flights at the contest. The contestants would also be wise to have a little kit of tools and scrap material for making repairs.

If a contestant is fully equipped and has prepared everything for his model flights, and still has spare time, he should help those less fortunate. He can assist in placing wings and making repairs, and can wind up the models of those about to fly. All of the time, however, he should keep one ear open for the judge's announcements, so that he will be ready when his turn comes. "Kidding" and "horseplay" should be discouraged at contests, because in a moment of carelessness a model might be stepped on or a model box upset, causing serious misfortune to a fellow-contestant. Finally, look out for the models in the air, because one might fly over the contestants' area, dive, and strike a person or model.

Well-known Elocutionists at 3LO

LISTENERS have expressed keen interest and satisfaction with the recitals given by Mr. and Mrs. John Hopkins, who, from their wide repertoire of modern dramatic and humorous works, with excerpts from the "period classics," have arranged some excellent programmes. For their radio programmes, Mr. and Mrs. Hopkins have selected many gems from the better-known classics.

Certain Definite Actions

HAVE you ever stopped to think why we behave after the fashion of human beings—what sense it is that impels us to perform certain definite actions, and why those around us all "act to schedule"? This subject will be dealt with in a very entertaining way from 3AR on August 28, by Professor J. A. Gunn, M.A., B.Sc., and those interested in the psychology of human nature, should not fall to tune in to a very worth-while address.

The Vision of Belshazzar

A NEW note in literary broadcasting will be sounded by Mr. Howlett Ross, who will commence a series of dramatic episodes from the Bible at 3AR on August 25. The first incident will concern "The Vision of Belshazzar," which is so graphically described in the Book of Daniel. It will be remembered that Belshazzar, the son and successor of Nebuchadnezzar, was the last king of Babylon, who was warned of his impending doom by the "writing on the wall." Mr. Howlett Ross has devoted a great deal of time to the preparation of this series, which, it is anticipated, will create a great deal of attention.

INTEREST has been caused in and around Sydney of late by the enormous power amplifier equipment, mounted on a truck, with which experimental work has been done by Messrs. Phillips Radio.

"Big Bill," as is the title of the very loud-speaking unit, derives his technical title from the fact that a power of 500 watts is applied to the last of a series of valves, used for amplifying the very small energy obtained from the microphone, or phonograph pick-up, to the power necessary to give the tremendous volume which "Big Bill" is capable of delivering.

As will be understood, the design of any apparatus which must efficiently transform the most minute energies to high power and yet maintain the purity required for a public address system, calls for extreme care and engineering skill.

Whilst it is impossible to describe this amplifier in detail, a short description, covering the complete outfit, may be of interest. The microphone is energised from a 6-volt "A" battery, which is tapped at 4 volts to supply heating current to the three tubes in the microphone amplifier. The microphone is connected to a mixing panel in the microphone amplifier type 2780, which has provision for two or more mixing panels if these are necessary.

The first amplifying tube is type E.414, which was specially designed and developed for this purpose, and is not used in any other piece of apparatus. This tube is transformer coupled to type A415, which is well known as a special detector—first audio tube. This stage is also transformer coupled to a B405.

In the grid circuit of the B405 is a change-over switch by means of which it is possible for this tube to be preceded by either the microphone and the two stages mentioned, or a phonograph pick-up, for which a special input transformer and gain control is provided. This tube feeds into an output transformer with a step-down ratio which allows it to be connected to a transmission line.

The plate supply for the complete amplifier is obtained from a type 3002 power unit in conjunction with extra smoothing apparatus, and the A.C. for this eliminator is obtained direct from the main panel containing the 500 watt amplifier.

The transmission line energy is plugged into the main panel when it is controlled by means of a potentiometer. From there the energy goes to a 10 watt amplifier, type 2754. This stage consists of one amplifying tube, E408, with rectifying tube, type 505, and is housed in a receptacle in the top right hand corner of the main panel.

The output from this amplifier is by means of a 1.2 transformer, which is coupled directly in the grid circuit of the last tube, type M.A. 4/600. Plate supply to this tube is obtained from a step down transformer, and rectified by means of a full wave rectifier, type 1062.

The actual D.C. Potential is 3500 volts and this is applied to the plate of the M.A. 4/600, by means of an output transformer, the secondary of which has several taps, and audio voltages ranging from 600 to 1850 are available. The A.C. input to this panel may vary from 103 to 250 volts, and the actual voltage on apparatus controlled by a tapped auto-transformer, which is connected to a multipoint switch.

The meters used consist of grid milliammeter for M.A. 4/600, plate milliammeter for M.A. 4/600, A.C. voltmeter, and plate milliammeter for E408. When used as a portable amplifier, power is derived from an alternator, which is connected to the engine of the truck.

If d.c. current is available, the alternator

may be used as a converter, and if a.c. is available this may be connected directly to the main panel. The uses to which "Big Bill" can be put are legion, and from providing music for a dance to amplifying a movie director's instructions in an outdoor film scene, he is always ready to oblige.

Amplion Cone

HEREUNDER is shown a photograph of the baby of the Amplion Cone series, known as the Model AC2. At first sight it looks like an old friend, but the improved model, which has just appeared on the Australian market, far exceeds the older type.



both in appearance and performance. The new model comprises a one-piece all-bakelite moulding, with polished mahogany rim in place of the composition moulding used previously. Whilst the overall dimensions are the same, the width of the rim has been considerably reduced, thereby permitting of a bigger cone. The speaker is supplied in a blue carton instead of in the usual brown carton, thus making it easy for dealers and public alike to rapidly pick out this speaker.

A New Magnetic-type Speaker

RECENT additions to the range of loud speakers available in this country include the new "Blue Spot" speakers, for which Messrs. Fox and MacGillycuddy, Ltd., are the distributors. The circular model of this



speaker, which we had for test, comprised one of the "Blue Spot" drive units—with which we were already familiar—coupled to a "floating" or "free-edge" diaphragm supported in a circular baffle isolated from the pierced front plate of the speaker. The assembly is an entirely satisfactory mechanical job, and its performance, for a magnetic type speaker, is quite creditable.

Local Programmes, Friday, August 23

2FC

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

EARLY SESSION—7 to 8.15 a.m.

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

MORNING SESSION—10.30 to 12.30 p.m.

- 10.30: Announcements.
- 10.32: To-morrow's sporting events by Oscar Lind.
- 10.45: Edgar Stone at the grand organ.
- 11.0: Household helps. by Miss Ruth Furst. a talk on cooking.
- 11.10: Cables, A.P.A. and "Sun"—"Herald" news service, also British official wireless news.
- 11.15: The 2FC Studio Orchestra.
- 12.0: "Big Ben": Stock Exchange and metal quotations.
- 12.2: What to read for the week-end.
- 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
- 12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

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

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The Radio Matinee Orchestra.
- 2.42: Phyllis Broadbent, soprano—
 - (a) "Buy My Roses" (Slater).
 - (b) "Caro, Mio Ben" (Giordani).
- 2.49: James Walker, pianoforte solos—"Variations Brillante," Op. 12 (Chopin).
- 2.59: The Radio Matinee Orchestra.
- 3.14: Kathleen Logue, violinist—
 - (a) "Viennese Popular Song" (Kreisler).
 - (b) "Mignonette" (Primi).
- 3.21: Frank Botham, baritone.
- 3.28: The Radio Matinee Orchestra.
- 3.40: Phyllis Broadbent, soprano—
 - (a) "Happy Song" (Del Rio).
 - (b) "Danny Boy" (Weatherly).
- 3.47: James Walker, pianoforte solos—
 - (a) "Nocturne in F Sharp Major," Op. 15, No. 2 (Chopin).
 - (b) "Rush Hour in Hongkong" (Chastins).
- 3.57: Kathleen Logue, violinist—
 - (a) "Brahms' Hungarian Dance," No. 1, G Minor (Brahms-Joachim).
 - (b) "Elegie" (Massenet).
 - (c) "Polinisch" (Mendelssohn).
- 4.4: The Radio Matinee Orchestra.
- 4.14: Frank Botham, baritone.
- 4.21: The Radio Matinee Orchestra.
- 4.28: Stock Exchange, third call.
- 4.30: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies' "Good-night" stories, told by the "Hello Man," assisted by Goodie Reeve.
- 6.45: The National Broadcasting Orchestra.
- 7.30: A.B.C. sporting service.
- 7.37: Special country session; Stock Exchange resume; markets; late news service, from the "Sun" and "News."
- 7.58: Announcements.

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

- 8.0: The Rah Rah RaHS—Robert Robert's revue—a revusical pot pourri of mirth and melody.
- 9.15: The country man's weather session—
 - (a) New South Wales forecasts.
 - (b) Inter-State weather synopsis.
- 9.16: The Australian Broadcasting Dance Orchestra.
- 9.28: Bessie Blake, soprano.
- 9.35: Carlton Fay, novelty pianist.
- 9.45: The Australian Broadcasting Dance Orchestra.

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- 9.57: Bryson Taylor, tenor.
- 10.4: The Australian Broadcasting Dance Orchestra.
- 10.15: Announcements; late official weather forecast.
- 10.20: The Australian Broadcasting Dance Orchestra.
- 11.30: Close. National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 333 metres).

EARLY SESSION—8.15 to 11 a.m.

- 8.15: Music for every mood.
- 8.45: Meteorological data for the country.
- 9.50: Songs and choruses.
- 9.30: British official wireless news.
- 9.35: New music.
- 10.5: News from "Sydney Morning Herald."
- 10.10: The Ladies' Club Hour—The Australian Women's A.B.C. Association, conducted by Miss Gwen Varley.
- 10.30: The 2BL Studio Orchestra.
- 11.0: Close.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: Announcements.
- 12.2: The National Broadcasting Orchestra.
- 1.0: Afternoon news from the "Evening News" and "Sun."
- 1.5: Studio music.
- 1.15: Women's "Interest Talk."
- 1.30: The Traders' "Selling the Set" Music.
- 2.0: J. Knight Barnett at the Wuriltzer organ.
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.

- 2.30: Business Efficiency Talks.
- 2.45: "The Magic Carpet"—A story of travel and adventure.
- 3.0: From the Oriental Cafe—Sydney Simpson's Syncopatens in dance music.
- 3.12: From the Studio—Enid D'Arcy, soprano—
 - (a) "Solweig's Song" (Grieg).
 - (b) "Drink to Me Only With Thine Eyes" (Arr. Quilter).
- 3.18: From the Oriental Cafe—Sydney Simpson's Syncopatens in dance music.

- 3.29: Reg Harrison, comedian—"The Human System" (Arthurs).
- 3.36: Hilda Grace, novelty pianist—
 - (a) "The Rag Doll" (Brown).
 - (b) "The Doll Dance" (Brown).
 - (c) "The Wedding of the Painted Doll" (Brown).
- 3.43: From the Oriental Cafe—Sydney Simpson's Syncopatens in dance music.
- 3.55: From the Studio: Enid D'Arcy, soprano—
 - (a) "Where the Bee Sucks" (Arne).
 - (b) "My Mother Bids Me Bind My Hair" (Haydn).
- 4.2: The latest dance music.
- 4.15: Reg Harrison, comedian—
 - (a) "The Kill Joys" (Jackson).
 - (b) "Auto-Suggestion" (Mundin and Jackson).
- 4.22: Hilda Grace, novelty pianist—
 - (a) "Feather Fingers" (Lapham).
 - (b) "Twinkle Toes" (Warrich).
- 4.30: From the Oriental Cafe—Sydney Simpson's Syncopatens in dance music.
- 4.45: From the Studio—"The Trade Hour"
- 5.45: Close.

THE DINNER HOUR

- 6.15: The National Broadcasting Orchestra.
- 6.45: The A.B.C. Younger Set Session—A.B.C. Boy Scouts' Club, conducted by Mr. Norman Lyons.
- 7.5: Studio music.
- 7.15: The country man's market session—wool, wheat, stock, farm produce, fruit, vegetables, and poultry markets.
- 7.30: The National Broadcasting Orchestra.
- 7.55: What's on the Air to-night.

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

- 8.0: The National Broadcasting Orchestra—Conductor, Horace Keats—"Peggy" (Leslie Stuart).
- 8.12: La Gioconda Quartette—
 - (a) "Happy Humming Bird" (Har Woods).
 - (b) "Care Killed a Cat" (Leigh Klug mll).
 - (c) "If You Want the Rainbow" (Dixon and Levant).
- 8.22: Leonard Nelson, entertainer—
 - (a) Song, "A Woman at the Bottom It All" (Rodges).
 - (b) "Recitation, "Not Too Bad" (John Nugent).
- 8.32: The National Broadcasting Orchestra—"Hansel and Gretel" (Humperdinck).
- 8.45: La Favorita Duo, entertainers.
- 8.52: Herbert Batchelor, baritone—
 - (a) "Thou Art Passing Hence" (Sullivan).
 - (b) "At Dawning" (Cadman).
- 9.0: Scott Alexander and Annie Hughes in an original radio comedy, by Codrington Ball, entitled "At a Loose End." The characters will be presented by Mr. Alexander and Miss Hughes.
- 9.10: The National Broadcasting Orchestra—
 - (a) "Celebrated Minuet" (Boccherini).
 - (b) "Expectation Song" (Kuecken).
 - (c) "Minuet" (Mozart).
- 9.20: La Gioconda Quartette—
 - (a) "The Rosary" (Nevin).
 - (b) "Where the Shy Little Violets Grow" (Kahn and Warren).
- 9.30: Late weather forecast for the morning on the land.
- 9.31: Leonard Nelson, entertainer—
 - (a) Song, "Just One More" (Nelson).
 - (b) Recitation, "The Dream" (John Nugent).
- 9.41: La Favorita Duo, entertainers.
- 9.51: Scott Alexander and Annie Hughes in a dramatic cameo from real life. Annie Hughes, entitled "Darby and Joan"
 - Darby Mr. Scott Alexander
 - Joan Miss Annie Hughes
- 10.1: Herbert Batchelor, baritone—
 - (a) "Trees" (Rasbach).
 - (b) "Welcome" (Crichton).
- 10.8: The National Broadcasting Orchestra—
 - "The Mousme" (Talbot)
- 10.25: Official weather forecast—metropolitan and country; late news from the "Evening News" and "Sun."
- 10.30: Close. National Anthem.

2GB

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

MORNING SESSION.

10.0: Music. 10.10: Happiness talk by A. E. Bennett. 10.20: Music. 10.30: Women's session by Miss Helen J. Beegling. 11.45: Close down.

AFTERNOON SESSION.

2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.30: Close down. 5.30: Children's session by Uncle George. 7.0: Music. 7.45: Feature story.

NIGHT SESSION.

8.0: Miss Edna Lister, contralto. 8.7: Symphony orchestra. 8.15: Mme. Betta-Vincent in an illustrated talk on music. 8.30: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 8.35: Mr. Clement Hosking, baritone. 8.45: Violin solo. 8.50: Miss Gwladys Edwards, soprano. 9.0: Weather report. 9.3: Address. 9.15: Symphony orchestra. 9.24: Miss Edna Lister, contralto. 9.35: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 9.40: Violin solos. 9.50: Miss Gwladys Edwards, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St., Sydney (Wavelength, 267 metres).

MIDDAY SESSION

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

EVENING SESSION

5.30: Children's hour, conducted by Uncle Jack. 6.30: Close down. 7.0: G.P.O. clock and chimes; request numbers. 8.0: Popular songs and numbers. 9.0: G.P.O. clock and chimes; comments on foreign affairs by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down.

2KY

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

MORNING SESSION.

10.0: Tune in to the ticking of the clock. 10.3: Popular fox trots. 10.15: Hawaiian steel guitar selections. 10.30: Request numbers. 10.50: Vocal items. 11.0: A few laughs. 11.5: Pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal numbers. 11.55: Where to go to-night. 12.0: Closing announcements.

CHILDREN'S SESSION.

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

EVENING SESSION.

7.0: Musical interlude. 7.5: Birthday calls. 7.15: Turf topics, review of candidates and their prospects for to-morrow, Mr. Geo. A. Davis. 7.40: Request numbers. 8.0: Hawaiian steel guitar selections. 8.15: Request numbers. 8.30: Music and vocal items from the studio. 9.10: Sporting feature. Presented by Tooth and Co., Ltd., Kent Brewery. From ring-side of M'Hugh's Leichhardt Stadium. Full description of main 15-round fight. Mr. Jack Dunleavy. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Storey Street, Maroubra Junction, Sydney (Wavelength, 293 metres).

EARLY MORNING SESSION

7.15 a.m.: Breakfast time hour orchestral music. 8.30: Weather forecast; close down.

MIDDAY SESSION

11.30 a.m.: Old time musical hour. 12.30: Close down.

AFTERNOON SESSION

1.0: Orchestral and vocal selections. 1.45: Organ recitals. 2.0: Vocal and orchestral music. 2.30: Announcements; close down.

EVENING SESSION

7.15: Orchestral dinner music. 7.58: Programme announcements. 8.0: Overture, "Dance of the Hours." 8.10: Vocal and instrumental items. 8.15: Announcements; close down.

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Interstate Programmes, Friday, August 23

3LO

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

EARLY MORNING SESSION

7 a.m.: Time signal from the Melbourne Observatory; weather forecast; mails and shipping. 7.3: Physical exercises set to music. 7.20: Reproduced music. 7.43: What's on to-day. 7.45: Market reports. 7.55: News service. 8.0: Melbourne Observatory time signal. 7.1: Arrival express trains. 8.5: Birthday greetings. 8.15: Close down.

MORNING SESSION

10.30: "Current Happenings in Sport"—Mel. Morris. 10.45: A.B.C. Studio Orchestra, with Owen Gibson, mezzo-soprano. 12.0: Melbourne Observatory time signal. 12.1: Orchestra, continued. 12.15: News service; British official wireless; Corn Exchange report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION

1.0: Time signal from Melbourne Observatory; Stock Exchange information; meteorological data; weather forecast for Victoria, New South Wales, South Australia and Queensland; Great Britain reports, rainfall; comments on the day's news. 1.30: Reproduced music.

EDUCATIONAL SESSION

2.0: "Strange People of Strange Countries"—Mr. R. D. Harper, M.A., Dip. Ed. 2.15: Reproduced music. 2.25: "General English Literature"—Dr. Stevenson's "Treasure Islands"; Professor G. H. Cowling, M.A. 2.40: Reproduced music. 2.45: A talk in German.

THE RADIO MATINEE

"An hour with Russian Composers." 3.0: National Broadcasting Orchestra (under direction of Wm. G. James, conductor Percy Coles). "Andantino," Op. 46. "4th Symphony" (Tschakowsky). "Prelude in G Minor" (Rachmaninoff). 3.12: Senia Chostakoff, tenor—"By the Fireside" (Strook). "The Love" (Vrangel). 3.19: Anstisl Water, piano—"Variations" (Aramini). 3.24: "Tina Hozel," Russian Folk Song—"The Fish" (Arensky). "We Sat Together" (Tschakowsky). "Away at the River" (Arensky). 3.34: Cecil Parkes, violin—Selected. 3.44: Mina Heseleva, soprano, Senia Chostakoff, tenor, duets—"The Volga Boatmen." 3.55: "Tina Hozel," Russian Folk Song—"Scherazade" (Rimsky-Korsakov). An Attractive Antithesis. 4.0: Doreen Berry, musical monologue—"When Mother Bobbed Her Hair." 4.10: Mariana Trio—Selections from their Repertoire. 4.17: Bernice Horschburg, contralto—"Break, Break" (Lavater). "Bring Snow" (Irish). "Pirate's Dream" (Huetter). 4.24: Orchestra—"The Maid of the Mountains" (Simson-Fraser). 4.30: Close down.

THE CHILDREN'S CORNER

6.45: Billy Bunny. 6.15: Reproduced music. 6.20: Talk of interest to the older boys and girls.

THE LECTURETTE SESSION

8.35: Reproduced music. 6.40: "Come With Us Around the World"—(Fire Walkers of P.M., Rev. A. W. Amos. 6.55: Reproduced music. 7.0: Time signal from Melbourne Observatory; Stock Exchange information; Corn Exchange report; Associated Stock and Station Agents' official reports; Wool Exchange report; mails and markets; fish and rabbit prices; farm and dairy produce report, supplied by the Interstate Dairy Produce Committee; wholesale fruit prices, supplied by the Wholesale Fruit Merchants' Association; retail fruit prices, supplied by the Victorian Fruitgrowers' Association; citrus fruit prices, supplied by Victorian Central Citrus Association; weather synopsis; river reports; rainfall data. 7.25: "Gardening Hints"—"General Seasonal Advice." Mr. T. H. Brunn. 7.40: "Herald" news. 7.45: "What's Wrong With Your Radio" by H. Kingsley Love.

NIGHT SESSION

8.0: Time signal from Melbourne Observatory. Collingwood Citizens' Band—March, "The Guard's Parade." Overture, "La Flandre." 8.10: Isabel Biddle, contralto—"The Lotus" (Schumann). "Ave Maria" (Schubert). 8.17: Edouard Lambert, violin—Selected. 8.32: Meistersingers Quartette. 8.40: Collingwood Citizens' Band—Selection, "Orpheus." 8.50: Margaret Kerf will entertain you. 9.0: Colin Thomson, tenor—"My Heart's Desire" (C. Clarke). "The Road to the Isles" (Kennedy Fraser). 9.1: Moscow Trio—"Valse Melancolique" (Darsin). "Insouciance" (Rebikoff). 9.17: Isabel Biddle, contralto—"See Wrack" (Hamilton Hart). "This Year's at Spring" (May Brahe). 9.24: Band—Fantasia, "The Smithy in the Wood." Hymn, "I'm Praying for You." 9.34: Meistersingers Quartette. 9.44: Moscow Trio—"The Return" (Venzor). "Une Larme" (Musorgsky). 9.54: Colin Thomson, tenor—"Svevin" (Sinding). 10.0: Fifteen minutes' fun—The A.B.C. Pierrots—A Pleasing Punchbowl of Popular People. 10.15: Solo—"Alice Ben Bolt." 10.20: British official wireless news from Rugby. Meteorological Information—News session. 10.30: The "Rex" Dance Band. 11.30: God Save the King.

3AR

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

MORNING SESSION

8.15: Morning music; weather forecast; items of interest. 9.0: "Sun" news service. 9.5: Reproduced music. 10.0: British official wireless. 10.10: Reproduced music. 10.30: Comedian at the Wurlitzer. 10.50: A message for the day. 11.0: Close down.

MIDDAY SESSION

12.0: Chimes from G.P.O. 12.1: "Famous Women"—(3) Lady Hester Stanhope, a notable female eccentric; Mrs. Ian Maxwell, M.A. 12.15: Fifteen minutes reproduced music. 12.30: Luncheon music, supplied by the National Broadcasting Orchestra (under direction of Wm. G. James; conductor, Percy Coles).

AFTERNOON SESSION

2.0: Cremona Trio—"Andante," "Scherzo," Op. 49, D Minor (Mendelssohn). 2.10: Freda Treweek, mezzo-soprano—"Demon" (Strang). "Do Not Go, My Love" (Hageman). 2.17: Frank Johnston, cello—"Memoria" (Popper). "Sarabande Gavotte" (Kriegler). 2.24: Guy Moore, tenor—"Phyllis Has Such Charming Graces" (Young). "Mary of Alendale" (Hack). 2.31: Cremona Trio—"Romance" (Hummel), march. "Mitteltanz" (Schubert). 2.38: Freda Treweek, mezzo-soprano—"The Wild Swallow" (Liza Lehmann). "The Starling" (Liza Lehmann). 2.45: Myra Montague, piano—"Waltz in A Flat" (Chopin). 2.50: Guy Moore, tenor—"Two Songs of the North" (Oliver). 2.57: Rita Hilton, entertainer. 3.4: Mariana Trio—"Dreamily Thinking," "Kissling You," "Waltz You," "Alhambra"—one step. 3.14: Bernice Horschburg, contralto—"Homing" (Del Riego). "Why" (Elliot). "Columbine's Garden" (Besley). 3.21: Marion Lightfoot, banjo—"Water Nymphs." "Days in Dixie." "Dreamily Thinking," songs at the piano. 3.30: A chat by a prominent woman. 3.45: Musical interlude. 3.50: Golf for ladies, Mr. A. W. Jackson. 4.5: Musical interlude. 4.10: What Science is doing for Women, Mr. E. S. Richards, M.Sc.; Trades' Demonstration. 4.25: Reproduced music. 5.0: Close down.

EVENING SESSION

6.15 to 7.30: Dinner music, supplied by the A.B.C. Studio-Orchestra. NIGHT SESSION. 7.30: What's on the Air To-night. 7.32: Latest musical releases. Sporting. 7.50: Mr. Cecil J. Williams—"To-morrow's Stadium Event." 8.0: National Broadcasting Orchestra—"Post and Peasant" (Suppe). 8.10: J. and G. in popular numbers. 8.17: Australian Problems in Economics—"What is the Source of Wages and Income." Professor D. B. Copland, M.A., D.Sc. 8.32: Community Singing—Transmission from Malvern Town Hall. From the Studio. 10.0: News service; meteorological information. 10.8: National Broadcasting Orchestra—Selected. 10.13: Sporting Interlude—Eric Welch to-morrow's racing events. 10.23: Orchestra—"Pale Moon." 10.30: God Save the King.

3DB

The "Herald" Broadcasting Station, Flinders Street, Melbourne (345 metres).

MORNING SESSION

11.0: Time signal; traditional melodies. 11.30: "La Vogue," "The World's Fashions and Fables." 11.35: Light and bright. 12.0: Purely classical. 12.25: News. 12.30: Close down.

AFTERNOON SESSION

2.0: Operatic excerpts. 2.30: Chamber music. 2.55: Atwater Kent Radio Hour, sponsored by A. O. Kealing, Ltd. and E. T. Muir. 3.55: News. 4.0: Close down.

EVENING SESSION

5.30: Billy Bunny's Children's Hour. 6.0: Requests. 6.30: Musical masterpieces. 7.0: Brass Band, baritone, and violin. 7.30: Symphony and Song. 7.45: Market reports.

NIGHT SESSION

8.0: Orchestra and Oratoria. 8.30: Organ, Piano, and Contralto. 9.0: Military Bands and Ballads. 9.30: Jazz and Jollity. 10.0: Pot Pourri. 10.30: Slumber music. 10.40: News. 10.45: God Save the King.

4QG

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

EARLY MORNING SESSION

7.43: Time signals. 7.45: News service. 8.30: Close down.

MORNING SESSION

11.0: Music. 11.30: News. 11.15: Lecturette: A cook and household talk by "The Etiquette Girl." 12.0 (noon): Close down.

MIDDAY SESSION

1.0: Market reports and weather information. 1.20: Lunch-hour music. 2.0: Close down.

AFTERNOON SESSION

3.0: A programme of records. 3.30: Mail train running times. 4.15: News. 4.30: Close down.

EARLY EVENING SESSION

6.0: Mail train running times; mail information; shipping news. 6.5: Records. 6.25: Commercial announcements. 6.30: Bedtime stories, conducted by "The Sandman." 7.0: News in brief; Stock Exchange; metal quotations; market reports; weather; Fenwick's stock report; to-morrow's sporting fixtures reviewed.

NIGHT SESSION

VISITING FRENCH CRUISER. PARLIAMENTARY RECEPTION. The parliamentary reception to the officers of the

visiting French cruiser, Tourville, will be relayed from Parliament House.

During the evening a musical programme, including portion of the following items, will be relayed (not necessarily in the order mentioned):—

The 4QG Orchestra (Conductor, A. R. Featherstone). Overture, "Scaramouche" (Remnick). Valse, "Tres Jolie" (Waldteufel). Selection, "La Belle France" (Laurandreaux). Cornet solo, "Berceuse de Jocelyn" (Godard). Soloist, Herbert Jackson. (Waldteufel). Fox trots "Fifty Million Frenchmen Can't Be Wrong" (Fisher). "Fleur d'Amour" (Padilla). Clarinet solo, "La Papillote" (Gruenwald). Soloist, Carl Aarons. One-step, "A La Parade" (Verdin). Selection, "French Patriotic Airs" (arr. Fitzgerald). Overture, "Le Chevalier du Bronze" (Aubert). Violin solo, "Le Cinquantine" (Gabriel Marie). Soloist, Maud Williams. Entracte, "Joli Moulin" (Godard). Pas seul, "Pirouette" (Finck). Characteristic, "Marcelle" (Trunkaus). March, "Vim Rhythm" (Bidsgood). Dick Pike (boss)—"A Chip of the Old Block" (Squire). The Anglo Male Quartette—"Little Tommy Went a-Fishing" (Parks). "Sittin' Around the Fire" (Parks). "Jim" (Parks). "Love's Old Sweet Song" (Parks). Harry Borradaile (elocutionist)—Humorous items. May Jordan (soprano)—"Villia" (Lehar). "Vilanelle" (Del Acqua). Jack Land (tenor)—"Roses of Picardy." "Adieu, Marie" (Adams). 10.0: From the studio—News supplied by the metropolitan dailies; weather information; close down. Note.—Week-end information for motorists, supplied by the R.A.O.C., will be broadcast from the studio at 9 p.m.

5CL

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

MORNING SESSION

11.15: Chimes. 11.16: Recordings. 11.45: Kitchen craft and menu talk. 12.0: Chimes. 12.1: Recordings. 12.15: General news service. 12.40: Columbia recordings. 12.57: Railway, Stock Exchange, and Meteorological information. 1.1: Community singing from the Adelaide Town Hall. 1.59: Meteorological. 3.0: Close down.

AFTERNOON SESSION

3.0: Chimes. 3.4: Programme review and announcements. 3.10: The Steiner Trio—"Josep" (Mohul). "Valse in C Minor" (Chopin). 3.20: Dr. Eleanor A. Allen, B.A., will continue her series of talks on "Psychology." 3.35: Rupert Hazell and Elsie Day will entertain you. 3.43: The Steiner Trio—"Folle Suite," "Reccoco" (Messon). 3.50: A pianoforte recital by Jean Finlay, L.A.B.—"La Source" (Leschetizky). "Cradle Song" (Brahms). "Bird Song" (Palmgren). 4.5: Rupert Hazell and Elsie Day. 4.15: The Steiner Trio—"Cavalieris Rusticans" (Mascagni). "Prelude" (Pachulski). 4.25: Stock Exchange. 4.30: Close down.

EVENING SESSION

6.0: Chimes. 6.1: Birthday greetings, correspondence; songs and stories by "Miss Wireless." 6.30: Dinner service, Rupert Hazell and Elsie Day. 6.5: Senior Birthdays Greetings; SCL's sporting service. 7.20: A talk on football. 7.35: Mr. A. G. Fenner will speak on Australian Cross Country Championship. 7.45: Mr. A. Grenfell Price, M.A., F.R.G.S., will continue his series of talks on "Pioneers of Australia."

NIGHT SESSION

8.0: Chimes. 8.1: Programme review and announcements. "Fifty Years Ago To-day—" "A Glimpse Into the Past." 8.10: The first programme to be broadcast by Members of the Staff of the Elder Conservatorium of Music, Adelaide (under the direction of Professor E. Harold Davies, Director of the Elder Conservatorium). A programme representative of the Modern English School. A short talk on this form of composition by Mr. John Horner, who will stress the pioneer work of Haydn. He will also describe the chief interest of the "Lady Audrey's Suite," and will preface each movement with a brief description. The Conservatorium String Quartette—Miss Sylvia Whittington, Kathleen Meegan (violinists), Clarice Gmeiner, and Mr. Harold Parsons. "Quartet in D Minor" (Haydn). "Movements from "Lady Audrey's Suite" (Herbert Howells). Mr. John Horner, pianoforte solo. Miss Sylvia Whittington, violin solo. Mr. Harold Parsons, cello solo. Mr. Harold Denton, vocal solo. 9.1: Meteorological information, including Semaphore tides. 9.2: Overseas grain report. 9.3: Extract from the "Advertiser" general news service. Elder Conservatorium concert (continued). 10.15: General news service. British official wireless news. Meteorological information.

SCL's Sporting Service—
 Billius gives a special late review of the Grand National Steeplechase and other events at Victoria Park and Williamstown to-morrow.
 10.30: Modern dance recordings.
 11.0: Close down.

6WF

Commonwealth Government Broadcasting Station, Perth (Wavelength, 100 metres).
 10.0: Gramophone records. 11.0: Close down.
 12.30: Markets, news, etc. 1.1: Weather bulletin.
 1.3: Music by the Radio Trio. 2.0: Close down.
 3.30: Afternoon concert. 4.30: Close down. 6.45: Bedtime stories, by Uncle Duffy. 7.5: Light music by the Radio Trio. 7.30: Commercial and general information. 7.45: Talk on "Racing." 8.0: Time signal. 8.1: First weather bulletin. 8.3: Popular programme. 8.50: Late news; ships within range announcement; late weather bulletin. 8.58: "Gardening," talk by Mr. James Conarty. 10.30: Close down. 104.5 metre transmission.—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres, commencing at 8.45 p.m.

7ZL

Tasmanian Broadcasters Pty., 95 Elizabeth St., Hobart (Wavelength, 516 metres).
 11.30: Record recital. 11.34: Midlands weather forecast. 11.35: Record recital. 11.55: Tasmanian stations 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information, ships within wireless range; mail notices; housewives' guide. 12.8: Record recital. 12.22: Announcements. 12.33: Record recital. 12.53: "Mercury" news service; British official wireless news; railway auction produce sales held at railway. 1.10: Record recital. 1.30: Close down. 3.0: Chimes. 3.1: Record recital. 3.4: Weather information. 3.5: Record recital. 4.15: Personalities, readings from the "Weekly Courier." 4.30: Close down. 6.15: Children's Hour with "Uncle David" and "The Story Lady." 7.10: News session. 7.15: Sid. Jones will speak on "Football." 7.25: Richard Darcey, vice-president of the Tasmanian Amateur Athletic Association, will speak on "The Tasmanian Ten Thousand Metres Cross Country Championships." 7.30: A studio concert, arranged by Madame Viola Pierce. Artists:—Misses Kathleen and Phyllis Trotter, Myra Mayne, Nita Wood, Belle Grice, Sadie Binet, Messrs. Geoff. Ricketts and Ken Owen. Piano trio: Misses Kathleen and Phyllis Trotter and Myra Mayne. "Dance Espangaisa," Sadie Binet, soprano, "Selected." Piano solo, Nita Wood, "Padreavski Minuet." Ken Owen, saxophone solo, "La Goldrinda," "Mimosa." Nita Wood, recitation, "Rosa." Belle Grice, piano solo, "Selected." Geoff. Ricketts, clarinet solo, "A Oera Memoria," "Grey Eyes." Duet, Viola Pierce and Belle Grice, "Shepherds' Dances." "Morris Dance." 8.45: J. M. Counsel, "The History and Development of Music." 9.45: News session. 10.0: Chimes; close down.



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 SYDNEY.

Local Programmes, Saturday, August 24

2FC

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

EARLY SESSION—7 to 8.15 a.m.

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

MORNING AND AFTERNOON SESSIONS.

- 10.30: Announcements.
- 10.32: A.B.C. racing observer.
- 10.45: Edgar Stone at the grand organ.
- 11.0: Week-end suggestions.
- 11.10: Cables, A.P.A. and "Sun"—"Herald" news service.
- 11.15: The 2FC Studio Orchestra.
- 12.0: "Big Ben"; Stock Exchange and metal quotations.
- 12.2: Music.
- 12.20: Midday weather forecast and weather synopsis; special produce market session for the man on the land, supplied by the State Marketing Board.
- 12.50: From Rosehill, description of the races in the running. During intervals between races musical items from the Oriental Cafe, played by Sydney Simpson's Syncopaters.
- 4.35: From the Studio, late sporting results.
- 4.45: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies "Good-night" stories, told by the "Hello Man," assisted by Aunt Willa.
- 6.45: The National Broadcasting Orchestra.
- 7.25: A.B.C. sporting service.
- 7.37: Special country session; Stock Exchange resume; late news service from the "Sun" and "News."
- 7.58: Announcements.

THE EVENING SESSION—8 to 11.30 p.m.

- 8.0: From "Weemalla," Ryde, the Radio Cheer Bringers. A happy interlude for those whom sickness has cast into the back-waters of life.
- 9.30: From the studio, the country man's weather session—
 - (a) New South Wales forecasts.
 - (b) Inter-State weather synopsis.
- 9.31: From the Oriental Cafe, Sydney Simpson's Syncopaters in dance music.
- 9.42: From the studio, Jack Lumsdaine, Radio Rascal.
- 9.52: Maise Oattie, in piano povetties.
- 10.2: From the Oriental Cafe, Sydney Simpson's Syncopaters in dance music.
- 10.15: From the studio, announcements; official weather forecast.
- 10.20: From the Oriental Cafe, Sydney Simpson's Syncopaters in dance music.
- 11.30: Close. National Anthem.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 368 metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: Music for every mood.
- 8.45: Meteorological data for the country.
- 8.50: A Musical Pot Pourri.
- 9.30: British official wireless news.
- 9.35: New music.
- 10.5: News from "Sydney Morning Herald."
- 10.10: Gardening.
- 10.30: The 2BL Studio Orchestra.
- 11.0: Close.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: Announcements.
- 12.2: The National Broadcasting Orchestra.
- 1.0: Afternoon news from the "Evening News" and "Sun."
- 1.5: Studio music.
- 2.0: J. Knight Barnett at the Wurlitzer organ.
- 2.12: Studio music.

AFTERNOON ENTERTAINMENT—2.30 to 5.15 p.m.

- 2.30: The Radio Matinee Orchestra.
- 2.45: Aida Bulmas, soprano.
- 2.52: Muriel Lang, 'cellist.
- 3.0: The Radio Matinee Orchestra.
- 3.15: Joe Cahill, entertainer—
 - (a) "Mister Dooley on Marriage" (Dunne).
 - (b) "Pink an' Green" (Hasen).
- 3.22: Laurence Macaulay, basso.
- 3.29: The Radio Matinee Orchestra.
- 3.45: Aida Bulmas, soprano.
- 3.52: Muriel Lang, 'cellist.
- 4.0: The Radio Matinee Orchestra.
- 4.15: Laurence Macaulay, basso.
- 4.22: The Radio Matinee Orchestra.
- 4.34: Joe Cahill, entertainer—
 - (a) "The First Flirtation."
 - (b) "The Answer" (Kipling).
- 4.42: Popular music.
- 5.0: Complete sporting resume.
- 5.15: Close.

THE DINNER HOUR.

- 6.15: The National Broadcasting Orchestra.
- 6.45: The A.B.C. Younger Set Session—The Captain to his Comrades.
- 7.5: Studio music.
- 7.15: The country man's market session—wool, wheat, stock, farm produce, fruit, vegetables, and poultry markets.
- 7.30: National Broadcasting Orchestra.
- 7.55: What's on the Air to-night.

TO-NIGHT'S PRESENTATION—8 p.m. to 12 midnight.

- 8.0: G.P.O. Chimes.
- Charles Lawrence and Ed. Warrington in a radio revue.
- 9.0: The Australian Broadcasting Dance Orchestra.
- 9.12: Leonard Nelson, entertainer—
 - (a) Song, "Eat More Fruit" (Glover).
 - (b) Recitation, "Dickens" (John Nugent).
- 9.19: Grace Quine, popular vocalist—
 - (a) "Happy Days and Lonely Nights" (Rose and Fisher).
 - (b) "Roses of Yesterday" (Irving Berlin).
- 9.26: The Australian Broadcasting Dance Orchestra.
- 9.38: Late weather forecast for the man on the land.
- 9.39: Leonard Nelson, entertainer—
 - (a) Song, "I Followed Her Here and I Followed Her There" (Weston and Lee)
 - (b) Recitation, "Ain't a Man Stiff" (John Nugent).
- 9.49: Grace Quine, popular vocalist—
 - (a) "For You Alone" (Geehl).
 - (b) "Carolina Moon" (Davis and Burke).
- 10.0: The Australian Broadcasting Dance Orchestra.
- 10.25: Official weather forecast—metropolitan and country; late news from the "Evening News" and "Sun."
- 10.30: The Australian Broadcasting Dance Orchestra.
- 11.30: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
- 12.0: Close. National Anthem.

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2GB

Theosophical Broadcasting Station, 99 Bight St., Sydney (Wavelength, 316 metres).

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

2UW

Radio Broadcasting, Ltd., Felling's Building, Ash St., Sydney (Wavelength, 267 metres).

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

2KY

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

CHILDREN'S SESSION.

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

EVENING SESSION.

- 7.0: Musical interlude.
- 7.5: Birthday calls.
- 7.15: Turf topics: How they ran to-day, Mr. Geo. A. Davis.
- 7.50: Request night.
- 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Storey Street, Maroubra Junction, Sydney (Wavelength, 293 metres).

EARLY MORNING SESSION

- 7.15: Breakfast time hour orchestral selections.
- 8.30: Weather forecast; close down.

EVENING SESSION

- 7.15: Orchestral dinner music.
- 8.0: Overture, "La Tosca."
- 8.10: Orchestral music.
- 10.30: Close down.



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Interstate Programmes, Saturday, August 24

3LO

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

EARLY MORNING SESSION.

7.0: Time signal from Melbourne Observatory; weather forecast; mails and shipping. 7.5: Physical exercises set to music. 7.20: Reproduced music. 7.43: What's on. 7.45: Market reports. 7.55: News service. British official wireless news; Corn Exchange report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MORNING SESSION.

10.30: Current Happenings in Sport, by Eric Welch. 10.45: A.B.C. Orchestra, with J. Howard King (baritone). 12.0: Time signal from Melbourne Observatory; A.B.C. Studio Orchestra (continued). 12.15: News service. British official wireless news; Corn Exchange report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION.

1.0: Time signal from Melbourne Observatory. 1.1: Stock Exchange Information; meteorological data; weather forecast for Victoria, New South Wales, South Australia, and Tasmania; ocean forecast; river reports; rainfall; comments on the day's news. 2.0: Recreative lectures—"Hiawatha" (Longfellow), Rev. W. Bottomley. 2.15: Reproduced music. 2.25: "The Romance of Rings," Mr. J. Howlett Ross. 2.40: Reproduced music. 2.45: "An Elephant Hunt in Burma"—Mr A. A. Downs.

THE RADIO MATINEE.

3.0: St. Augustine's Band (Percy Jones conductor)—"Humoresque," "March of the Mannikins" (Percy Fletcher), March, "Hungarian" (Berlioz). 3.10: De Reszke Quartette—Robin Adair, "Mosquitoes" (Elms). 3.20: Return of the Soft, Gentle Evening" (Emerson). 3.30: Nicholls and Mack, Instrumentalists—Selected. 3.30: Alexander Raff, baritone—"A Slave of Roving Tim" (Martin Shaw). "The Cavalier's Escape" (Martin Shaw). 3.37: St. Augustine's Band—Selection, "Der Freischutz" (Weber). 3.47: Half an Hour with Fun and Frolic with "The Scarlet Gaieties." 4.17: St. Augustine's Band—Selection, "Maid of the Mountains" (Fraser-Simson). 4.27: De Reszke Quartette—"Sylvia" (Speake), "Virgine" (Brandt), "Uncle Moon." 4.37: Nicholls and Mack, Instrumentalists—Selected. 4.47: St. Augustine's Band—Intermezzo, "In a Persian Market" (Ketelby), "Minuet in G" (Beethoven). 5.0: Close down.

THE CHILDREN'S CORNER.

5.45: Little Miss Kookaburra—"A Mystery Story—Guess what its name will be?" and fairy songs. 6.20: A talk of interest to the older boys and girls. 6.35: Reproduced music.

EDUCATIONAL SESSION.

6.40: Stories of our mining fields—(2) Mount Morgan, Mr. E. St. J. Somerset. 6.55: Reproduced music. 7.0: Stock Exchange Information; Corn Exchange report; Associated Stock and Station Agents' official report; Wool Exchange report; mines and metals; fish and rabbit prices; farm and dairy produce report; supplies by the Inter-State Dairy Produce Committee; wholesale fruit prices, by the Wholesale Fruit Merchants' Association; retail fruit prices, supplied by the Victorian Fruitgrowers' Association; citrus fruit prices, supplied by the Victorian Central Citrus Association; weather synopsis; river reports; rainfall data. 7.25: Come with us Round the World—(3) Fire-walkers of Fiji, Rev. A. W. Amos. 7.40: "Herald" news service. 7.45: Australian Birds—(3) Diamond Birds or Pardalotes, Dr. J. A. Leach, D.Sc.

NIGHT SESSION.

8.0: A special programme has been arranged. 10.15: British official wireless news from Rugby. "Herald" news service. Meteorological information. 10.30: The "Big" Dance Band. 11.30: "God Save the King."

3AR

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

MORNING SESSION.

8.15: Morning music; weather forecast; items of interest. 9.0: "Argus" news service. 9.5: Reproduced music. 10.0: British official wireless. 10.10: Reproduced music. 10.30: Arnold Coleman at the Wuritzer organ. 10.50: A message for the day. 11.0: Close down.

MIDDAY SESSION.

12.0: Feminine topics. 12.15: Fifteen minutes synopsis. 12.30: To 2.0: Luncheon music, provided by the National Broadcasting Orchestra, under direction Wm. G. James (conductor, Percy Code).

AFTERNOON SESSION.

2.0 to 5.30: Sporting descriptions by Eric Welch and Mel. Morris. 5.30: Final football scores. 5.35: Close down.

EVENING SESSION.

6.15 to 7.30: Dinner music, supplied by the A.B.C. Studio Orchestra. 7.30: What's on the air to-night. 7.32: Latest musical releases.

NIGHT SESSION.

8.0: Brunswick City Band (conductor, Hugh Niven) Overture, "The Scottish Lion" (Verner). 8.10: Fred Butcliffe, tenor—"An Evensong" (Blumenthal).

"From the Land of the Sky Blue Water" (Ondman).

"Blue Water" (Cadman).

"A Cradle Song" (Kreissler).

8.20: Billie King, solo at the piano.

8.32: Brunswick City Band—

Selection, "Recollections of Carl Rosa" (Round).

8.44: A special programme has been arranged.

10.15: Brunswick City Band—

Selection, "Down on the Mississippi" (Rimmer).

10.25: Fred Sutcliffe, tenor—"I Hear You Calling Me."

"At Dawning" (Cadman).

10.32: Billie King—

Some more songs at the piano.

10.40: Brunswick City Band—

Cornet solo, "Ora Pro Nobis" (Piccolomini).

March, "Perseverance" (Greenwood).

10.50: British official wireless.

Weather information.

11.0: Linn Smith's Hour of Syncopealton.

12.0: God Save the King.

3DB

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

MORNING SESSION.

10 a.m.: Time signal; orchestra, 'cello, and songs. 10.30: An Octet and Songs. 11.0: Bands and Baritone. 11.30: Chamber music. 12.0: Close down.

EVENING SESSION.

6.30: Billy Bunny's Children's Hour. 6.0: Requests. 6.25: What's On at the Theatres and Movies. 6.27: Radio Movie Club. 6.30: Sporting results. 6.45: Latest releases. 7.30: Symphony and songs. 8.0: Light Orchestral and Glee Singers. 8.30: Celebrity recordings. 9.0: Coon Songs and Banjo. 9.30: The music of Wagner. 10.0: Orchestral and Vocal. 10.30: Slumber music. 10.40: News. 10.45: God Save the King.

4QG

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

EARLY MORNING SESSION.

7.43 to 8.30: See Friday.

NO MORNING SESSION.

NO MIDDAY TRANSMISSION.

AFTERNOON SESSION.

3.0 to 4.30: See Friday.

EARLY EVENING SESSION.

6.0 to 7.30: See Friday.

NIGHT SESSION.

8.0: The Studio Orchestra—(Conductor, A. R. Featherstone). Overture, "Morning, Noon, and Night" (Von Suppe).

8.10: Monument and Harrow, entertainers.

8.25: George Williamson, tenor—"Come to the Fair" (Martin).

"Bonnie Mary of Argyll."

8.34: The Studio Orchestra—

Selection, "The Belle of New York."

8.45: Harry Collins and Tom Mullar.—

In a humorous sketch.

9.0: Metropolitan weather forecast.

9.2: Berenice Berg.—

In popular numbers.

9.9: Mrs. C. Williams, violin solo (accompanied by the Studio Orchestra).

9.15: The Studio Orchestra—

Three-quarters of an hour's dance music.

10.0: News supplied by the metropolitan morning dailies; weather information; close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 469 metres).

AFTERNOON SESSION.

12.0: Chimes. 12.1: Selections for Williamstown races. 12.3: Probable starters and selections for Victoria Park races. 12.15: General news service. 12.45: Recordings. 1.1: Williamstown race results. 1.15: Victoria Park riders and positions for Eastwood Hurdle, 2 miles. 1.20: Musical interlude. 1.30: Victoria Park, running description of Dequetteville Stakes, 2.15: Musical interlude. 2.35: Victoria Park riders and positions for Mayor's Mile. 2.40: Williamstown races. 2.50: Victoria Park, running description of Mayor's Mile. 2.55: League football. 3.0: Resume of Williamstown and Victoria Park race results. 3.2: Description of League football. 3.17: Victoria Park riders and position for Grand National Steeplechase, about 3 miles. 3.22: League football. 3.30: Victoria Park, running description of Grand National Steeplechase. 3.35: League football. 3.45: Williamstown race result. 3.45: Victoria Park riders and positions for Mitcham Weiler, 1 mile. 4.1: Resume of Williamstown and Victoria Park race results and League football results. 4.4: League football. 4.10: Victoria Park, running description of Mitcham Weiler. 4.15: League football. 4.30: Williamstown race results. 4.35: Victoria Park riders and positions for Corporation Handicap, 4 furlongs. 4.40: League football. 4.50: Victoria Park, running description of Corporation Handicap. 4.55: League football. 6.5: Resume of Williamstown and Victoria Park race results and final League football scores. 8.10: Close down.

EVENING SESSION.

6.0: Chimes. 6.1: Resume of sporting results. 6.3: Birthday greetings, correspondence, songs and stories by "Auntie Peggy." 6.30: Dinner session. 7.0: Birthday League greetings. 7.10: Rev. G. E. Hale, B.A., will speak on "Are We Mostly Fools?" 7.25: Mr. C. G. Riley on "Items of Interest." 7.40: 5CL's sporting service, including Victoria Park and Williamstown race results, League football scores, country sporting, open amateur golf championships, Australia results, Soccer (three grades), lacrosse results, ladies and gentlemen's hockey, cycling, athletics, and other sporting results.

NIGHT SESSION.

8.0: Chimes. 8.10: Holden's Silver Band—Conducted by Oswald Summerton. March, "Southern Cross" (Code). Waltz, "Over the Waves" (Roais). Song, "Sunshine" (Addison). 8.20: Stanley Stevens, musical saw—"My Task." "The Paradise in Mother's Eyes" (Sheard). 8.27: Rupert Hazell and Elsie Day. 8.37: Holden's Silver Band—"Intermezzo, 'The Wedding of the Rose'" (Jessel). Song, "Chanson Triste" (Tschakaloff). 8.45: M. Dayne Roland, Whispering Baritone. 8.52: Holden's Silver Band.—Flugel solo, "Adieu" (Schubert). Cornet and Euphonium duet, "Garden of Happiness" (Wood). 9.1: Overseas grain report. 9.2: Extracts from the "Advertiser." General news service. 9.8: Holden's Silver Band—Selection, "Faust" (Gounod). 9.18: Norman Morphet, tenor—"Wings" (Zaner) (Jones). "Maire, my Oirl" (Altken). 9.25: Stanley Stevens, musical saw—"When the Silvery Colorado Wends Its Way" (Rossiter). "A Perfect Day" (Bond). 9.31: M. Dayne Roland, Whispering Baritone. 9.38: Holden's Silver Band—Characteristic, "March of Mannikins" (Fletcher). Intermezzo, "After the Sunset" (Jones). March, "Thin Red Line" (Allford). 9.48: Rupert Hazell and Elsie Day. 9.56: Holden's Silver Band—Trombone solo, "When Other Lips." Soprano cornet, "Cavalleria Rusticana" (Mascagni). 10.0: Norman Morphet, tenor—"Daano" (Collet). "My Little Banjo." 10.8: Holden's Silver Band—Selection, "Fox and Hounds" (Rimmer). 10.15: 5CL's sporting service, including Williamstown and Victoria Park race results, League football scores, country sporting, open amateur golf championships—Australia results, Soccer (three grades), lacrosse results, ladies' and gentlemen's hockey, cycling, athletics, and other sporting results. 10.50: Recordings. 11.0: Close down.

6WF

Commonwealth Government Broadcasting Station, Perth (Wavelength, 100 metres).

10.0: Gramophone records. 11.0: Close down. 12.0: Racing anticipations. 12.7: Pianoforte solos, by Miss Audrey Dean. 12.44: Markets; news, etc. 1.0: Time signal; weather bulletin. 1.3: Close down. 3.30: Soccer—Race results and quarter-time scores of the football matches; musical items from the Studio. 5.30 approx.: Close down. 6.45: Bed-time stories by Auntie Amy. 7.12: Sports results. First weather bulletin. 7.45: Music. 8.1: 8.30: Dance music. 8.50: Late news; ships within range; late weather bulletin. 10.30: Close down. 10.4.5 metres transmission—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres commencing at 6.45 p.m.

7ZL

Tasmanian Broadcasters Pty., 55 Elizabeth St., Hobart (Wavelength, 516 metres).

11.30 a.m.: Record recital. 11.34: Midlands weather forecast. 11.35: Record recital. 11.55: Tasmanian stations 9 a.m. weather report. 12.6: Chimes. 12.1: Sporting information, ships within wireless range; mail notices; housewives' guide. 12.8: Record recital. 12.29: Announcements. 12.33: Record recital. 12.55: "Mercury" news service; British official wireless news; railway station produce sales held at children's; Record recital. 1.30: Close down. 2.45: Transmission from the North Hobart Oval, football match. New Town v. Lefroy, described by Sid Jones. 4.56: All sporting results to hand. 5.0: Close down. During the afternoon the results will be given of the Tasmanian Ten Thousand Metres Cross Country Championship, held at Elwick racecourse, Elwick, Hobart. 6.0: All sporting results to hand. 6.15: Children's Hour with "Uncle David." 7.15: News session. 7.25: Transmission from the Ten Thousand Tasmanian Cross Country Championship will speak to listeners on his impressions of the race. 7.30: Belle St. Lawrence will continue her travel talks. 7.45: J. M. Counsel will speak on "Europe Affairs." 8.0: Chimes. 8.1: Record recital. 8.15: Transmission from the Theatre Royal; State amateur boxing championships, described by George Collis. 9.30: News session. 9.45: Boxing (continued). 10.20: Close down.



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Local Programmes, Sun., Aug. 25

2FC

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

THE CHURCH PROGRAMME—10 a.m. to 11.30 a.m.

10:0: Announcements.
10:5: Studio music.
10:30: This morning's news.
10:35: British official press.
10:45: Music leading to
11:0: From St. Jude's Church of England, Randwick; morning service, conducted by Rev. George Playn.
12:5: Music.
12:30: Close.

AFTERNOON SESSION—3 p.m. to 4.30 p.m.
3:0: From the Lyceum Hall, Pitt Street, musical programme, by Bennett North.
4:30: Close.

EVENING PROGRAMME—6 p.m. to 10.30 p.m.

6:0: John Lemmone and Signor Torzillo, harp and flute.
6:10: Ernest M'Kinlay, tenor.
6:17: Signor Torzillo, harpist.
6:25: John Lemmone, flautist.
6:32: Ernest M'Kinlay, tenor.
6:40: Professor Bridgen will speak on "The Economist in Australian Affairs."
7:0: An hour of Jewish music.
8:0: Concert programme, arranged by Albert Cazabon, musical director of the Prince Edward Theatre.
10:0: Meditation music.
10:30: Close.

2BL

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

MIDDAY SESSION—10.55 a.m. to 3 p.m.

11:05: Announcements.
11:0: From Fullerton Memorial Presbyterian Church—Morning service, conducted by Rev. G. Cowie, B.A., Organist, Mr. Ronald Marston, A.T.C.L., L.L.C.M.—
Organ Voluntary—Easter Hymn, from "Cavalleria Rusticana" (Mascagni).
Doxology—Unannounced.
Scripture Sentences and Prayer of Invocation.
Praise—"All People That On Earth Do Dwell."
Scripture Lesson.
Bass solo, Mr. Raymond Beatty—"Arm Arm, Ye Brave," from "Judas Macca-beus" (Handel).
Talk to the Kiddies
Prayer.
Hymn—"Jesus Bids Us Shine."
Announcements and Offertory.
Organ Voluntary, "A Morning Song" (Meale).
Vocal Duet—"Break Diviner Light" (Al-listen)—Misses Margaret and Maud Barnfather.
Lord's Prayer.
Hymn—"Rock of Ages."
Sermon—Rev. Geo. Cowie.
Hymn—"Rescue the Perishing, Care for the Dying."
Benediction.
Organ Voluntary—"Hallelujah Chorus," from "The Messiah" (Handel).
12:15: Musical items.
12:20: News from "Sunday Sun."
12:28: Studio presentation of a specially arranged programme of music.
2:15: The "Cheer-up" Society, conducted by Mr. Frank Grose.
2:30: Half an hour's music from the Great Masters.
3:0: Close.

LATE AFTERNOON SESSION—4.30 p.m. to 6 p.m.

4:30: From the Arcadia Theatre, Chats-wood—
Organ recital, arranged by Nicholas Robins.
4:50: From the studio—Lance Jeffree, tenor
(a) "How Vain is Man" (Handel).
(b) "Where'er You Walk" (Handel).
4:57: From the Arcadia Theatre, Chats-wood—
Organ recital, arranged by Nicholas Robins.

2GB

Theosophical Broadcasting Station, 29 High St., Sydney (Wavelength, 316 metres).

MORNING SESSION

9:0: Address by Miss Mary Rivett "On harmonising the Intellectual and the Spiritual." 9:30: Address by Mr. Victor E. Cromer, "Tuning In to God." 10:0: Music from Studio. 10:15: Organ music from St. Alban's Church, Regent St., Sydney. 10:30: Morning service from St. Alban's Church. 12 noon: Music from Studio. 12:30: Close down.

AFTERNOON SESSION

3:0: Musical session. 5:30: Children's session by Uncle George.

NIGHT SESSION

7:0: Lecture from Adyar House. 7:30: Lecture from St. Alban's Church. 8:0: Music from studio. 8:15: Concert by courtesy of Messrs. Sutons, Ltd. Player piano solo. 8:23: Miss Florence Gordon, contralto. 8:30: Mr. Gregory Valentine, violinist. 8:37: Mr. Austin Punch, baritone. 8:45: Miss Gladys Aubin, soprano. 8:52: Player piano solo. 9:0: Weather report. 9:1: Miss Florence Gordon, contralto. 9:18: Mr. Gregory Valentine, violinist. 9:16: Mr. Austin Punch, baritone. 9:23: Miss Gladys Aubin, soprano. 9:28: Address by Mr. Victor E. Cromer, "Do we believe the great physician." 9:45: Close down.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St., Sydney (Wavelength, 267 metres).

10:30 a.m.: Music and request numbers
1 p.m.: Close down. 5:30: Children's hour, conducted by Uncle Jack. 6:30: Close down.
7:0: Musical programme. 10:30: Close down.

2UE

Broadcasting Station 2UE, Storey Street, Maroubra Junction, Sydney (Wavelength, 293 metres).

11:0 a.m.: Mass from St. Mary's Church, Ridge Street, North Sydney. 12:15 p.m.: Orchestral and vocal music from Radio House.
1:0: Announcements; close down. 6 p.m.: Music from Catholic Studio. 6:5: Session arranged by Rev. Father T. Walsh, S.J., 6:30: Announcements. 6:33: "Question Box" talks arranged by Rev. Dr. L. Rumble, M.S.C.
7:30: Announcements. 7:32: Evening devo-tions from St. Mary's Church, North Sydney.
8:15: Studio announcements. 8:17: Vocal and instrumental items. 8:30: Overture, "Pique Dame." 8:40: Orchestral and vocal concert. 10:15: Announcements; close down.

Wireless Talks From Station 2GB

SUNDAY, AUGUST 25TH

- 9 a.m.—MARY RIVETT;
On Harmonising The Intellectual and The Spiritual
- 9.30 a.m.—VICTOR E. CROMER:
Tuning In To God.
- 9.30 p.m.—Do We Believe The Great Physician?

These talks deal with the workings of certain finer forces, forces which religious thought has agreed to term "spiritual," but whose nature we believe this age must scientifically understand.

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Interstate Programmes, Sun., Aug. 25

3LO

Australian Broadcasting Co. (39A Russell St., Melbourne (Wavelength, 371 metres).

MORNING SESSION.

10.0: Melbourne Observatory time signal. 10.1: Birthday greetings. 10.15: A special programme of reproduced music. 10.40: British Official wireless news, and items of interest. 10.44: Express train information. 10.49: Broadcast of St. Paul's Cathedral. 11.0: Morning service from the Unitarian Church, Grey Street, East Melbourne. Preacher, Rev. William Bottomley. Subject: "Proving all things." 12.30: Close down.

AFTERNOON SESSION.

3.0: Pleasant Sunday afternoon service from Wesley Church Central Mission. Speaker: The Right Hon. the Prime Minister, S. M. Bruce, P.O., M.H.R. 4.30: Close down.

THE CHILDREN'S CORNER.

6.0 to 7.0: Round the fireside with "Billy Bunns" and "Brother Bill."

EVENING SESSION.

7.0: The Oremoa Trio—
"Opus II in B Flat."
"Allegro, Con Brio" (Beethoven).
"Cacelo."
"Variations."
7.19: Beryl Hallborough, soprano—
"Star Vicino" (Salvatorosa).
"Our Diocesi" (Lotti).
7.26: Cecil Parkes and May Broderick, violin and piano—
"Sonata in A Major" (Caesar Franck).
"Fantasia-Recitative."
"Finale."
7.41: Beryl Hallborough, soprano—
"The Romance" (Debussy).
"Bonjour Suzon" (Delibes).
7.48: The Oremoa Trio—
"Romance" (Hummel).
"Menuet" (Mozart).
"Gavotte" (Martini).
"Rondo" (Parker-Mozart).
7.58: What's on the air.

NIGHT MUSICAL SESSION.

8.0: Sunday night Musical Ensemble. Stan Porter and his orchestra—
Overture, "The Beautiful Galatea" (Suppe).
A. King, trumpet solo—
"Floods of Spring" (Rachmaninoff).
Orchestral accompaniment by Stan Porter and his orchestra.
Vocal number—Selected.
Request item.
Frank Lanterman at the organ.
String quartet—Messrs. Norri, Challenger, Whittingham, Howley—
"O Minor" (Grieg).
Second Movement, "Romance."
Third Movement, "Intermezzo."
Stan Porter and his orchestra—
(a) "Serenade" (Chaminade).
(b) "The Wiping Hour" (Zamecnik).
Chas. M'Fee, saxophone solo—
"Alien" (Saulis).
Orchestral accompaniment by Stan Porter and his orchestra.
Request item.
Bob M'Queenen and his band—
(a) "An Indian Medley."
(b) "Girl of My Dreams."
(c) "The Man I Love."
Frank Lanterman, organ solo.
Arved Norri, violin solo.
Carl Bartling, at the piano—
"Mazurka" (Chopin-Kreisler).
Request item.
Stan Porter and his Orchestra—
(a) "Summer Nights" (Roberts).
(b) "Autumn and Winter" (Glazounov).
Cliff Morgan, xylophone solo—
"Log Cabin Blues."
Frank Lanterman, organ solo.
Bob M'Queenen and his Band—
Melody number, "Out of the Dawn."
Request item.
Stan Porter and his Orchestra—
Orchestral Suite—
(a) "Morning" (104 metres).
(b) "Peer Gynt."
(c) "Death of Ase."
(d) "Amir's Dance."
(e) "In the Hall of the Mountain King."
10.0: British official wireless news.
Items of interest.
10.20: Special recital of reproduced music.
10.30: God Save the King.

3DB

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

AFTERNOON SESSION.

3.0: Chamber music. 4.30: Close down.
EVENING SESSION.
6.30: Billy Bunns' Children's Hour. 7.0: Request night. 10.0: Close down.

4QG

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

MORNING SESSION.

11.0: The complete morning service will be relayed from St. Andrew's Presbyterian Church. 12.30: Close down.

AFTERNOON SESSION.

3.15: The band concert provided by the Brisbane Citizens' Band will be relayed from the Botanic Gardens. 4.30: Close down.

EARLY EVENING SESSION.

8.30: Greetings to little listeners and replies to letters.

NIGHT SESSION.

7.0: The complete evening service will be relayed from St. Andrew's Presbyterian Church.
At the conclusion of the church service the concert by the Brisbane Municipal Concert Band will be relayed from Wickham Park.
9.30: Close down.
Vocal recital by Rex Harrison.
At the conclusion of the band concert a vocal recital by Rex Harrison (baritone) will be broadcast.
9.30: From the Studio—
Rex Harrison, baritone—
"Blow, Blow, thou Winter Wind" (Sergeant).
"Mine Enemy" (Oiga Rudd).
Mrs. Woolmer, pianist—
Selected.
Rex Harrison, baritone—
"A Song of Thanksgiving" (Allitsen).
"Rolling Down to Rio" (Ed. Germain).
H. Scott MacCallum, violinist—
Selected.
Rex Harrison, baritone—
"The Blind Poughman" (Coningsby Clarke).
"The Trumpeter" (Arlie Dix).
Close down.

5CL

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

MORNING SESSION

10.45: Carillon of bells from Adelaide Town Hall. 11.1: service from St. Peter's Cathedral; minister, Rev. E. F. Finnis; organist, Mr. J. M. Dunn. 12.10: British official wireless news. 12.15: Close down.

AFTERNOON SESSION

3.0: Chimes. 3.1: A pleasant Sunday afternoon service from the Glenelg Congregational Church. 4.0: Close down.

EVENING SESSION

6.0: Chimes. 6.1: Birthday greetings. 6.45 Church choir numbers. 7.1: Service from Maugham Methodist Church, Franklin Street; minister, Rev. W. H. Cann; organist, Mr. M. Finlay.

NIGHT SESSION

8.20: Announcements.
8.30: Symphony Orchestra (conducted by Lionel Blyth)—
Overture—"The Bohemian Girl" (Balfe).
8.40: Linda Wald, soprano—
"Long Ago" (Oley Speaks).
"Thy Remembrance" (Cohen).
8.47: Elsie Quick, Violinist.
8.54: The Madrigal Singers (under the direction of Horace Perkins)—
"Ave Verum."
"In That Hour of Softened Splendor."
9.1: Symphony Orchestra—
"Bells Across the Meadow" (Ketelby).
"In a Monastery Garden" (Ketelby).
9.8: Norman Morphett, Tenor—
"You in a Gondola" (Clarke).
"Trees" (Rasbach).
9.18: G. Emery, Clarionist.
9.23: The Madrigal Singers (under the direction of Horace Perkins)—
"Soldiers' Farewell."
"The Rosary" (Nevin).
9.30: Symphony Orchestra—
"Light Cavalry."
9.40: Mr. Wilfred Thomas will speak on—
"Some Songs of the Seven Seas."
9.52: General news service; announcements. 10.0: Close down.

6WF

Commonwealth Government Broadcasting Station, Perth (Wavelength, 100 metres).

10.25: "Adapting of receivers to the new wavelength of 6WF." 11.0: Morning service. 12.15: Close down. 3.30: Tune in. 3.35: Music and song. 4.30: Close down. 6.45: Tune in. 6.48: Bedtime stories for the kiddies. 7.15: Music. 7.30: Evening service. 8.45: After church concert, by the Perth City Band. 10.5: Close down. 104.5 metre transmission.—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres, commencing at 6.45 p.m.

7ZL

Tasmanian Broadcasters Pty., 95 Elizabeth St., Hobart (Wavelength, 516 metres).

11.0: Morning service from St. David's Cathedral, Murray Street, Hobart. 12.15: Close down. 3.30: From the Studio, a concert programme arranged by the Derwent Concert Band. 4.30: Close down. 8.15: Children's chorus singing; conductor, Trevor M. Morris. 8.45: Bertha Southey Bramhall will read a poem to the wee folk, "A Happy New Year to Mr. Thimth." 7.0: Evening service from Chalmers Presbyterian Church, Bakers Street, Hobart. 8.25: From the Studio, a programme of sacred and classical music arranged by J. M. Counsel. 9.45: News session. 9.50: Close down.



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U2.

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Local Programmes, Monday, August 26

2FC

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

EARLY SESSION—7 to 8.15 a.m.

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

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

10.30: Announcements.
10.32: A.B.C. racing observer.
10.45: Edgar Stone at the grand organ.
11.0: Household helps, a talk on cooking by Miss Ruth Furst.
11.10: Cables, A.P.A. and "Sun"—"Herald" news service.
11.15: The Studio Orchestra.
12.0: "Big Ben"; Stock Exchange, and metal quotations.
12.2: Fiction talk.
12.20: Midday weather forecast and weather synopsis; special produce market session for the man on the land, supplied by the State Marketing Board.
12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

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

THE RADIO MATINEE—2.30 to 4.30 p.m.

2.30: The Radio Matinee Orchestra.
2.45: Gwladys Rowling, popular vocalist—
(a) "You Were Meant for Me" (Brown).
(b) "Think of Me Thinking of You" (Wimbrow).
(c) "For Old Times' Sake" (De Sylva, Brown, and Henderson).
2.52: Margot Toner, pianist.
3.2: The Radio Matinee Orchestra.
3.15: William Bowyer, basso.
3.22: May Nancarrow, in two radio sketches—
(a) "The Obstructive Hat" (Anstey).
(b) "A Charlady's Confidences" (Newman).
3.32: The Radio Matinee Orchestra.
3.45: Gwladys Rowling, popular vocalist—
(a) "Some Sweet Day" (Shilkret and Pollack).
(b) "Ten Little Miles from Town" (Schoebel).
(c) "Just a Night for Meditation" (Leons, Young, and Pollack).
3.52: Margot Toner, pianist.
4.2: May Nancarrow, in two radio sketches—
(a) "The Song of the Market-place" (Buckham).
(b) "The Clock Speaks" (Anonymous).
4.12: William Bowyer, basso.
4.19: The Radio Matinee Orchestra.
4.30: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

5.45: Kiddies' "Good-night" stories, told by the "Hello Man" and Aunt Elly.
6.45: The National Broadcasting Orchestra.
7.30: A.B.C. sporting service.
7.37: Special country session; Stock Exchange resume; markets; late news service from the "Sun."
7.58: Announcements.

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

8.0: G.P.O. chimes.
"CAVALLERIA RUSTICANA."
A production by Frank Rigo—
National Broadcasting Orchestra, conducted by Horace Keats.
Sydney Harmonic Choir.
8.45: Eleanor Ross will render
"The Dwarf's Tragedy" (Alfred Noyes).
9.5: The country man's weather session—
(a) New South Wales forecasts.
(b) Inter-State weather synopsis.
9.6: Iris de Calros-Rego, pianist—
(a) "Berceuse" (Chopin).
(b) "Scherzo in C Sharp" (Chopin).

9.24: Norman Hestelow, basso—
(a) "Le Cor" (Slegler).
(b) "The Floral Dance" (Moss).
9.34: Victor M'Mahon, flautist—
(a) "Andalouse" (Pessard).
(b) "Bolero" ("Spanish Dance") (Pessard).
9.45: The National Broadcasting Orchestra.
10.0: Sydney Harmonic Choir—
(a) "The Bridal Chorus" (Cowen). Part Song.
(b) Madrigal, "All Creatures Now Are Merry-minded" (Benet).
(c) Ladies' chorus, "The Two Clocks" (Rogers).
10.15: Announcements; official weather forecast.
10.20: Romano's Dance Orchestra, conducted by Bennie Abrahams.
11.30: Close. National Anthem.

2BL

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

OPENING SESSION—8.15 to 11 a.m.

8.15: Music for every mood.
8.45: Meteorological data for the country.
8.50: Light music and songs.
9.30: British Official Wireless news.
9.35: New music.
10.5: News from "Daily Telegraph Pictorial."
10.10: The Ladies' Club Hour—The Australian Women's A.B.C. Association, conducted by Miss Gwen Varley.
10.30: The 2BL Studio Orchestra.
11.0: Close.

MIDDAY SESSION: 12 noon to 2.30 p.m.

12.0: Announcements.
12.2: The National Broadcasting Orchestra.
1.0: Afternoon news from the "Sun."
1.5: Studio music.
1.15: Women's "Interest Talk."
1.30: The Traders' "Selling the Set" Music
2.0: J. Knight Barnett.
2.12: Close.

AFTERNOON ENTERTAINMENT—2.30 to 5.45.

2.30: Business Efficiency Talks.
2.45: "The Magic Carpet." A Story of Travel and Adventure.
3.0: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
3.12: From the Studio: Charles Lawrence and Rae Foster, in duets.
3.22: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
3.32: From the Studio: Carlton Fay, pianoforte solo—
(a) "Love's Refrain" (Gerard).
(b) "Rhapsodie Mignonne" (Koeller).
3.40: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
3.50: From the Studio: Roger Jones, baritone—
(a) "Your Smile" (Forster).
(b) "Let me Sit in Your Garden" (Russell).

3.57: Carlton Fay, Pianoforte Solo—
(a) "Valse in A Flat" (Chopin).
(b) "Impromptu, A Flat" (Schubert).

4.5: Charles Lawrence and Rae Foster, duets.
4.15: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
4.22: From the Studio: Roger Jones, baritone—
(a) "Dear Little Star" (Forster).
(b) "Through all the Days to Be" (Melville-Hope).

4.30: From the Oriental Cafe: Sydney Simpson's Syncopaters in dance music.
4.45: "The Trade Hour."
5.45: Close.

THE DINNER HOUR.

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

10-NIGHT'S PRESENTATION—8 to 10.30.
8.0: G.P.O. Chimes.
The Arcadian Male Quartet.

8.10: Frank Ryan, entertainer—
"The Taxi-Driver's Story" (Hastings).

8.20: Bertini and Powell, instrumentalists—
(a) "Czardas" (Monti).
(b) "Was it a Dream?"

(c) "Glad Rag Doll" (Milton Ager).
8.30: From the Stadium—
Description of the wrestling contest, by the A.B.C. Wrestling Expert.

10.0: From the Studio—
The Arcadian Male Quartet.

10.8: Frank Ryan, entertainer—
(a) "The Pack of Cards" (Anon).
(b) "Old Sweetheart of Mine" (Riley).

10.18: Bertini and Powell, instrumentalists—
(a) "Love, Take My Heart" (Meyer).

(b) "Impression of Eugene Stratton in Lily of Laguna" (Leslie Stuart).
(c) "Our Own Version of Moonlight and Roses" (Lemare).

(d) "There's a Rainbow" (Al Jolson).
10.25: Official weather forecast, metropolitan and country.
Late news from the "Sun."

10.30: Close. National Anthem.

2GB

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

AFTERNOON SESSION

2.0: Music. 2.5: Women's Radio Service by Mrs. Dorothy Jordan. 2.50: Movie News. All. 3.0: Music. 3.30: Close down.

NIGHT SESSION

5.30: Children's session by Uncle George.
7.0: Music. 7.45: Feature story. 8.0: Miss Heather Kinnaird, contralto. 8.7: Instrumental quintette. 8.15: Mr. Leslie Herford, baritone. 8.22: Symphony orchestra. 8.30: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 8.35: Miss Elsie Peerless, soprano. 8.45: Address. 9.0: Weather report. 9.3: Instrumental trio. 9.13: Miss Heather Kinnaird, contralto. 9.23: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 9.28: Symphony orchestra. 9.38: Mr. Leslie Herford, baritone. 9.48: Instrumental trio. 9.53: Miss Elsie Peerless, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Faling's Building, Ash St., Sydney (Wavelength, 267 metres).

EVENING SESSION

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

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 240 metres).

MORNING SESSION.

10.0: Tune in to the ticking of the clock. 10.3: Popular fox trots. 10.15: Hawaiian steel guitar selections. 10.30: Request numbers. 10.50: Vocal items. 11.0: A few laughs. 11.5: Pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Where to go to-night. 12.0: Closing announcements.

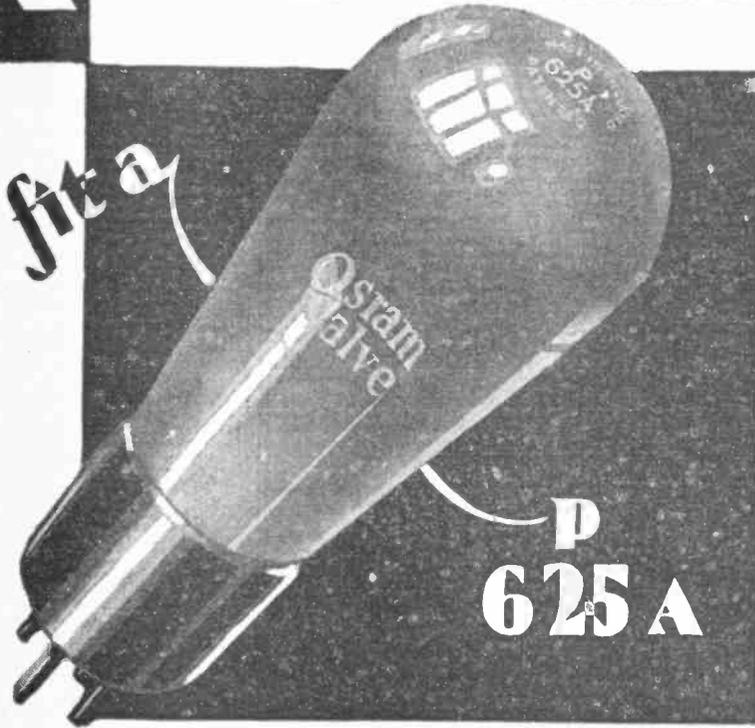
CHILDREN'S SESSION.

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

EVENING SESSION.

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

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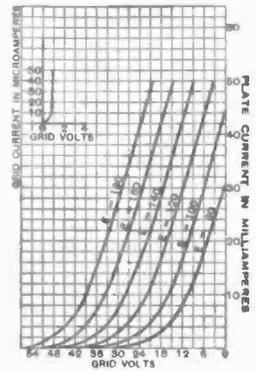
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Interstate Programmes, Monday, August 26

3LO

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

EARLY MORNING SESSION

7.0 to 8.15: See Friday.

MORNING SESSION

10.30: Current happenings in sport, by Mel. Morris. 10.45: A.B.C. Studio Orchestra, with Melba Stocks, mezzo contralto. 12.0: Melbourne Observatory time signal. 12.1: Orchestra (continued). 12.15: News service: British official wireless; Corn Exchange report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION

1.0: Melbourne Observatory time signal; Stock Exchange information; meteorological data; weather forecast for Victoria, New South Wales, South Australia, and Tasmania; ocean forecast. 1.30: Relay from Constitutional Club luncheon; speaker, Senator R. D. Elliott.

EDUCATIONAL SESSION

2.0: Boys and girls of other days, Mr. N. D. Harper, M.A., Dip. E. 2.15: Musical interlude. 2.25: Forecasting the weather, Mr. H. Barkley. 2.40: Musical interlude. 2.45: Our Australian writers—(4) Miss B. E. Baughan, Mr. Percival Serle.

THE RADIO MATINEE

3.0: National Broadcasting Orchestra—"Andante Cantabile from String Quartette" (Tschalkowsky); "Serenata" (Tarenghi). 3.10: Eileen Pascoe Webb, contralto—"Elegische Ode" (Brahms), "To Music" (Schubert), "Easter Hymn" (Bridge). 3.17: A.B.C. Quartette. 3.30: A one-act play—"Forever." A dramatic episode in one act by Emmie L. South for Australian stage. Cast, Judith Mallory, Miss Betty Landau; Douglas Weston, a young artist, Frank Pearson. Scene, Mrs. Mallory's flat. Time, The present; just before 9 a.m. Moods in mirth and music. 3.45: N.B.O. Orchestra—Overture, "Winkly Fair" (Fletcher). 3.55: William Perryman, tenor—"What a Wonderful World It Is" (Lohr); "Selected." 4.2: Winks Smith, xylophone. 4.10: "The Humorists"—a concoction of comedy with music. 4.20: N.B.O. Orchestra—Selection, "Belle of New York" (Kerker). 4.30: Close down.

THE CHILDREN'S CORNER

5.45: Travel on the Magic Carpet with "Billy Bunny" and Winks Smith on the xylophone. 6.15: Musical interlude. 6.20: For the older boys and girls—"Boy Scout Drama." 6.35: Musical interlude. 8.40: Public school activities, Mr. E. C. H. Taylor. 6.55: Musical interlude.

COUNTRYMAN'S SESSION

7.0: Melbourne Observatory time signal. 7.1: Stock Exchange information; Corn Exchange report; Assoc. Stock and Station Agents official reports; Wool Exchange report; mines and metals; fish and rabbit prices; farm and dairy produce report, supplied by the Inter-State Dairy Produce Committee; wholesale fruit prices, by the Wholesale Fruit Merchants' Association; retail prices of fruit, supplied by the Victorian Fruitgrowers' Association; citrus fruit prices, supplied by the Citrus and Citrus Association; weather synopsis; river reports; rainfall data.

LECTURETTES

7.25: "Recent Books of Note," Mr. A. A. Phillips, B.A. 7.40: News. 7.45: "Recent Discoveries and Inventions," (3) Unplintable Glass.

NIGHT SESSION

8.0: Melbourne Observatory signal. National Broadcasting Orchestra—Selection, "Traviata" (Verdi). 8.10: Gertrude Hutton, contralto—"Softly Awakes My Heart," "Samson and Delilah" (Glinka). 8.17: Edouard Lambert, violin—"Meditation," "Thais" (Massenet). 8.23: Trio—"Faust" (Gounod). Sefo Arnat, soprano. Horace White, tenor. J. Alexander Browne, baritone. 8.30: N.B.O. Orchestra—Selection, "La Rene de Saba" (Gounod). 8.40: J. Alexander Browne, baritone—"E'en Bravest Heart" (Faust). "Her Bright Smile," "Il Trovatore" (Verdi). 8.47: Duet from "Carmen." Sefo Arnat, soprano. Horace White, tenor. 8.54: Tasma Tierman, cello—"Chanson Indou" (Rimsky-Korsakoff). 9.0: Quartette from "Rigoletto" (Verdi). Sefo Arnat, soprano. Gertrude Hutton, contralto. Horace White, tenor. J. Alexander Browne, baritone.

9.10: The Repertory Theatre Company present "The Cobler's Shop," a comedy in one act, by Charles Forrest. Produced by Frank D. Clewlow. This is a little play of a period designated by the author as "many years ago," actually soon after Waterloo. It is a comedy of village life in the south of England at a time when there was a carefree, buccolic spirit in the air, which is now, unhappily, seldom found in the play (in order of speaking):—
Either Umbley, the village cobbler; Howard Smith David Doubleday, Terence Crisp. Della Umbley, daughter of Ether, Lucy Aron. Corporal Gideon Windy, Frank D. Clewlow. Seturak Doubleday, a widow farmer, Irene Webb. The scene is Ether Umbley's shop. 9.40: N.B.O. Orchestra—Selection, "Ballad Memories" (Baynes).

9.50: J. and G., entertainers—

"Entre Nous." 10.0: Gus. Quinn—"Radio Magic." 10.10: N.B.O. Orchestra—Selection, "Chocolate Soldier" (Strauss). 10.20: British official wireless news; news service; meteorological information. 10.30: The "Rex" Dance Band. 11.30: God Save the King.

3DB

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

MORNING SESSION

11.0: Thelma Ready's orchestra, transmitted from the King's Theatre. 12.0: Community singing, conducted by Mr. G. J. Mackay. 12.45: Close down. 2.15: Bournemouth Municipal Orchestra. "Zampa Overture." 2.30: John Goss (baritone). "Watch Him Along, Johnny." 3.0: Atwater Kent Radio Hour, sponsored by A. G. Healing, Ltd., and E. T. Muir. 4.0: Close down.

EARLY EVENING SESSION

5.30: Hubert Eissell (tenor). "Columbine's Garden." 6.0: Children's Hour, with Billy Bunny and the Queen of Hearts. 6.30: What's on at the theatres and movies, "Carriote Club activities." 6.35: Paul Whiteman and his orchestra. "Cradle of Love." 7.0: Jeanne Gantier (violin). "Chant Hindoue." 7.15: Market reports. 7.30: Debroy Somers' Band. "Voice Memories."

EVENING SESSION

8.0: The Aeolian Company's session. 8.30: Ruth Etting. "I'll Get By." 9.0: Frank Beaurepaire's programme. 9.30: Norman Long (entertainer). "Side By Side." 10.0: Dajos Bela Orchestra. "Vienna Blood." 10.30: Sarah Jozsi Orchestra. "Monastery Bells." 10.40: News. 10.45: God Save the King.

4QG

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

For day sessions see Friday. 7.45: Lecturette, "A Popular Breakfast," by Mr. E. J. Shelton, senior instructor in pig-raising.

NIGHT SESSION

8.0: The Studio Orchestra—"Homeward to You" (Coates). 8.8: Kennedy Allen—the ninth of a series of reviews of Shakespeare and his works. "Shakespeare's Handling of History." 8.13: Doris M'Innes (soprano)—"Homeward to You" (Coates). 8.24: Stanley Wardle (elocutionist)—"Salubrious Bill" (Peterson). 8.30: From the School of Arts—a short choral recital by the Brisbane Eisteddfod Choir, including:—Choral fantasia, "Tannhauser" (arr. Grainger). Irish air, "County Derry" (without words, arr. Grainger).

Madrigal, "Fair Orenska" (Wilbye). 8.50: From the studio—the Studio Orchestra—Valse, "Echoes of Spring" (Miles). 8.56: Doris M'Innes (soprano)—"Early in the Morning" (Phillips). 9.0: Metropolitan weather forecast. 9.1: The Rio Grande Serenaders—Ten minutes of Hawaiian music. 9.11: Monument and Harrow—Another argument. 9.29: The Studio Orchestra—"Rara" (Colonial Song) (Ball). 9.30: J. P. Cornwell (bass)—"The Highwayman" (M'Gowen). 9.35: The Rio Grande Serenaders—Hawaiian music. 9.40: A. Smith (tenor)—"Hark, Hark, the Lark!" (Schubert). 9.44: An organ record. 9.50: J. P. Cornwell (bass)—"Gardens in the Morning" (Donaldson). 9.54: The Rio Grande Serenaders—More Hawaiian music. 9.58: A. Smith (tenor)—"Mother of Mine" (Tours). 10.0: The Studio Orchestra—Fox trot, "The Hunt Club" (Tanbert). News supplied by the metropolitan dailies. Weather information. Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 469 metres).

11.15 to 2.0, see Friday.

MORNING SESSION

3.0 to 4.30, see Friday. 6.0: Chimes. 6.1: Birthday greetings. 6.10: Children's request numbers. 6.30: Piano-forte recital by Hans Bertman (blind pianist). 7.1: Radio day greetings: cycling notes and training hints—"How to Keep Fit," schedule of work to do, notes, by Hubert Opperman (Australia's champion cyclist). General market reports. 7.20: Under the auspices of the South Australian Agricultural Department, Mr. W. G. Bennett (lecturer on Veterinary Science, Roseworthy College) will speak on "Livestock in Fiji." 7.35: Entertainment by "The Twinkler."

NIGHT SESSION

8.0: Chimes. 8.10: Walter Barratt and his Maison Masters of Melody—"The National Federation" (South). "The Irish Savoy Medley" (Somers). "Carolina Moon" (Davis). 8.20: M. Dayne Roland, Whispering Baritone. 8.24: Walter Barratt and his Maison Masters of Melody—"Happy Humming Birds" (de Sylva). "Avalon Town" (Brown). "You're Wonderful" (Fields). 8.34: Rupert Hazell and Elsie Day. 8.42: Walter Barratt and his Maison Masters of Melody—"A Room with a View" (Coward). "I Faw Down and go Boom" (Brahm). "When Love Comes Stealing" (Rapee). "Marie" (Berlin). 8.56: Phyllis Gibbs, mezzo-soprano—"O Night of Stars and Splendour." 9.0: Chimes. 9.1: Meteorological information, including Senaphore tides. 9.2: Overseas grain report. 9.3: Extracts from "The Advertiser." General news service. 9.10: Walter Barratt and his Maison Masters of Melody—"O What a Night to Love." "The Kinkajou" (Tierney). "It Goes Like This." 9.20: M. Dayne Roland, Whispering Baritone—"In more popular numbers." 9.24: Walter Barratt and his Maison Masters of Melody—"Some Sweet Day" (Shikret). "Undereath the Russian Moon" (Gusman). "Rio de Janeiro" (Trucker). 9.34: Rupert Hazell and Elsie Day. 9.42: Walter Barratt and his Maison Masters of Melody—"Ho-Ho-Hogan" (Trucker). "Me and the Man in the Moon" (Leslie). "That's What I Call Keen" (Kahn). 9.52: Phyllis Gibbs, mezzo-soprano—"There's a Big Lot of Sunshine Coming." 9.56: Walter Barratt and his Maison Masters of Melody—"You were Meant for Me" (Brown). "Broadway Melody" (Brown). "Chiquita" (Wayne). "I'm on the Crest of a Wave" (de Sylva). 10.0: M. Dayne Roland, Whispering Baritone. 10.15: News session. 10.30: Walter Barratt and his Maison Masters of Melody—"Out of the Dawn" (Donaldson). "Mother, I Still Have You" (Jolson). "That's How I Feel About You" (Davis). "The Wedding of the Painted Doll" (Brown). "Dance of the Paper Doll" (Trucker). "Roses of Remembrance" (Cevelli). "I Love to Hear You Singing" (Haydn Wood). Request numbers. 11.0: G.F.O. chimes. Close down.

6WF

Commonwealth Government Broadcasting Station, Perth (Wavelength, 160 metres).

10.0: Gramophone records. 11.0: Close down. 12.30: Markets, news, etc. 1.0: Time signal. 1.1: Weather bulletin. 1.3: Panatroue Hour. 2.0: Close down. 3.30: Musical programme. 4.30: Close down. 6.45: Bedtime stories, by Uncle Duffy. 7.5: Light music. 7.30: Commercial information. 7.45: Talk, by Lieut.-Col. Le Souef, Director Zoological Gardens, South Perth. 8.0: Time signal. 8.1: First weather bulletin. 8.3: Programme by the "Specialty Hour." 8.50: Late news items; ships within range announcement. 10.30: Close down. 10.4: metre transmission.—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres, commencing at 6.45 p.m.

7ZL

Tasmanian Broadcasters Pty., 55 Elizabeth St, Hobart (Wavelength, 516 metres).

11.30 a.m.: Morning melodies. 11.34: Midland weather forecast. 11.35: Record recital. 11.55: Tasmanian stations 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information; mail notices; housewives' guide. 12.8: Record recital. 12.30: "Mercury" news service; announcement. 12.40: Record recital. 1.5: British official wireless news; railway auction sales. 1.10: Under the auspices of the "Come to Tasmania" Organisation, A. J. Honey will speak on "Tasmania for Tourists." 1.45: E. A. Roberts, of the Tasmanian Car Tourist Bureau, will speak on "Tasmania's Car Land." 2.0: Chimes. 2.1: Record recital. 2.5: Transmission from the Memorial Congregational Church, Hobart; a concert arranged by James Marsh. Artists: Misses Daisy Walters (soprano), Myra Gillon, Thomas Goward (bass), and James Marsh (organist). 3.30: News session. 9.45: Record recital. 10.0: Chimes. 10.1: Close down.

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Local Programmes, Tuesday, August 27

2FC

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

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
- 7.3: This morning's news from the "Daily Telegraph Pictorial."
- 7.8: Early-rising music.
- 7.45: Mails and shipping.
- 7.48: What's on to-day?
- 7.50: Children's birthday calls.
- 8.0: Music from the studio.
- 8.5: Close.

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

- 10.30: Announcements.
- 10.32: A.B.C. racing observer.
- 10.45: Edgar Stone at the grand organ.
- 11.0: Household helps; hints to housewives.
- 11.30: Cables, A.B.A. and "Sun"—"Herald" news service.
- 11.15: The 2FC Studio Orchestra.
- 12.0: "Big Ben" and Stock Exchange, metal quotations.
- 12.2: Literary talk.
- 12.20: Midday weather forecast and weather synopsis; special produce market session for the man on the land, supplied by the State Marketing Board.
- 12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

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

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The Radio Matinee Orchestra.
- 2.42: Hilda Nelson, soprano—
 - (a) "The Cloths of Heaven" (Dunhill)
 - (b) "Sappische Ode" (Brahms)
- 2.49: Gwen Sherwood, in a sketch entitled "Swimming in All Directions" (Adapted)
- 2.59: The Radio Matinee Orchestra.
- 3.15: Hugh McLean, violinist.
- 3.22: Hilda Nelson, soprano—
 - (a) "A Spirit Flower" (Campbell-Tipton)
 - (b) "Almond Blossoms" (Arundale)
- 3.29: The Radio Matinee Orchestra
- 3.45: Suzanne Ennis, contralto—
 - (a) "Sing, Red Sun" (Del Riego)
 - (b) "Blackbird and Rose" (Connisby Clarke)
- 3.52: Gwen Sherwood, in a sketch entitled "Studies in Old Junk" (Adapted)
- 4.2: The Radio Matinee Orchestra
- 4.10: Suzanne Ennis, contralto—
 - (a) "Like to the Damask Rose" (Elger)
 - (b) "A Little Winding Road" (Ronald)
- 4.17: The Radio Matinee Orchestra.
- 4.28: Stock Exchange, third call.
- 4.30: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies "Good-night" stories, told by Aunt Willa, assisted by Cousins Marjory and Gwen and Peter Leonard, ventriloquist.
- 6.45: The National Broadcasting Orchestra.
- 7.30: A.B.C. sporting service.
- 7.37: Special country session; Stock Exchange resume; markets; late news service from the "Sun."
- 7.58: Announcements.

THE EVENING PRESENTATION—8.0 to 11.30

- 8.0: Fun from Fullers'.

OLD TIME DANCE NIGHT.

- To-night our programme is composed entirely of request numbers from listeners. All the Old Time Dances and Songs are bringing back happy memories of the past to listeners, who are content to sit back quietly and let the flood tide of the present day pass them by.
- 8.15: The Australian Broadcasting Dance Orchestra.
 - 8.27: Norman Janson, baritone—
 - (a) "The Land of the Leal."
 - (b) "When You and I were Young, Maggie" (Butterfield).
 - 8.34: The Australian Broadcasting Dance Orchestra.
 - 8.46: Les Coney, comedian—
 - (a) "Funniosities" (Stuart and Hart).

- (b) "I Like 'Em All" (Arthurs and Jerome)
- 8.53: The Australian Broadcasting Dance Orchestra.
- 9.5: The Country Man's Weather Session—
 - (a) New South Wales forecasts.
 - (b) Inter-State weather synopsis.
- 9.6: Mabel Batchelor, soprano—
 - (a) "The Song that Reached My Heart" (Jordan).
 - (b) "Polly, the Cows are in the Corn."
- 9.13: The Australian Broadcasting Dance Orchestra.
- 9.25: Alf Lawrance and Nell Crane, entertainers—
 - (a) "I Wouldn't Leave My Little Wooden Hut for You" (Lawrance).
 - (b) "Grow, Little Mushroom. Grow" (Lawrance).
- 9.35: The Australian Broadcasting Dance Orchestra.
- 9.47: Maggie Foster, violinist.
- 9.54: The Australian Broadcasting Dance Orchestra.
- 10.15: Announcements.
- Official weather forecast.
- 10.20: The Australian Broadcasting Dance Orchestra.
- 11.30: Close. National Anthem.

An "Introduction-to-Radio" Number of WIRELESS WEEKLY will be published next week. Special articles designed for the listener who has not previously found any interest in the technical side of radio will be published.

2BL

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

OPENING SESSION—8.15 to 11 a.m.

- 8.15: Music for every mood.
 - 8.45: Meteorological data for the country.
 - 8.50: A recital of instrumental music.
 - 9.30: British Official Wireless news.
 - 9.35: New music.
 - 10.5: News from the "Labor Daily" and "Daily Telegraph Pictorial."
 - 10.10: The Ladies' Club Hour—The Australian Women's A.B.C. Association, conducted by Miss Gwen Varley.
 - 10.30: The 2BL Studio Orchestra.
 - 11.0: Close.
- ### MIDDAY SESSION—12 noon to 2.30 p.m.
- 12.0: Announcements.
 - 12.2: The National Broadcasting Orchestra.
 - 1.0: Afternoon news from "Sun."
 - 1.5: Studio music
 - 1.15: Women's "Interest Talk."
 - 1.30: The Traders' "Selling the Set" music.
 - 2.0: J. Knight Barnett at the Wurliizer Organ.
 - 2.12: Close.

AFTERNOON ENTERTAINMENT—2.30 to 5.45

- 2.30: Business Efficiency Talk, by Fred Arlington Burke.
- 2.45: Lucille Bruntnell will give a talk on "The Art of Silvio Dora, the King's Musician."
- 3.0: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 3.12: From the Studio: William Cotterill, tenor—
 - (a) "A Little Tender Thought" (Wright)
 - (b) "Love Came Calling" (Zambenick)
- 3.19: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 3.29: From the Studio: Les Coney, comedian—
 - (a) "Signor Acitarto" (Coney)
 - (b) "Shakes Phere Snapshotted" (Reg Low)
- 3.39: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 3.51: From the Studio: Mab Bowyer, contralto—
 - (a) "Thou't Lovely as a Flower" (Schumm)
 - (b) "The Ships of Arcady" (Head)

- 4.0: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 4.12: From the Studio: William Cotterill, tenor—
 - (a) "Sally Horner" (Australian Story Book)
 - (b) "Dawn Skies" (Drummond)
 - (c) "Some Day Waiting Will End" (Caryll)
- 4.19: A dance item.
- 4.22: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
- 4.32: Mab Bowyer, contralto—
 - (a) "The Lotus Flower" (Schumann)
 - (b) "Where the Abana Flows" (Woodforde-Pinden)
- 4.39: Les Coney, comedian—
 - (a) "Captain Thingame Bob"
 - (b) "Sticks and Stones" (Lloyd and Lee)
- 4.45: The Trade Hour.
- 5.45: Close.

THE DINNER HOUR.

- 6.15: The National Broadcasting Orchestra
- 6.45: The A.B.C. Younger Set Session—A.B.C. Girl Guides' Club, conducted by Gwen Varley
- 7.5: Studio music.
- 7.15: The Country Man's Market Session—Wool, wheat, stock, farm produce, fruit, vegetables, and poultry markets.
- 7.30: The National Broadcasting Orchestra
- 7.55: What's on the air to-night.

TO-NIGHT'S PRESENTATION—8.0 to 10.30

- 8.0: G.P.O. Chimes.
- From the Ashfield Town Hall—Third annual grand concert of the Trinity Grammar School "League of Friends" Sydney Male Choir—Conductor, Mr. O Helleman—
 - "Song of the Northmen" (Mauder)
 - Master Henry Basket, Trinity Grammar School Soloist—
 - (a) "An Old-fashioned Town" (Squires)
 - (b) "Sailing" (Marks)
 - Marjorie Allomes, New Zealand contralto—
 - (a) "O del mio dolce ador" (Gluck)
 - (b) "Oh, could I but Express in Song" (Malaskin)
 - Lawrence Campbell, elocutionist.
 - Bennett North Studio Quartette—
 - Misses Dorothy Rose, Madeline Le Brun, Messrs. Maurice Helsen and Albert Weaver—
 - (a) "The Lullaby" (Arnold Mote)
 - (b) "When the Budding Bloom of May" (Haddon Hall) (Sullivan)
 - Charles Lawrence at the piano.
 - Wilfrid Thomas, basso-baritone.
 - Sydney Male Choir—
 - "At Thy Feet in Adoration" (Dvorak)
 - Solo and Chorus. "Stabat Mater."
 - Soloist: Mr. Norman Ellis.
 - 9.20: From the Studio: Late weather forecast for the man on the land.
 - Announcements.
 - 9.30: From the Ashfield Town Hall—Second half of the third annual grand concert of the Trinity Grammar School "League of Friends"—
 - Sydney Male Choir—
 - "O Peaceful Night" (Buck)
 - Essie Neal, violinist—
 - "Obertass" (Wienlawski)
 - Marjorie Allomes, New Zealand contralto—
 - "Lavender Days" (Drummond)
 - Wilfrid Thomas, basso-baritone.
 - Bennett North Studio Quartette.
 - Charles Lawrence at the piano.
 - Sydney Male Choir—
 - "The Vocal Combat" (Dudley Buck)
 - 10.0: From the Studio: In Lichtelein Vain—Mirth and frivolity, contributed by Alf. Lawrence and Nell Crane, Maggie Foster and her violin, Charles Lawrence, Popular ballads by Norman Janson and Mabel Batchelor.
 - 10.25: Official weather forecast—metropolitan and country.
 - Late news from the "Sun."
 - 10.30: Close. National Anthem.

2GB

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

MORNING SESSION

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

AFTERNOON SESSION

2.0: Music. 2.5: Women's Radio Service, by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Address. 3.30: Close down.

NIGHT SESSION

5.30: Children's session by Uncle George. 7.0: Music. 7.30: Talk from Sutton's 2GB Radio Service Dept., by Mr. Stan. Critten. 7.45: Feature story. 8.0: Miss Kathleen Cracknell, contralto. 8.7: Miss Mildred Hill, pianiste. 8.15: Mr. Clement Q. Williams, baritone. 8.22: Symphony orchestra. 8.30: Humorous Interlude by Mr Jack Win and Mr. Heath Burdock. 8.35: Miss Marjorie Cole, soprano. 8.45: Violin solos. 8.50: Miss Kathleen Cracknell, contralto. 9.0: Weather report. 9.3: Address. 9.15: Miss Mildred Hill, pianiste. 9.25: Mr. Clement Q. Williams, baritone. 9.35: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 9.40: Symphony orchestra. 9.50: Miss Marjorie Cole, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Faling's Building, Ash St., Sydney (Wavelength, 367 metres).

MIDDAY SESSION

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

EVENING SESSION

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

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 380 metres)

MORNING SESSION.

10.0: Tune in to the ticking of the clock. 10.3: Popular fox trots. 10.15: News items. 10.30: Vocal items. 10.50: Hawaiian steel guitar selections. 11.0: A few laughs. 11.5: Pianoforte selections. 11.15: Calls and announcements. 11.20: Musical numbers. 11.30: Request numbers. 11.40: Music and vocal items. 11.55: Where to go to-night. 12.0: Closing announcements.

CHILDREN'S SESSION.

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

EVENING SESSION

7.0: Musical interlude. 7.15: Turf topics. How they should run to-morrow, Mr. Geo. A. Davis. 7.45: Request numbers. 8.0: Novelty numbers, Miss Billie Underwood. 8.10: Soprano solos. 8.18: Baritone solos, Mr. Higgins. 8.28: Pianoforte solos, Mr. Hancock. 8.30: Music and request numbers from the studio. 9.0: Sporting feature. Presented by Tooth and Co., Kent Brewery. From the ringside of M'Hugh's Leichhardt Stadium. Results of early events and full description of main 15-round event. 9.40: Dance music from the studio. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Storey Street, Maroubra Junction, Sydney (Wavelength, 283 metres).

EARLY MORNING SESSION

7.15 a.m.: Breakfast time hour orchestral selections. 8.30: Weather report; close down.

MIDDAY SESSION

11.30 a.m.: Orchestral and vocal items. 12.30 p.m.: Announcements; close down. 1.0: Vocal and instrumental music. 1.45: Organ solos. 2.30: Announcements; close down.

EVENING SESSION

7.15: Orchestral and vocal dinner music. 7.58: Programme announcements. 8.0: Overture, "Bohemian Girl." 8.10: Orchestral music. 10.15: Announcements; close down.



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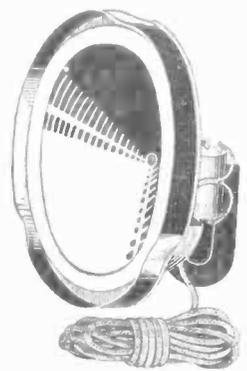
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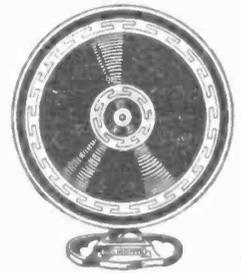
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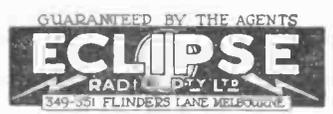
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Interstate Programmes, Tuesday, August 27

3LO

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

EARLY MORNING SESSION

7.0 to 8.15: Set Friday.

MORNING SESSION

10.30: Current happenings in sport, by Eric Welch.
10.45: A.B.C. Studio Orchestra, with Ernest Wilson (baritone). 12.0: Melbourne Observatory time signal.
A.B.C. Orchestra (continued). 12.15: News service.
British official wireless news: Corn Exchange mid-day report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION.

1.0: Melbourne Observatory time signal. 1.1: Stock Exchange information; meteorological data; weather forecast for Victoria, N.S.W., S.A., and Tasmania; ocean forecast; river reports; rainfall; comments on the day's news.
1.30: Reproduced music.

EDUCATIONAL SESSION.

2.0: Stories from the operas, Miss E. Babington. 2.25: Reproduced music. 2.25: Science in every-day life, Dr. Loftus (lecturer). D.Sc. 2.40: Reproduced music. 2.45: A talk in French, Mons. Th. Rouel, B.A.

THE RADIO MATINEE.

3.0: Stephens' Syncopators—fox-trots, "If You Want the Rainbow" "Louise." 3.9: Rosina Down, soprano—"If There Were Dreams to Sell" (Ireland). "Three Green Bonnets" (d'Hardelet). 3.16: Stephens' Syncopators—waltz, "I Loved You Then as I Love You Now"; fox-trot, "I Life Up My Finger and say Teet, Teet." 3.25: "The Optimists." in "Happy Harmony." 3.35: Stephens' Syncopators—fox-trot, "She's Funny That Way" "Weary River." 3.42: Rita Hilton, songs at the piano—"Da, Da, Da, My Darling" (Monaco). "Dream Kisses" (Jerome). 3.52: Stephens' Syncopators, fox-trot, "My Sin"; waltz "King for a Day." 3.59: Rosina Down, soprano—"Babe o Mine" (Ishmith). "Le Saran Rose" (Ardito). 4.6: Stephens' Syncopators—fox-trot, "Blue Bird, Why Don't You Call on Me." 4.15: Stephens' Syncopators—xylophone solo. 4.20: Stephens' Syncopators—fox-trot, "My Suppressed Desire." 4.30: Close down.

THE CHILDREN'S CORNER

4.45: "Bobbie Bluegum," further adventures with "Ector and Grace." 6.5: Clever Clarice in "Catchy Cadences." 6.15: Musical interlude. 6.20: A talk of interest to the older boys and girls—an adventure story. 6.35: Musical interlude. 6.40: Careers for our boys and girls; 3. Trends in vocational guidance, Mr. J. M'Rae, M.A. 6.55: Musical interlude.

COUNTRYMAN'S SESSION.

7.0: Melbourne Observatory time signal. 7.1: Stock Exchange and markets. 7.25: For the man on the land, "Care of Cream at Farm and Factory," Mr. R. Crowe. 7.40: News. 7.45: The things we drink. "Light Wines," Mr. Francis de Castella. 8.0: Melbourne Observatory time signal.

NIGHT SESSION

8.1: Prahran Band, "Souvenir of the Opera."
8.10: The Harmonists' Male Quartette—"Robin Adair" (Liszt).
"A Travesty" (O'Hara).
8.17: Mariana Trio—"Hawaiian Melodies."
8.27: Gordon Ireland, "The Apostle of Pep"—"Honey" (Liszt).
"Broadway Melody" (Brown).
"The Wedding of the Painted Doll" (Brown).
8.37: Prahran Band, "Tist Infantry."
"Selected."
8.42: Harmonists' Male Quartette—"The Tar's Song" (Hatton).
"A Madrigal" (McClennan).
"The Land of the Leani" (Button).
8.52: Prahran Band, "Boccaccio."
9.0: University Extension Series—"The King's English," Prof. S. H. Cowling, M.A.
9.17: The Harmonists—"Tis Me, O Lord" (Burligh).
"Heaven's Heat" (Burligh).
9.27: Marion Lightfoot, banjo—"Moonlight Memories."
9.32: J. Howlett Ross—"The Wall in the Gong."
9.41: Prahran City Band, "Humoreske."
"Virtuoso."
9.54: Violet Anderson, soprano—"O Lovely" (Wright) (Landon Ronald).
"The Enchanted" (Hutton).
10.1: Joe Brennan and Ida Newton, the "Inimicable and Irresistible."
10.11: Prahran City Band—"The Talamani."
10.20: British official wireless news; items of interest; meteorological information.
10.30: The "Rex" Dance Band.
10.40: God Save the King.

3DB

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

MORNING SESSION

11.0: Edward d'Evry (organ). "Album Leaf." 11.30: Lionel Tertis (viola). "Mazurka" (Popper). 12.0: Hubert Elsdell (tenor). "All Suddenly the Wind Comes Soft." 12.30: Terence Casey (organ). "I'm Lonely" (Coates). 1.0: Edith Lorand Orchestra.

SPECIAL BEGINNERS' NUMBER OF "WIRELESS WEEKLY" NEXT WEEK ORDER YOUR COPY NOW

"Rustle of Spring" (Sinding). 1.30: Vern Buck and his orchestra. "What a Girl." 1.45: Close down

AFTERNOON SESSION

2.0: Quentin Maclean (organ). "Classical." 2.30: Victor Symphony Orchestra. "Spring Morning" (Lacombe). 2.55: Alwate Kent Radio Hour, sponsored by A. G. Healing, Ltd., and E. T. Muir. 3.55: News. 4.0: Close down.

EARLY EVENING SESSION

5.30: Edith Lorand Orchestra. "Song of Autumn." 6.0: Children's Hour. Stories by "Uncle Ted." 6.30: Jesse Crawford (Wurlitzer). "A Dream" (Bartlett). 7.0: W. H. Squire (cello). "Broken Melody" (Van Biene). 7.15: Market reports. 7.30: Reginald Whitehead (bass). "Cellar Cool."

EVENING SESSION

8.0: Guy Lombardo and his Royal Canadians. "Greeting You" 8.9: Will King (monologue). "The Pigtail of Li Fang Fu." 9.0: Henry Burr (tenor). "Love Dreams." 9.30: Dajos Bela Orchestra. "Supper with Suppe Pot Pourri." 10.0: Charles Hackitt. "Duna" (M'Gill). 10.30: De Groot (violin) and Terence Casey (organ). "Cavatina" (Raz). 10.40: News. 10.45: God Save the King.

4QQ

Queensland Government Radio Service, Brisbane (Wavelength, 365 metres).

For day sessions see Friday.
7.45 p.m.: Lecturette, talk on poultry, by Mr. P. Rumball poultry instructor.

NIGHT SESSION.

4QQ SYMPHONY ORCHESTRA.

(Conductor, Erich John.)
Supporting artists: Mabel Malouf (soprano), A. N. Falk (baritone), W. W. Crisp (tenor).
Group 1.—Grand Opera.
Symphony Orchestra—
Overture, from "Flying Dutchman" (Wagner).
Mabel Malouf (soprano)—
"Waltz Song," from "Romeo and Juliet" (Gounod).
Symphony Orchestra—
March, from "Aida" (Vevdi).
A. N. Falk (baritone)—
"Even Bravest Heart," from "Faust" (Gounod).
Symphony Orchestra—
Selection from "Rigoletto" (Verdi).
Group 2.—Suite of Serenades.
W. W. Crisp (tenor)—
"Serenade" (Schubert).
Symphony Orchestra—
"Serenade" (Mozzkowsky).
"Serenade" (Pierne).
Mabel Malouf (soprano)—
"Serenade" (Toselli).
Symphony Orchestra—
"Serenade" (Widor).
"Serenade," from "Millions of Arlequin" (Drigo).
9.0: Metropolitan weather forecast.
Group 3.—Classical.
A. N. Falk (baritone)—
"The Two Grenadiers" (Schumann).
Symphony Orchestra—
"Symphony in G Minor" (Mozart), first movement.
Mabel Malouf (soprano)—
"Ave Maria" (Masagnoli).
Symphony Orchestra—
"Symphony in G Minor" (Mozart), second movement and finale.
Group 4.—Miscellaneous.
W. W. Crisp (tenor)—
"Good-bye" (Tosti).
Symphony Orchestra—
"Invitation to the Waltz" (Weber).
Mabel Malouf (soprano) and A. N. Falk (baritone)—
Vocal duet, selected.
Symphony Orchestra—
Overture, "Light Cavalry" (Suppe).
10.0: News supplied by metropolitan dailies.
Weather information.
Close down.

5CL

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

MORNING SESSION

11.15 to 2.0, see Friday.

AFTERNOON SESSION

3.0 to 4.30, see Friday.

EVENING SESSION

8.45: Tattersall's acceptances. 6.1: Birthday

greetings. 6.50: Dinner session—Rupert Hazel and Elsie Day. 7.1: Birthday League greetings. 5CL's sporting service; general market reports. 7.20: Under the auspices of the Workers' Educational Association, Mr. E. G. Blair (lecturer). "Waste." 7.35: Mr. H. Brewster-Jones give "A Piano Interpretation of Jugs and Jug Habits." 7.40: Dr. Herbert Basedow, M.P.

NIGHT SESSION

8.0: Chimes.
8.10: A request presentation from the residents of Kalgal and River Murray of the Opera Announcements.
"Lucia de Lammermoor."
Characters:

Lucia	.....	Marcelle Berardi
Edgardo	.....	Dino Felardi
Enrico	.....	Bert Woolley
Raymondo	.....	Ramon Romano
Alisa	.....	Owen Collett
Arturo	.....	Vincent M'Murray
Norman	.....	Ann Young

And Chorus.

Explanatory remarks by Edgardo Perkins, Mus. Bac., A.M.U.A., assisted by Essie Francis. Music by the Operatic Orchestra.

10.20: General news service.
British official wireless news.

10.30: 5CL's sporting service, including Tattersall's acceptances.

Results of open amateur golf championships of Australia.

10.55: Modern dance recordings.

11.0: Close down.

6WF

Commonwealth Government Broadcasting Station, Perth (Wavelength, 160 metres).

10.0: Gramophone records. 11.0: Close down. 12.30: Markets, news, etc. 1.0: Time signal. 1.1: Weather bulletin. 1.3: Luncheon music. 2.0: Close down. 3.30: Tune in. 3.35: Pianoforte solos by Miss Audrey Dean: violin solos, by Mr. Frank Robins. 4.30: Close down. 6.45: Bedtime stories, by Uncle Duffy. 7.5: Light music. 7.30: Commercial information. 7.45: Talk, by Mr. J. Bathgate. "Books of the Month." 8.0: Time signal. 8.1: First weather bulletin. 8.3: A relay. 8.50: Late news; ships within range announcement; late weather bulletin. 10.30: Close down. 104.5 metre transmission.—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres, commencing at 6.45 p.m.

7ZL

Tasmanian Broadcasters Pty., 95 Elizabeth St., Hobart (Wavelength, 316 metres).

11.30 a.m.: Selections by the Melody Masters. 11.34: Midlands weather forecast. 11.35: Selections by the Melody Masters. 11.55: Tasmanian stations 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information; housewives' guide; mail notices. 12.5: Selections by the Melody Masters. 12.30: "Mercury" news service; announcements. 12.40: Record recital. 1.3: British official wireless news; railway auction sales. 1.10: Record recital. 1.30: Close down. 3.0: Chimes. 3.1: Record recital. 3.4: Weather information. 3.5: Record recital. 3.45: Miss Joyce Walker will speak on "Homecraft." 4.0: Record recital. 4.15: An educational talk on "Food Production and Science." 4.30: Close down. 6.15: Children's Hour with "Doris David" and "The Story Lady." 6.30: Elsie Carter will play the piano for the little ones. 6.45: Children's Hour (continued). 7.15: News session. 7.30: Under the auspices of the Agricultural Department E. R. Hudson will speak on "Some Aspects of Sheep Husbandry." 7.45: W. E. Fuller will speak on "Literary Lapses and Library Lists." 8.0: Chimes. 8.1: Record recital. 8.15: A programme of dance music by the Discus Dance Ensemble. 8.27: William Kent, "Lady, Be Good." 8.30: Dance numbers. 8.42: Buddy Lee, "Fascinating Rhythm." 8.45: Dance numbers. 8.57: George Royce, "I Stopped, I Looked, I Listened." 9.0: Dance numbers. 9.11: Derek O'Brien, "Rose Marie." 9.15: Dance numbers. 9.27: E. Hazel and H. Pether, "Just the Reverse." 9.30: News session. 9.40: Dance numbers. 9.52: Slumber music. 10.0: Chimes. 10.1: Close down.

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Local Programmes, Wednesday, August 28

2FC

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

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
7.3: This morning's news from the "Daily Telegraph Pictorial."
7.8: Early rising music.
7.45: Mails and shipping.
7.48: What's On To-day.
7.50: Children's birthday calls.
8.0: Music from the Studio.
8.5: Close.

MORNING SESSION—10.30 to 12.30 p.m.

- 10.30: Announcements.
10.32: A general sporting talk by Oscar Lind.
10.45: Edgar Stone at the Grand Organ.
11.0: A talk on cooking by Miss Ruth Furst.

- 11.10: Cables, A.P.A. and "Sun"—"Herald" news service.
11.15: The Studio Orchestra.
12.0: "Big Ben"; Stock Exchange, and metal quotations.

- 12.2: A "Dicken's Story."
12.20: Midday weather forecast and synopsis; special produce market session for the man on the land, supplied by the State Marketing Board.
12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch to music with the Australian Broadcasting Orchestra.
2.0: Stock Exchange, second call.
2.2: A glance at the afternoon papers.
2.7: Popular education.
2.27: Announcements.

TW RADIO MATINEE—2.30 to 4.30 p.m.

- Note.—At 3.30, if reception is favorable. S. on K.G.O., California, will be relayed.
Note.—Results from Victoria Park will be transmitted as received.

- 2.30: Googs Hanlon, novelty pianist—
(a) "Honey" (Gillespie).
(b) "Just a Night for Meditation" (Young).

- 2.38: Ina Varini, popular vocalist.
2.45: The latest dance numbers.
3.12: Les Busse, melo accordion—
(a) "Persian Market" (Ketybelj).
(b) "Old Fashioned Locket" (Marvin).

- 3.18: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
3.59: From the Studio—Ina Varini, popular vocalist.

- 3.36: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.

- 3.45: From the Studio—Googs Hanlon, novelty pianist—
(a) "Where the Shy Little Violets Grow" (Kahn).
(b) "Carolina Moon" (Davis).

- 3.54: The latest dance numbers.
4.0: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.

- 4.12: From the Studio—Les Busse, melo accordion—
(a) "Happy Humming Bird" (Dixon).
(b) "Ten Little Miles from Town" (Kahn).

- (c) "Old Man Sunshine" (Warren).
4.19: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
4.45: Close.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Kiddies' "Goodnight" stories, told by the "Hello Man," assisted by the Farmyard Five.

- 6.45: The National Broadcasting Orchestra.
7.30: A.B.C. Sporting Service.
7.37: Special country session: Stock Exchange resume; markets: late news service from the "Sun."

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

- 8.0: An hour from the State Theatre—The State Orchestra, conducted by Will Prior; Price Dunlavy at the Grand Organ. Clive Hood, producer.

- 9.0: From the Studio—The country man's weather session—
(a) New South Wales forecasts.
(b) Inter-State weather synopsis.

- 9.1: The Wireless Singers.

- 9.13: Athos Martelli, cellist.
9.20: Dulcie Starkey, soprano—
(a) "Romance" (Debussy).
(b) "The Gathered Rose" (Cesar Franck).
(c) "Cradle Me Low" (Brahe).

- 9.27: Joan Fry, pianist—
(a) "The Sea" (Palmgren).
(b) "Rococo" (Palmgren).
(c) "Two Preludes" (Besley).

- 9.39: Raymond Beatty, basso—
(a) "The Hunting Horn" (Flegler).
(b) "The Bonnie Lass o' Ballochmyle" (Jackson).

- 9.46: A sketch by Scott Alexander.
10.0: Romano's Dance Orchestra, conducted by Bennie Abrahams.

- 10.15: From the Studio—Announcements.
Official weather forecast.
10.20: Romano's Dance Orchestra, conducted by Bennie Abrahams.

- 11.30: Close. National Anthem.

2BL

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

OPENING SESSION—8.15 to 11 a.m.

- 8.15: Music for every mood.
8.45: Meteorological data for the country.
8.50: An Old Folks' programme.
9.30: British Official Wireless news.

- 10.10: The Ladies' Club Hour—The Australian Women's A.B.C. Association, conducted by Miss Gwen Varley.
10.30: The 2BL Studio Orchestra.

- 11.0: Close.
MIDDAY SESSION—12 noon to 2.30 p.m.
12.0: Announcements.

- 12.2: The National Broadcasting Orchestra.
1.0: Afternoon news from the "Evening News" and "Sun."
1.5: Studio music.

- 1.15: Women's "Interest Talk."
1.30: The Traders' "Selling the Set" music.
2.0: J. Knight Barnett at the Wurlitzer Organ.
2.12: Studio music.

AFTERNOON ENTERTAINMENT—2.30 to 5.45.

- 2.30: Business Efficiency Talks.
2.45: "The Magic Carpet"—A Story of Travel and Adventure.

- 3.0: The Radio Matinee Orchestra.
3.15: Rowell Bryden, baritone.
3.22: Keith Kennedy, violinist—
(a) "Der Zigeuner" (The Gypsy) (Burck).
(b) "Auld Robin Grey" (Scotch).
(c) "Russian Dance" (Zimbalist).

- 3.29: The Radio Matinee Orchestra.
3.44: Enid D'Arcy, soprano.
3.51: "Romance, F Sharp" (Schumann).
(b) "Novallette" (Schumann).

- 3.59: The Radio Matinee Orchestra.
4.9: Rowell Bryden, baritone.
4.16: Keith Kennedy, violinist—
(a) "Romance" (Palmgren).
(b) "Liebesfreud" (Kreisler).

- 4.23: Enid Hynes, pianoforte solos—
(a) "Prelude, A Flat" (Besley).
(b) "Polichinelle" (Rachmaninoff).

- 4.31: Enid D'Arcy, soprano.
4.38: The Radio Matinee Orchestra.
4.46: "The Trade Hour."
5.45: Close.

THE DINNER HOUR.

- 6.15: The National Broadcasting Orchestra.
6.45: The A.B.C. Younger Set Session—A.B.C. Boys' Radio Club, conducted by Mr Norman Lyons.

- 7.5: Studio music.
7.15: The Country Man's Market Session—Wool, wheat, stock, farm produce, fruit, vegetables, and poultry markets.

- 7.30: The National Broadcasting Orchestra.
7.55: What's on the air to-night.

TO-NIGHT'S PRESENTATION—8.0 to 10.30

- 8.0: G.P.O. Chimes.
Classical Programme arranged by G. Vern Barnett.
G. Vern Barnett's Trio—
Piano: G. Vern Barnett.
Cello: Athos Martelli.
Violin: Moore MacMahon.

- Song Cycle, "Wildflower" (Somerville).

- Song Cycle, "Flora's Holiday" (Lane Wilson).
9.40: Leslie MacCallum, flautist—
"Hungarian Fantasia" (Doppler).

- 9.50: The Wireless Singers.
10.0: 2BL Studio Quintet.
10.7: Dulcie Starkey, soprano—
(a) "My Love is a Silent Forest" (Margaret Woolmer).
(b) "Fragile Things" (Montague Phillips).

- (c) "L'Envol" (Drummond).
10.14: 2BL Studio Quintet.
10.25: Official weather forecast—metropolitan and country.

- Late news from the "Sun."
10.30: Close. National Anthem.

2GB

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

MORNING SESSION

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

AFTERNOON SESSION

- 2.0: Music. 2.5: Women's Radio Service, by Mrs. Dorothy Jordan. 2.50: Music. 3.0: Movie Know All. 3.30: Close down.

NIGHT SESSION

- 5.30: Children's Session, by Uncle George.
7.0: Music. 7.45: Feature story. 8.0: Miss Mary Neal, contralto. 8.7: "Cello solos. 8.15: Mr. William Green, tenor. 8.22: Symphony orchestra. 8.30: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 8.35: Miss Gladys Verona, soprano. 8.45: Instrumental trio. 8.50: Miss Mary Neal, contralto. 9.0: Weather report. 9.3: Address. 9.15: Symphony orchestra. 9.25: Mr. William Green, tenor. 9.35: Humorous interlude by Mr. Jack Win and Mr. Heath Burdock. 9.40: "Cello solos. 9.50: Miss Gladys Verona, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St., Sydney (Wavelength, 267 metres).

MIDDAY SESSION

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

EVENING SESSION

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

2KY

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

MORNING SESSION.

- 10.0: Tune in to the ticking of the clock. 10.3: Popular fox trots. 10.15: Hawaiian steel guitar selections. 10.30: Request numbers. 10.50: Vocal items. 11.0: A few laughs. 11.5: Pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal items. 11.55: Where to go to-night. 12.0: Closing announcements.

CHILDREN'S SESSION.

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

EVENING SESSION.

- 7.0: Musical interlude.
7.15: Complete review of to-day's racing. Mr. Geo. A. Davis.
7.40: Health feature.

- 8.0: Hawaiian steel guitar selections.
8.15: Tenor solo, Mr. Chas. E. Macdonald.
8.30: Banjo solo, Master Harry Weir.
8.36: Al Rosenberg at the piano.

- 9.10: Sporting feature. Presented by Tooth and Co., Ltd., Kent Brewery, From Sydney Stadium. Full description of main 15-round event. 9.50: Music from the studio. 10.0: Closing announcements.

- (The programme for 2UE will be found on page 51.



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Interstate Programmes, Wednesday, August 28

3LO

Australian Broadcasting Co., (29A Russell St., Melbourne) (Wavelength, 351 metres).

EARLY MORNING SESSION

7.0 to 8.15: See Friday.

MORNING SESSION

10.30: Current happenings in sport, by Eric Welch; 10.45: The A.B.C. Studio Orchestra, assisted by Ernest Hancock baritone, 12.0: Time signal from Melbourne Observatory, 12.1: The A.B.C. Studio Orchestra 12.15: News service; British official wireless news from Rugby; Corn Exchange midday report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION

1.0: Melbourne Observatory time signal; Stock Exchange information; meteorological data; weather forecast for Victoria, New South Wales, South Australia, and Tasmania; coast forecast; river reports; rainfall; comments on the day's news. 1.30: Transmission of speeches from the Rotary Club luncheon.

EDUCATIONAL SESSION

3.0: Ancient Civilisations, Dr. E. Sweetman, M.A.; 4.0: Little D. 2.15: Musical interlude. 2.30: "Rambles in the Bush," Mr. Charles Daley. 2.35: Musical interlude. 2.40: "What is Happening in the World," Dr. Loftus Hills, D.Sc.

THE RADIO MATINEE

3.0: National Broadcasting Orchestra, under direction Wm. G. Jaumes conductor, Percy Code—"Parade of The Soldiers" (Pesselt); duet for two trumpets, "Two Inns" (Alford). 3.10: A one-act play, "Little White Lies," an original farce by L. T. Williams. The husband, Frankie Williams; the wife, Yetty Landau. 3.25: Orchestra—"Marche Mignonne" (Poldini); "Scarf Dance, Air de Ballet" (Chaminade). 3.35: Etta Bernard, contralto. 3.42: Raymond Lambert, tenor—"Four-leaf Clover" (Brownell). "I Pitch My Lonely Caravan at Night" (Coates). 4.4: National Broadcasting Orchestra—"Songs My Mother Taught Me" (Dvorak), "London-derry Air" (1.0). Courtney Ford, entertainer—"A Little Nonsense." 4.20: Orchestra—"Four Dances from The Rebel Maid" (Phillips). 4.30: Close down.

THE CHILDREN'S CORNER

5.45: "Little Miss Kookaburra" has a story of mischief for her tiny folk—about pixies and goblins and a little girl and boy. 6.0: Nicholls and Mack will provide a variety show with their many quaint instruments. Musical interlude. 6.20: A talk of interest to the older boys and girls—"Just-talk-A Teller of Tales," Mr. J. R. Lyall. 6.35: Musical interlude. 6.55: Musical interlude. 7.0: The Country Man's Session. 7.25: Technical talks for mechanics—Simple mechanical operations, Mr. F. S. Ward. 7.40: The "Herald" news service. 7.45: How to attain and retain good health—Rational physical culture, Mr. Dickenson.

NIGHT SESSION

8.0: Carter and Buckland, Hawaiian instrumentalists. 8.10: Colin Nash, bass—"Red Devotion by the Sea" (Coningsby-Clarke). "Vagabond" (Coningsby-Clarke). 8.17: Carter and Buckland, Hawaiian instrumentalists. 8.24: Colin Nash, bass—"Gipsy Juhn" (Clay). Selected.

OUR DANCE NIGHT

8.30: Ken Cottaris Dan Orchestra—"Give Me the Southland" (Sissell). "A Room with a View" (Coward). "I'm Crazy Over You" (Sherman). 8.39: Horace Calvert, tenor—"Passing By" (Purcell). 8.42: Band—"Watching the World Go By" (Ball). "Some of These Days" (Brooks). "All Over You" (Lenard). 8.51: Mollie Warden, soprano—"Flower Rain" (Schneider). 8.54: Band—"Stay at Home, Girl!" (O'Hagan). "Deep Night" (Henderson). "She's Funny That Way" (Moret). 9.3: Jack Hocking, baritone—"A latest song hit." 9.6: Band—"When Summer is Gone" (Whitely). "Wedding of the Painted Dove" (Brin). "I Always Knew I'd Find You" (Wayne). 9.15: Norman Pil, entertainer—"The Funny Instrument." 9.18: Band—"If I Had You" (Shapiro). "Another Kiss" (Scherzinger). 9.29: Horace Calvert, tenor—"She is Mine" (Slight). "Brahe). 9.32: Dance Band—"I Paw Down and Go Boon" (Broekman). "Honey" (Simons). "Clad Rock" (Ager). 9.41: Mollie Warden, soprano—"The Fairy Tales of Ireland" (Coates). 9.45: Dance Band—"That's My Man" (Ager). "Thinking of You" (Ruby). "Up in the Clouds" (Ruby). 9.51: Jack Hocking, baritone—"Latest song hit." 9.54: Dance Band—"Sweethearts on Parade" (Lombardo). "A Precious Little Thing Called Love" (Davis). "I Can't Give You Any" (but Love" (Davies). 10.3: Norman Pil, entertainer—"Johnson's Jubilee."

10.7: Dance Band—"What D'Ya Say?" (Brown). "Happy Days and Lonely Nights" (Fisher). "If You Want the Rainbow" (Rose). 10.16: Jack Hocking, baritone—"Latest song hit." 10.19: Dance Band—"My Mother's Eyes" (Baer). "Caroline Moon" (Burke). "Crazy Rhythm." 10.20: Weather information; British official wireless news from Rugby. 10.40: Dance Band—"You Can't Cry Over My Shoulder" (Heath). "Two Lips" (Rose). "Pickin' Cotton" (Henderson). "The Crest of a Wave" (Henderson). "Blue Night" (Rollins). "Coquette" (Berlin). "Marie" (Berlin). "That's How I Feel About You" (Davies). "The Druid's Prayer" (Davison). "No Parking" (Ruth). 11.30: God Save the King.

3DB

The "Herald" Broadcasting Station, (Hinders Street, Melbourne) (245 metres).

MORNING SESSION

11.0: J. H. Seure (Cello, Ocle). "Whispering Flowers." 11.30: "La Vogue." "The World's Fashion and Fables." 11.35: De Groot and Piccadilly Orchestra. "Lady of the Rose." 12.0: Muriel Bruback (contralto). "Sink Red Sun." 12.30: Edith Lorand (violin). "The Old Tower of St. Stephen." 1.0: Fraser Gange (baritone). "Bedullu Love Song." 1.30: Philharmonic String Quartet. "Minuet" (Boucherini). 1.45: Close down.

AFTERNOON SESSION

2.15: James Compton (cornet). "An Emblem" (Thompson). 2.30: Mrs. Dorothy Silk "Homecrafts" (prano). H. Williamson and R. Howe. "There Lived a King." 3.0: Atwater Kent Radio Hour, sponsored by A. G. Healing, Ltd. and E. T. Mulc. 4.0: Close down.

EARLY EVENING SESSION

4.45: Choral Evensong, transmitted from St. Paul's Cathedral. 5.30: Sascia Jacobsen (violin). "At the Brook" (de Borsdorff). 6.0: Children's Hour. "Billy Bunk." 6.30: Drury Lane Theatre Orchestra. Selections, "Shov' Boat." 7.0: Lotie Lehmann (prano). "Ave Maria" (Bach-Gounod). 7.15: John M'Namara and Company's market reports and forecasts. 7.25: Massed military bands. 7.30: Market reports, Gippsland and Northern Co-operative Company. 7.45: The Tris Sisters. "I'm Crazy Over You." 7.50: Mr. Harman, of Burns, Philp, and Co. "Travel Talk."

EVENING SESSION

8.0: Salon Orchestra. "Nola" (Arndt). 8.30: Rhodes Motor's session. 9.0: George Erwin (tenor). "Paradise." 9.30: Clapham and Dwyer. "At the Races." 10.0: De Groot and Piccadilly Orchestra. "Worryin'" (Fairman). 10.30: Jan Garber and his orchestra. "Weary River." 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 383 metres).

For morning sessions see Friday.

AFTERNOON SESSION.

3.0: Mail train running times. 3.5: From Hotel Carlton—A programme of music by the Carlton Orchestra, including Selection, "Floradora" (Stuart) Valse. "Bygone Days" (Waldeule); One Step, "Hong Kong Gong" (Hildreth); Morceau, "Fairy Tiptoe" (Fredericks); Characteristic, "Marceline" ("Dance of the Clowns" (Trinkaus); Selection, "Miss Hook of Holland" (Palmer); One Step, "Back to Alabama in the Spring" (Ruben); Entracte, "Nocturne" (Knight-Logan); March, "Sinfonia" (Hayes). Between orchestral items vocal numbers by Miss May Jordan and Mr. Arthur Aldridge will be relayed. 4.45: News. Close down.

NIGHT SESSION.

A Dance Night. 8.0: Alf Featherstone and his Dance Orchestra—"Fox trots, 'You Taught Me How to Love You' (Hursche). "Forty-seven Gingerheaded Sailors" (Sarony). "Another argument." 8.25: Alf Featherstone and his Dance Orchestra—"Rhythmic Paraphrase, 'Fadst' (arr. Lange). "Alida" (arr. Black). 8.35: Shirley Radford (soubrette)—In popular numbers. 8.45: The Aloha Trio—Hawaiian music. 8.50: Alf Featherstone and his Dance Orchestra—"Jazz waltz, 'Spanish Rose' (Husley). 9.0: Metropolitan weather forecast; movements of night-boat steamers. 9.5: Harry Borradale.—In humorous monologues. 9.15: The Aloha Trio—More Hawaiian music. 9.20: Alf Featherstone and his Dance Orchestra—"Fox trots, 'New York Ain't New York Any More' (Henderson). "Just to Hide Away With You" (Alford). 9.30: Beatrice Fugh (soprano)—"Snowflakes" (Mallinson). "The Willow Song" (Coleridge-Taylor). 9.40: Alf Featherstone and his Dance Orchestra—"One steps, 'Hunkin' (Levey). "Jolly Jingles" (Powell). 9.50: The Aloha Trio—Hawaiian music.

9.50: Alf Featherstone and his Dance Orchestra—"Fox trots, 'Deep Night' (Henderson). "Stay At Home Girl" (O'Hagan). 10.0: News, "supplied by the metropolitan dailies." Weather information. 10.15: Alf Featherstone and Orchestra—"Dance music. 10.30: "The Hoot Owls." 11.0: Close down.

5CL

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

MORNING SESSION

11.15 to 2.0: see Friday.

AFTERNOON SESSION

3.0 to 4.30: see Friday.

EVENING SESSION

6.0 to 7.45: see Friday.

NIGHT SESSION

8.5: Programme review. 8.6: Waltz, "The Merry Widow" (Lehar). 8.10: Special cheerios. 8.14: Polka selected. 8.19: Old-time songs (under the direction of Horace Perkins, assisted by the Madrigal Singers)—"Drink to Me Only." "Back to Dixie." 8.26: Schottische "Silver Bell." 8.30: Rupert Hazell. 8.36: Military Two-step—"Dance of the Honey Bees." 8.44: Elsie Day, Soprano. 8.47: Alberts, "Variety Tunes." 9.1: Meteorological information, including Semaphore tide service. 9.2: General news service. 9.5: Barn Dance "Barney Google." 9.11: Old-time songs (under the direction of Horace Perkins, assisted by the Madrigal Singers)—"Oft in the Silly Night." "Kentucky." 9.16: Marine Four-step, "Old Melodies." 9.25: Special cheerios and numbers of lucky prize-winners. 9.27: Waltz, "Valeta." 9.33: Rupert Hazell. 9.37: Lancers. 9.55: Old-time Choruses (under the direction of Horace Perkins, assisted by the Madrigal Singers)—"In the Shade of the Old Apple Tree." 10.1: Waltz, "Pink Lady Waltz." 10.7: Elsie Day, Soprano—Selected. 10.11: Polka Mazurka—"Alice, Where Art Thou?" 10.18: News session. Sporting service, including Baikalava and Lydale race results. 10.30: Marcella. 10.35: Old-time Songs (under the direction of Horace Perkins, assisted by the Madrigal Singers)—"Rose of No-Man's-Land." "Kentucky." 10.39: Military Two-step—Selected. 10.45: Jack Burgess. 10.48: Barn Dance. 10.54: Old-time Songs (under the direction of Horace Perkins, assisted by the Madrigal Singers)—"Hush Thee, My Baby." "When You Were a Tulp." 10.56: Waltz—"Two Little Girls in Blue." 11.1: "Auld Lang Syne." 11.3: Close down.

6WF

Commonwealth Government Broadcasting Station, Perth (Wavelength, 190 metres).

10.0: Gramophone records. 11.0: Close down. 12.30: Market etc. 1.0: Time signal. 1.0: Weather bulletin. 1.3: Music. 1.30: Close down. 3.30: Afternoon programme, 4.30: Close down. 6.45: Bedtime stories, by Uncle Duffy. 7.5: Light music. 7.30: Commercial information. 7.45: Talk, by Mr. Hal McKail. 8.0: Time signal. 8.1: First weather bulletin. 8.3: A relay. 8.50: Late news; ships within range; late weather bulletin. 10.30: Close down. 104.5 metre transmission—Simultaneous broadcast on 104.5 metres programme given on 1250 metres commencing at 6.45 p.m.

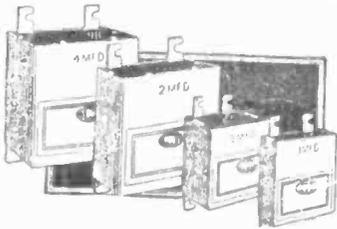
7ZL

Tasmanian Broadcasters Pty., 96 Elizabeth St., Hobart (Wavelength, 216 metres).

11.30 a.m. Monisora, musical selections. 11.34: Midlands weather forecast. 11.35: Monisora, musical selections. 11.55: Tasmanian station 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information; mail notices; housewives' guide. 12.2: Monisora, musical selections. 12.30: "Mercury" news service; announcements. 12.40: Monisora, musical selections. 1.5: British official wireless news; railway auction sales. 1.10: Monisora, musical selections. 1.30: Transmission from the Imperial Hotel, Collins Street, Hobart, speeches at the Rotary Club luncheon. 2.0: Close down. 2.15: Weather information. 2.5: Monisora, musical selections. 3.1: Monisora, musical selections. 3.15: Children's Hour with Bertha Southey Brammell. 3.30: News session. 3.40: Belle St. Lawrence will continue her travel talks. 7.45: V. C. Webb will speak on "General Care of Cars." 8.0: Chimes. 8.1: Monisora, musical selections. 8.15: A Columbia record, including latest releases, specially arranged by Fidelity Music Warehouse. 9.30: News session. 9.45: Columbia record (continued). 10.0: Chimes. 10.1: God Save the King; close down.

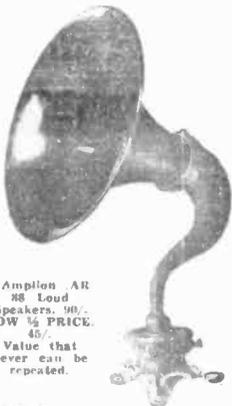


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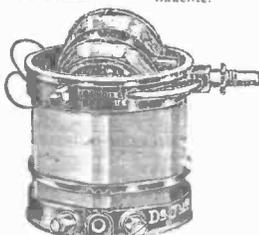
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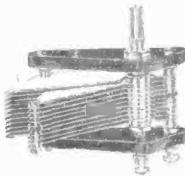


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Local Programmes, Thursday, August 29

2FC

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

EARLY SESSION—7.0 to 8.15 a.m.

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

MORNING SESSION—10.30 to 12.30 p.m.

- 10.30: Announcements.
10.32: A.B.C. Racing Observer.
10.45: Edgar Stone at the Grand Organ.
11.0: Household Helps—Cooking.
11.10: Cables, A.P.A. and "Sun"—"Herald" news service.
11.15: The Studio Orchestra.
12.0: "Big Ben." Stock Exchange and metal quotations.
12.2: What to read for the week-end.
12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
12.30: Close.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch to music with the National Broadcasting Orchestra.
2.0: Stock Exchange, second call.
2.2: A glance at the afternoon papers.
2.7: To-day's acceptances, by the A.B.C. Racing Observer.
2.17: Popular education.
2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: The Radio Matinee Orchestra.
2.45: Gwladys Fimister, soprano.
2.52: Madame Evelyn Grieg, dulcitone solos.
3.0: The Radio Matinee Orchestra.
3.15: Gwladys Fimister, soprano.
3.22: David McKissock, cello solos—
(a) "Aria" (Tenaglia).
(b) "Alice, Where Art Thou?" (Ascher).
3.30: The Radio Matinee Orchestra.
3.45: Robert Gilbert, baritone—
(a) "Sacrament" (MacDermid).
(b) "If There were Dreams to Sell" (Ireland).
(c) "My Song is of the Sturdy North" (German).
3.52: Madame Evelyn Grieg, dulcitone solos.
4.0: The Radio Matinee Orchestra.
4.7: Robert Gilbert, baritone—
(a) "So We'll go no more A-roving" (White).
(b) "My Wishes for You" (Little).
(c) "What the Red-haired Bosun Said" (Harry).

4.14: David McKissock, cello solos—

- (a) "Ballade" (Dunkler).
(b) "Moment Musical" (Schubert).

4.21: The Radio Matinee Orchestra.

4.30: Close.

THE EARLY EVENING SESSION—5.45 to 7.55

- 5.45: Kiddies' "Good-night" Stories, told by Aunt Willa, assisted by Cousins Marjory and Gwen, and Uncle Ted and "Sandy."
6.45: The National Broadcasting Orchestra.
7.0: A.B.C. Sporting Services.
7.37: Special Country Session—Stock Exchange resume markets.
Late news service from the "Sun."
7.58: Announcements.

THE EVENING PRESENTATION—8.0 to 11.30

- 8.0: Alexander Sverjensky, pianist—
(a) "Nocturne in E Major" (Chopin).
(b) "Etude in F Major" (Chopin).
(c) "Etude in C Sharp Minor" (Chopin).
8.15: Miss Le Brun Brown, soprano.
8.25: Gladstone Bell, cellist—
(a) "Air" (Percevole).
(b) "Pastorale" (Handel).
8.35: Oliver King, basso—
(a) "Vittoria, Vittoria!" (Carissimi).
(b) "When a Maiden Takes Your Fancy" (Mozart).
(c) "Next Market Day" (arr. Herbert Hughes).
8.45: Simon Phillipoff, Balalaika solos—
(a) "Souvenir" (Drdla).
(b) "Prelude" from "Carmen" (Bizet).

8.55: The Country Man's Weather Session:

- (a) New South Wales forecasts.
(b) Inter-State weather synopsis.
9.0: From the Conservatorium of Music—Second half of the Farewell Recital by Marjorie Beely.
9.25: From the Studio: The Sydney University Players—Sketch.
10.0: From the Town Hall—
On the occasion of the Chief Commissioner's Ball, dance music by Montgomery Evans' Dance Orchestra.
10.15: From the Studio: Announcements.
Official weather forecast.
10.20: From the Town Hall—
Dance music from the Chief Commissioner's Ball.
11.30: Close. National Anthem.

2BL

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

OPENING SESSION—8.15 to 11 a.m.

- 8.15: Music for every mood.
8.45: Meteorological data for the country.
8.50: A Melange of Mirth and Melody.
9.30: British Official Wireless news.
9.35: New music.
10.5: News from the "Labor Daily" and "Daily Telegraph Pictorial."
10.10: The Ladies' Club Hour—The Australian Women's A.B.C. Association, conducted by Miss Gwen Varley.
10.30: The 2BL Studio music.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: Announcements.
12.2: The National Broadcasting Orchestra.
1.0: Afternoon news from "Sun."
1.5: Studio music.
1.15: Women's "Interest Talk."
1.30: The Traders' "Selling the Set" music.
2.0: J. Knight Barnett at the Wurlitzer Organ.

2.12: Studio music.

AFTERNOON ENTERTAINMENT—2.30 to 5.45

- 2.30: Business Efficiency Talks.
2.45: "The Magic Carpet"—A Story of Travel and Adventure.
3.0: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
3.12: From the Studio: Marjory Pritchard, popular vocalist.
3.19: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
3.29: From the Studio: Edith Cowley and Ian Maxwell in a sketch—
"At the Box Office Window" (Sisk).
3.39: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
3.49: From the Studio: Al Jack, novelty pianist.
3.57: The latest dance music.
4.2: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
4.12: From the Studio: Marjory Pritchard, popular vocalist.
4.22: Romano's Cafe Dance Orchestra, conducted by Bennie Abrahams.
4.32: From the Studio: Edith Cowley and Ian Maxwell in a sketch—
"Suburban Hostess" (Sisk).
4.40: Al Jack, novelty pianist.
4.45: "The Trade Hour."
5.45: Close.

THE DINNER HOUR.

- 6.15: The National Broadcasting Orchestra.
6.45: The A.B.C. Younger Set Session—A.B.C. Girls' Radio Club, conducted by Miss Gwen Varley.
7.5: Studio music.
7.15: The Country Man's Market Session—Wool, wheat, stock, farm produce, fruit, vegetables, and poultry markets.
7.30: The National Broadcasting Orchestra.
7.55: What's on the air to-night.

TO-NIGHT'S PRESENTATION—8.0 to 10.30

- 8.0: G.P.O. Chimes.
An Hour from the Capitol—
Ted Henkel and the Capitol Theatre Orchestra
Fred Scholl at the Wurlitzer Organ.
9.0: From the Studio: The A.B.C. Male Quartet—
(a) "Silver Threads Among the Gold."
(b) "Drink to me only with Thine Eyes" (Jonson).

9.12: 2BL Studio Quintet.

- 9.22: The A.B.C. Male Quartet—
"Oft in the Stilly Night" (Thom Moore).
(b) "The Old Rustic Bridge by the Mill" (Skeely).
9.32: Late weather forecast for the man on the land.
9.33: Miss Le Brun Brown, soprano.
9.40: Gladstone Bell, cellist—
(a) "Evening Song" (Schumann).
(b) "Tarantelle" (Gossmann).
9.50: Alexander Sverjensky, pianist—
(a) "Evening Harmonies" (Pachulski).
(b) "Humoresque" (Rachmaninoff).
(c) "The Swan" (Palmgren).
(d) "Rustic Dance" (Boscoff).
10.2: Oliver King, basso—
(a) "Dedication" (Schumann).
(b) "Dream in the Twilight" (Strauss).
(c) "Come you, Mary" (Harold Crazon).
10.10: Simon Phillipoff, Balalaika, solo—
(a) Duet from "Traviata" (Verdi).
(b) "Czardas" (Phillipoff).
10.17: 2BL Studio Quintette.
10.25: Official weather forecast—metropolitan and country.
Late news from the "Sun."
10.30: Close. National Anthem.

2GB

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

MORNING SESSION

- 10.0: Music. 10.10: Happiness Talk by E. Bennett. 10.20: Music. 10.30: Women's Session, by Miss Helen J. Beegling, N.S.W. Music. 11.45: Close down.

AFTERNOON SESSION

- 2.0: Music. 2.5: Women's Radio Service by Mrs. Dorothy Jordan. 2.50: Movie News. 3.0: Labor saving demonstration from Buckingham Ltd. 4.0: Close down.

NIGHT SESSION

- 5.30: Children's session, by Uncle George. 7.0: Music. 7.15: Gardening talk by J. Prior. 7.45: Feature story. 8.0: Miss Mo Long, contralto. 8.7: Symphony orchestra. 8.15: Mr. Jack Win and Miss Nora Wind in a humorous sketch. 8.25: Violin solo. 8.35: Mr. Clifford Lathlean, baritone. 8. Instrumental trio. 9.0: Weather report. 9. Address. 9.15: Miss Molly Long, contralto. 9.25: Mr. Jack Win and Miss Nora Wind in a humorous sketch. 9.35: Scenes from grand opera. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Faling's Building, Ash Street, Sydney (Wavelength, 297 metres).

MIDDAY SESSION

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

EVENING SESSION

- 5.30: Children's hour, conducted by Uncle Jack. 6.30: Close down. 7.0: G.P.O. clock and chimes; request numbers. 7.45: Garden talk by Mr. S. H. Hunt. 8.0: World famous love songs. 9.0: G.P.O. clock and chimes; comments on foreign affairs by J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down.

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 296 metres).

MORNING SESSION

- 10.0: Tune in to the ticking of the clock. 10.3: Popular fox trots. 10.15: Hawaiian steel guitar selections. 10.30: Request numbers. 10.50: Vocal items. 11.0: A 100 laughs. 11.5: Pianoforte selections. 11. Calls and announcements. 11.20: Music interlude. 11.30: Request numbers. 11. Music and vocal items. 11.55: Where to to-night. 12.0: Closing announcements.

CHILDREN'S SESSION

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

EVENING SESSION

- 7.0: Musical interlude.
7.5: Birthday calls.
7.15: Request numbers.

- 7.30: Hawaiian steel guitar selections.
- 7.45: Humorous interlude.
- 8.0: Orchestral selections.
- 8.10: Tenor solos, Mr. G. Mason.
- 8.17: Bert Worne presents a humorous interlude.
- 8.30: Frederick Holt presents a recital of Australian composers and compositions, with musical and vocal illustrations.
- 8.45: Selection of humorous records.
- 9.10: Request numbers.
- 9.40: Continue record recital.
- 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Storey Street, Maroubra Junction, Sydney (Wavelength, 293 metres).

EARLY MORNING SESSION

- 7.15: Breakfast time hour orchestral music.
- 8.30: Weather forecast; close down.

MIDDAY SESSION

- 11.30 a.m.: Vocal and Instrumental music.
- 12.30: Close down. 1.0: Orchestral and vocal selections. 2.30: Announcements; close down.

EVENING SESSION

- 7.15: Orchestral and vocal dinner music.
- 7.58: Programme announcements.
- 8.0: Overture, "Barber of Seville."
- 8.10: Vocal and Instrumental selections.
- 10.15: Announcements; close down.

2UE

Broadcasting Station 2UE, Storey Street, Maroubra Junction, Sydney (Wavelength, 293 metres).

Wednesday, August 28

EARLY MORNING SESSION

- 7.15: Breakfast time orchestral music. 8.30: Weather forecast; close down.

EVENING SESSION

- 7.15: Orchestral music.
- 7.58: Programme announcements.
- 8.0: Overture, "La Traviata."
- 8.10: Vocal and instrumental concert.
- 10.15: Announcements; close down.

Gems From Popular Operas

A PROGRAMME of gems from popular operatic music will be given from 3.0 on August 26. Orchestral selections will include the overture to "La Traviata" (Verdi), and Gertrude Hutton will be heard in the familiar "Softly Awakes My Heart" (Saint-Saens). Edouard Lambert will contribute "Meditation from Thaïs" (Massenet), arranged as a violin solo, and vocal numbers include the trio from "Faust," under the direction of J. Alexander Browne.

Dr. Gale's Gospel of Health

FAMOUS for his economical health diet "prescriptions," Dr. Gale is to broadcast from 3.0 on Wednesday evening, August 21. His subject being "What is health?"

3LO Dance Night

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Harold Elvins at 3LO

A PIANOFORTE recital by Harold Elvins will be broadcast by 3LO on Thursday evening, August 22. Mr. Elvins has selected for his recital the delightful "Children's Corner Suite" (Debussy).

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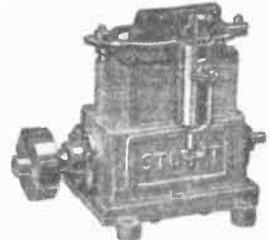


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Interstate Programmes, Thursday, August 29

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 371 metres).
EARLY MORNING SESSION
 7.0 to 8.15: See Friday.

MORNING SESSION

10.30: Current happenings in sport, by Eric Welch. 10.45: The A.B.C. Studio Orchestra, with Myrtle Walscott, contralto. 12.0: Melbourne Observatory time signal. 12.1: A.B.C. Orchestra (continued). 12.15: News service; British official wireless news; Corn Exchange report; Newmarket stock sales; Associated Stock and Station Agents' official report. 12.30: Close down.

MIDDAY SESSION

1.0: Melbourne Observatory time signal; Stock Exchange information; meteorological data; weather forecast for Victoria, New South Wales, South Australia, and Tasmania; ocean forecast; river reports; rainfall; comments on the day's news. 1.20: Community singing—transmission from the Town Hall, Melbourne.

EDUCATIONAL SESSION

2.0: Great Australians—(4) David Syme, J. Howlett Ross. 2.15: Reduced music. 2.35: Music Explained and Illustrated—Style in Music—The Grand Manner, Mr. A. E. H. Nickson, F.R.O.C., A.R.C.M. 2.40: Reproduced music. 2.45: Romantic stories of Australia's early days, Mr. C. R. Long, M.A.

THE RADIO MATINEE

3.0: National Broadcasting Orchestra—"Suite Ballet Egyptian" (Inglis). 3.10: Martin La Matt, tenor. 3.17: Helga Brennecke, cello—"Oriental" (Cull). "Hindo Coonang" (Rimsky-Korsokoff). 3.24: Rose Clayden, contralto—"Sloe Eyes," "My Cinnamon Tree." 3.31: National Broadcasting Orchestra—"Dance Oriental" (Cady). "Dance of the Egyptian Maidens" (Shelley). 3.41: Colla Blinks, entertainer—"Community Singing." 3.47: Thirty minutes of old favorites. 4.17: National Broadcasting Orchestra—selection of W. H. Squires' songs. 4.30: Close down.

CHILDREN'S SESSION

5.45: "Bobby Bluegum" in song and story, with Clever Clarice at the piano. 6.15: Musical interlude. 6.20: For the older boys and girls—An Adventure Story. 6.35: Musical interlude. 6.40: Let's talk about our animals—(3) "The Sheep Dog," Mr. J. L. Milne. 6.55: Musical interlude. 7.0: Countryman's Session. 7.25: For the man on the land—Wheat Growing, Working the Fallows, Mr. J. Brahe. 7.40: "Herald" news. 7.45: Novels and authors of to-day, Mr. A. E. M'Micken. 8.0: Melbourne Observatory time signal.

NIGHT SESSION

8.0: National Broadcasting Orchestra—"First Movement 5th Symphony" (Beethoven). 8.10: Rita Coonan, soprano—"Lithuanian Song" (Chopin). "The Almond Tree" (Schumann). 8.17: Piano Recital—Edward Coll. 8.27: The Sunday-evening Male Quartette—"The Long Day Closes" (Sullivan). "Ye Banks and Braes" (Burns). 8.34: National Broadcasting Orchestra 8.45: Rita Coonan, soprano—"An Old Carol" (Quilter). "Oh, Mistress Mine" (Quilter). 8.52: You will hear the outstanding personality or subject of the week. 9.7: Edward Coll—Piano Recital. 9.21: J. Harcourt Bailey, entertainer—"The Lighthouse-keeper's Story." 9.26: The A.B.C. Gingsingers, in Something Scotch—Chorus, "Scotland for Ever!" Song, "Angus MacDonald." Chorus, "There is No Luck." Song, "Loch Lomond." Song, "Bonnie Prince Charlie." Chorus, "Callin' On." Song, "Callin' Herrin'." Bagpipe selection. Chorus, "The Flowers of the Forest." Song, "Somebody." Song, "Oh, Whistle and I'll Come." Chorus, "Ye Banks and Braes." Song, "My An' Fiddle, Stand for Ever." 9.56: "The Strollers"—Singers and Comedians. 10.10: National Broadcasting Orchestra—Selection, "The Thistle" (Mykletun). 10.20: British official wireless news. Items of interest. Meteorological information. 10.30: The "Red" Dice Band. 10.35: God Save the King.

3DB

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

MORNING SESSION

11.0: Thelma Reddy's band, transmitted from King's Theatre. 12.0: Community singing, transmitted from King's Theatre. Conductor, Mr. G. J. Mackay, assisted by Mr. Reg. Brown. 1.45: Close down.

AFTERNOON SESSION

2.15: Robert Easton (bass). "If Ever I Meet the Sergeant." 2.30: Lacrosse Karsal Orchestra. "Orpheus in the Underworld" (Offenbach). 3.0: Atwater Kent Radio Hour, sponsored by A. G. Healing, Ltd., and E. T. Muir. 4.0: Close down.

EARLY EVENING SESSION

5.30: Virtuoso String Quartet. "Oriental" (Glasounour). 6.0: Children's Hour, "Uncle Ted." 6.15:

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Edith Day and Howitt Worster. "Make Believe." 6.30: What's on at the Theatres and movies. 6.32: Radio Movie Club. 6.35: Sergei Rachmaninoff. "Bees' Wedding" (Mendelssohn). 7.0: Harold Williams. "The Trumpeter." 7.15: Market reports. 7.25: Rudy Wiedorf (saxophone). 7.30: E. L. Coulter, of Sidney Kelk, Sons, and Coulter. "A Talk on Books." 7.40: Beatrice Harrison. "Songs My Mother Taught Me."

EVENING SESSION

8.0: Norah Blamy. "Roses of Yesterday." 8.30: H.M. Coldstream Guards. "Nails—Ballet" (Delibes). 9.0: Columbia Light Opera Company. Vocal gems, "Lilac Time." 9.30: Marcel Dupre (organ). "The Swan" (Saint-Saens). 10.0: Male Vocal Choir of Vienna. "Die Nacht" (Schubert). 10.30: Art Hickman and his orchestra. "Dream House." 10.40: News. 10.45: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 383 metres).

For day sessions see Friday. 7.45: Lecture, "Country Life," by Mr. J. F. F. Reid. Editor "Queensland Agricultural Journal."

NIGHT SESSION.

A NAUTICAL NIGHT.

8.0: The Brisbane Federal Band (Conductor, W. H. Davis)—"Sons of the Sea" (with vocal refrain by 4QG artists). 8.6: J. P. Cornwell, bass—"They All Love Jack" (Adams). 8.11: Harry Borradaile, elocutionist—"Steamer Voices." 8.15: The Orpheans (Conductor, Tom Muller)—"A Life on the Ocean Wave" (Russell) (accompanied by the Brisbane Federal Band). 8.20: George Williamson, tenor—"When My Ships Come Sailing Home" (Dorel). 8.25: The Federal Band—Hymns, "Eternal Father." "Fierce Raged the Tempest." 8.32: Ernest Harper, baritone—"Twas in the Broad Atlantic." 8.37: Harry Borradaile—"Christmas at Sea" (Robt. Louis Stevenson). 8.44: The Orpheans—"White Wings" (Winter). 8.50: The Federal Band—"A Nautical Medley." 9.0: Metropolitan weather forecast; movements of the Travelling Dental Clinic. 9.5: Radio interlude—In response to requests, the first of "The Divine Spark" interludes, given from 4QG during last year, will be repeated—"The Story of the Helen B. Stirling." 9.25: Francis Lane (contralto)—"My Ships" (Barratt). 9.30: G. Williamson, tenor, and E. Harper, baritone—Vocal duet, "Larboard Watch" (Williams). 9.35: Albert Falk, baritone—"Golden Shore" (Scott Gatty). 9.40: The Federal Band—Another Nautical Medley. 9.45: J. P. Cornwell, bass—"Bells of the Sea" (Solman). 9.50: The Orpheans—"Star of Peace." "Let the Lower Lights be Burning" (accompanied by the Brisbane Federal Band). 10.0: News supplied by the metropolitan stations. Weather. Close down.

5CL

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

MORNING SESSION

11.15 to 2.0, see Friday.

AFTERNOON SESSION

3.0 to 4.30, see Friday.

EVENING SESSION

6.0: Chimes. 6.1: Birthday greetings. 6.15: Children's request numbers. 6.30: Dinner session. 7.1: Birthday greetings; sporting service; general market reports. 7.30: Dr. G. H. Wright, M.A. will continue his series of literature talks. 7.39: Mr. A. Bertram Cox will speak on "Lacrosse

Activities." 7.35: A short lecture by Horace Perkins. 7.45: Mr. A. M. Whittenbury, hints on poultry breeders.

NIGHT SESSION

8.0: Chimes. 8.5: From Port Adelaide Town Hall—Tom King, pianist—"Szigisz's Rhapsodie" (Friedman). Allan's Mouthorgan Band (conducted by Mr. R. Dutton)—"March of the Crackajacks" (Grace Edwards). Master W. Wood, Mouthorgan Solo—"Killarney" (Balfe). Allan's Mouthorgan Band—"She's Got a Great Big Army of Friends" (Nelson). Thelma Bailestone, Elocutionist—Humorous items. The Madrigal Singers—under the direction of Horace Perkins—"In This Hour" (Pinsuti). "Silver Threads Among the Gold." Harold Clayton, 14-year-old champion Xylophonist—"Parade of the Tin Soldiers." "William Tell Overture" (Graze Edwards). Wilfred Thomas, Bass—Selected. Bert Woolley, Banjoist—"Mother Macree" (Ball) (Four Hammer). Rupert Hazell and Elsie Day—Will entertain you. Gwenda Bisset will sing—"Please Give Me a Penny, Sir." 9.1: Meteorological information, including Semaphore tides. 9.2: Overseas grain report. 9.3: "Atmos" will talk to you about "Radio." 9.12: Continuation of concert from the Port Adelaide Town Hall—Tom King, Pianist—In popular hits. Allan's Mouthorgan Band—"Juanita" (Norton). "Jeannine, I Dream of Lilac Time," with vocal chorus. "Phyllis Milion Frenchman" (Fisher). Thelma Bailestone, Elocutionist—More humorous items. The Madrigal Singers—"Carry Me Back to Old Virginia," (accompanied by Bert Woolley, banjoist). Harold Clayton, Xylophonist—"Hiarity." "Good-night" (Wood). Phyllis Everett, Contralto—"Casey, the Fiddler" (Haydn Wood). "In An Old-fashioned Town" (Squire). Bert Woolley, Banjoist—"Mexican Ride" (Grimshaw). Rupert Hazell and Elsie Day—Allan's Mouthorgan Band—"Climax March" (Hall). "Medley of Old Melodies." The Madrigal Singers—"The Old Folk" (accompanied by Bert Woolley, banjoist). 10.25: News service. British official wireless news. Meteorological information. 10.30: Modern dance recordings. 11.0: Close down.

6WF

Commonwealth Government Broadcasting Station Perth (Wavelength, 100 metres).

10.0: Gramophone records. 11.0: Close down. 12.30: Tune in. 12.35: Markets, news, etc. 1.0: Time signal. 1.1: Weather bulletin. 1.3: Organ recital, by Mr. E. S. Craft, A.R.C.M. L. Mus. A. 2.0: Close down. 3.30: Tune in. 3.35: Afternoon programme. 4.30: Close down. 6.45: Bedtime stories by Uncle Duffy. 7.5: Light music. 7.30: Commercial information. 7.45: Talk, by Mr. A. T. Boswell. 8.0: Time signal. 8.15: First weather bulletin. 8.3: Concert by the Perth City Band. 8.50: Late news; ships within range; late weather. 9.45: "Health" talk, by Mr. Fation. 10.30: Close down. 104.5 metres. News session—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres commencing at 6.45 p.m.

7ZL

Tasmanian Broadcasters Pty., 55 Elizabeth St., Hobart (Wavelength, 516 metres).

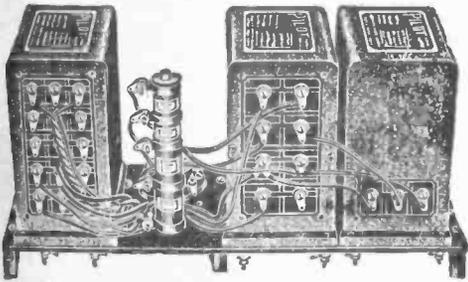
11.30 a.m.: Record recital. 11.34: Midlands weather forecast. 11.35: Record recital. 11.55: Tasmanian stations 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information; mail notices. 12.15: Record recital, by Mr. E. S. Craft, A.R.C.M. L. Mus. A. 2.0: Close down. 3.30: Tune in. 3.35: Afternoon programme. 4.30: Close down. 6.45: Bedtime stories by Uncle Duffy. 7.5: Light music. 7.30: Commercial information. 7.45: Talk, by Mr. A. T. Boswell. 8.0: Time signal. 8.15: First weather bulletin. 8.3: Concert by the Perth City Band. 8.50: Late news; ships within range; late weather. 9.45: "Health" talk, by Mr. Fation. 10.30: Close down. 104.5 metres. News session—Simultaneous broadcast on 104.5 metres of programme given on 1250 metres commencing at 6.45 p.m.

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The WIRELESS WEEKLY RADIO INFORMATION SERVICE

Under the direction of Ross A. Hull

YANNA (Miller's Point).—Probably a loose connection at the switch itself. Turn the set upside down (I have had some trouble with this type receiver), and you will find the four bolts which hold the rubber rests, when taken out, will allow the receiver to be withdrawn from its cabinet.

"GRID" (Moonee Ponds).—Yes, can recommend the kit. It is excellent. Sorry, cannot advise re type speaker mentioned in your letter, as we have not heard it in operation. However, it is being used in talkie systems, so should think it is O.K.

H.B.G. (Manly).—Yes, R.F. stage can be added. Merely duplicate first stage. May be necessary to alter coils slightly, or use trimmers.

M.E.S. (Kangaroo Valley).—"I notice in your issue of July 5, 1929, that an aerial with counterpoise is described as being best for summer reception. Would such an aerial give maximum results in winter?"

Answer: You have misread the remarks. What is meant is that during summer, static is usually worse than in winter, and a counterpoise, if used in place of an earth, assists greatly in the elimination of this bugbear. It does, however, reduce volume slightly, but the reverse will be in summer. It is not necessary in winter, because static is not troublesome.

(2) "Will it assist reception on broadcast and short-wave reception?"

Answer: It will have little effect on the broadcast band beyond that mentioned. On short-waves you will probably find that neither earth nor counterpoise is absolutely necessary, and if this is so, it is better to do without it, especially on bands where static is troublesome (at present 80 metre band).

(3) "If use a 7/22 bare copper wire. Would enamelled wire give better results?"

Answer: No; results will be the same. The enamelling will save the aerial wire from corroding between hands. It is advisable to use 18 if climate is humid. Hum mentioned may be due to some local interference or grid trouble.

N.G.B. (Wentworthville).—If you wish to tune below 200 metres it will be necessary to use smaller coils, down to say 100 metres, then smaller coils and condensers for the other bands. The trouble complained of with the tower valve is either overloading or wrong grid bias.

K.H.J. (Melbourne).—Suggest you wind coils on valve bases as per Midget S.G. R.F. Four.

I.O.U. (Mileell).—Probably flat "B" batteries or "C" battery. If the station comes on clearly for a few months, then dies away altogether, it is a sign of a flat "A" battery.

General: Mr. V. E. Thomas, Carrington Street, West Walsend, via Maitland, writes: "Would you kindly let Mr. Norman Read, of North Sydney, know through your service columns that I have the eight copies of WIRELESS WEEKLY which he desires. If he has not already procured these copies elsewhere, he can have mine. I will be pleased to hold same for him. Please pay postage only. I also send a list of back numbers which I have on hand. Any reader can have these copies for postage cost. 1927; December, 9, 16, 23, 1928; March 16, 23; April 6, 13, 20, 27; May 11, 18, 25; June 1, 8, 15, 22, 29; July 6, 13, 20, 27; August 3, 10, 17; September 7, 14, 21; October 5, 12, 19, 26; November 9, 16, 23, 30; December 14, 21, 28, 1929; January 4, 11, 18, 25; February 8, 15, 22; March 1, 8, 15, 22; April 5, 12, 19; May 3, 10, 17, 24, 31; June 7, 14, 21, 28, 1929." Thanks, Mr. Thomas.

J.W.F. (Roseville).—Only remedy is to add a stage of audio. Circuits have appeared in these columns frequently.

J.H. (Paxton).—You will require a .00025 variable condenser, .00015 variable condenser, an old valve-in-use, 100 ohm detector valve similar to those in use in existing receiver coil kit, 2" choke valve socket, bush, panel, and baseboard. Place coils so that leads to other components will be short. Left-hand corner of baseboard. Diagram returned as requested. Fixing noise may be faulty transformer or speaker.

E.P.D. (Canley Vale).—Probably a faulty detector valve.

"FIVE VALVE" (South Australia).—Go-Getter coil O.K. Condenser for reaction should be .00025 mfd. and that for main tuning .00015 mfd. You referred to a diagram, but none was enclosed. Copy required has been forwarded.

"STATIC" (Sydney).—The crackling sound noticed at night is probably your "nom-de-plume"—static, though it may be a faulty transformer, primary, or flat "B" batteries. Quite O.K. to hear click in

speaker when light is switched on. This is known as induction. Door bell buzz under same category. Only remedy is to use lead-covered cable for bell leads, and earth the lead covering.

A.F. (Rose Bay).—Almost certain to be faulty valve or valves in audio. From your remarks, should think detector valve is O.K. Try audio valves in detector socket. Wiring may be wrong, or perhaps grid bias is insufficient. Cannot place the station in kilocycles can be found by dividing the mentioned. The reaction condensers should be kept in step with the main tuning condenser, not as regards numerical reading, but so that a rushing sound can be heard all the time.

(2) "Could you give me the formula for changing the wavelength in metres to kilocycles?"

Answer: Frequency in cycles can be found by dividing the velocity by the wavelength, and frequency in kilocycles can be found by dividing the answer to the former sum by 1000. The velocity of aether waves is 300,000,000 metres per second. Thus a station with a wavelength of 300 metres, would have a frequency of (300,000,000 over 300) equals 1,000,000 cycles or 1000 kilocycles.

G.C.A. (Pyrmont).—Not enough details. Rather than give you advice which may be useless, wading that you write again, giving a few particulars. State deviations made, if any.

C.M.W. (Arncliffe).—S.W. adaptor can be used, but would suggest you use dry batteries on adaptor, as otherwise hum will be troublesome. Circuit diagrams have appeared in these columns recently. Valve to use in adaptor should be of the detector 1-volt type. Suggest A415. Suggest Radiokios S.W. coil kit.

(3) "What is the cause of my amplifying valve heating up?"

Answer: It has a greater plate voltage impressed upon it than any of the other valves, and is working harder.

"BETH" (Buderim Mt.).—All-Empire. Life of batteries depends on voltage and capacity of batteries used. Querists should advise these points, as otherwise their time and ours is wasted. For the same reason, cannot advise re carbon cells. The aerial arrangement you suggest will have no particular advantage unless locality conditions are subnormal. It does not make so much difference on S.W. as it does on the broadcast band. With the All-Empire, you should be able to get good reception with a piece of wire ten feet long thrown out into the back yard. A better set still was the S.G. Midget Four.

W.A.P. (Banora).—No; condensers are too small. You would only be able to get up to about 300 metres, then sitting of 290, 280, 270, etc. Screening arrangement suggested will be quite O.K.

V.F.N. (Richmond River).—Evidently grid bias trouble. Also have valves tested, and check up batteries.

F.W.G. (Croydon).—As per the Go-Getter article, May 10.

GENERAL.—Can any reader please supply Mr. W. Henry, 30 Percival Street, Leichhardt, with a copy of WIRELESS WEEKLY containing the "All-Empire" S.W. receiver?

R.L.M. (Queensland).—"Why is it that when a condenser is lapped across a portion of a tuning circuit it has the same effect as using a smaller condenser across the whole coil?"

Answer: Because in both cases, the total capacity of the circuit is reduced. Capacity in parallel cause the net capacity of the circuit to be reduced. It is precisely the same as connecting two condensers in parallel. Two condensers of .0005 mfd. in parallel have a net capacity of less than one of them, in fact it is exactly half the capacity of one of them, i.e., .00025 mfd. Sorry cannot place the stations. We are awaiting a list, which will be published as soon as it arrives.

J.L.S. (Chatswood).—Re file-board may be made smaller if desired. Not necessary to use power valve, but it is advisable if best results are expected. Eliminator quite O.K.

C.C. (Hurstville).—Emmoco battery charger good would not advise you to tamper with the transformer.

GENERAL.—Mr. John R. White wishes to know if there is any reader in the Petersham district who has had any success with crystal receivers. Mr. White states receivers that have given good results elsewhere were a failure in Petersham. The address is 33 The Boulevard, Petersham.

G.S.H. (Deer Vale).—Yes; use 30 gauge wire, and increase number of turns by one-third. In Space, 1/4-inch.

C.H.E.K. (Moosgle).—No; the type cells you men-

tion would not be suitable for the portable. They are extremely cumbersome, heavy, and spillable, but are quite O.K. for a fixed receiver.

E.F. (June).—Midget .00005—thirteen plate O.K. (2) No. (3) Condenser would be better. Resistance control of reaction is often noisy. A good resistor, by-passed with 1 mfd., is essential.

E.T. (Dulwich Hill).—The easiest way to magnetise a steel bar is to rub one end of it with the N end of a magnet, and the other end with the S end of a bar magnet. Another way is to (say to magnetise a needle), make a single coil electro-magnet, as per instructions given in "Proving Radio," leave out the core, and insert the needle in its place. To magnetise larger objects, larger electro-magnets must be made. Full details for making smaller electro-magnets will be found in "Proving Radio," part II, and further details on magnetising steel bar with another magnet will be gleaned from "Proving Radio," part 5.

H.M. (Lelehardt).—Alter the 15 turn coil to 20 turns, and place it over the centre of L2. Use about 25 or 30 turns for L3. A615 valve. Yes; O.K. for UX socket. Connect the positive terminal of the first 45 volt "B" battery to the negative terminal of "B" battery No. 2, and also to the positive terminal of another set. Connect the positive terminal of "V" battery No. 2 to B plus 1 on your battery strip. Then connect the negative terminal of B minus, on No. 1 battery, to A negative and positive.

General: "Marco." 6/o Ashfield Post Office, Ashfield, N.S.W., writes: "In your issue of August 2, 1929, I see two inquiries—A. W. Lidcombe, and J.E.O.G. Tempe, regarding the Marco Four, and requesting report from interested readers. I shall be glad to help fellow hams with Marco receivers, free of charge, as I am a lover of the Marco, and shall be happy to oblige and exchange views with other fans."

General: Can any reader, please supply Mr. K. E. Richardson, "Angrove," 1 Beaconsfield Road, Measman, Sydney, with two copies of WIRELESS WEEKLY, viz., Nos. 12, 13, and 19, for which he is willing to pay cost and postage?

R.C. (Greenwich).—What make was the condenser? A certain cheap type of condenser now on the market is being sold for a .0005, whereas it is only a .00035. Do not alter the coils of the Countryman's One, which have been found to be exactly correct. This receiver is better than the other you mention. Coil details of Reinartz one-valve are primary 15, secondary 1/4-inch from primary; 47 turns reaction (no space) 25 turns wound on three-inch diameter former, 24 gauge D.C.C. wire.

W.R.H. (Campsie).—Probably a faulty valve.

R.H.H. (Chatswood).—Letter passed on to Colville Moore, who now hold all Q.S.L. cards. Your message passed on to Technical Editor, who desires to thank you.

G.J.C. (Victoria).—The R.P. Valves are rectifying. Probably you used transformers unsuited to the job. Highest ratio transformer should be placed in first stage. Detector valve may be faulty. Yes, the S.G. valves could be substituted, but alterations as shown in circuit you mention will be necessary.

QUERY COUPON

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

The Radio Information Service, 3150-3160 C.P.O., Sydney
Please answer the accompanying queries in the WIRELESS WEEKLY. Enclose 1/- postage and your return envelope. I enclose this coupon in order to indicate that I am a bona-fide reader.

General.—Mr. S. M. Cook, of Colswold, via Bournemouth, writes: "I have frequently read in your (and other) radio journals comments on distant reception with a crystal receiver. I have experimented for a number of years with various crystal circuits and valve circuits. With the circuit appended, I can receive 4GG (about 100 miles distant) in daylight, and 2FC, 2BL, 2GB (about 350 miles air line distance), 2LO, and 3AR (680 miles distant), and have even had 5CL on a clear night. All of these stations can be heard on any moderately clear night. 2FC is loudest here. The country is mountainous—it is 15 miles from the New South Wales border. I have never seen the same circuit elsewhere. I always use a Harlic detector. I have had one of these for five years, and it is still in perfect condition."

Answer: We appreciate your letter and circuit. The results you are getting seem almost like the proverbial fisherman, but, of course, your location is excellent, since you would not suffer interference. However, I greatly doubt if any reader in the city or suburbs would be able to get anything like these results, but there's plenty who'd like to try.

W.A.P. (Brisbane).—(1) Yes; an excellent set.
 (2) Speaker O.K.
 (3) Yes, the condenser can be used to by-pass R.F., and it can also be used in conjunction with a choke to protect windings of speaker. A 25 Henry choke will be required. Your circuit correct. If you use T.C.C. are well known, and are good. Hydra condensers also excellent.
 (4) Can be used with any receiver.
 (5) "Can you give me a list of a good set of valves, six-volt type, to use with Neutrodyne?"

Answer: Philips A635, A635, A615, A609, B605, Marconi (or Gram) HL510, DL610, DL610, DL610, DL610, Radlotta, UX201A, UX201A, UX200A, UX201A, UX112A, Mullard, PM5X, PM5X, PM5D, PM5, PM256, etc.

C.H.P. (Victoria).—Look for open grid circuit, which may include grid bias, condenser lead, grid condenser, grid leak, grid terminal of detector valve socket, detector valve not making proper contact with grid strip, etc.

W.W.T. (Queensland).—The circuit requested will be published in these columns shortly. We are endeavoring to trace the original book. In the meantime, the Countryman's One Valve will be found in these columns, and I think you will find it quite equal, if not better than, the other receiver you mention.

S.W. (Glencaigh).—Whilst we are always ready to assist readers with their problems, they would have much time and trouble if they were to write direct to the manufacturers of the apparatus about which they require detailed information. As matters stand, we have to pass the letter back to the correspondence department, and a letter is written to the firm, asking for the information. If any delay occurs it is not always our fault. If the primary of the transformer has become damaged a 100,000 ohm fixed resistor placed across it may help. Coils may be better. The B605, followed by two C605's, would be useful. Cannot advise you re speakers till we receive information from manufacturers.

Radio Ace.—See below.
General.—L.L. of Watson's Bay does not give his full address, writes: "Could you kindly let me know the address of that Parkes writer in your recent issue of WIRELESS WEEKLY. He signed him self 'Radio Ace.' I have a one-valve set, on which I can get the following stations: 2UF, 2UV, 2KY, 2BL, 2GB, 3AR, 5LO, and 4GG, but I will take off my hat to 'Radio Ace.'"

Answer: Sorry, we have not the full address. If "Radio Ace" likes to forward it, we will publish it for you.

M.G.M.G. (Parkes).—I have a six-valve receiver about twelve months old, and know nothing about radio. Reception is quite good, but piano notes and music often have a shattered sort of effect—much like the old mouthorgan of boyhood, after we blew its reeds out of joint. Could you let me know what is the cause of this, and how it can be remedied? No use talking audio or radio frequency.

Answer: Try adjusting grid bias and detector plate voltages. One or more of the valves may have lost their emission. Piano notes are a solid test for good reproduction. Presume your speaker

is a good one, and is in perfect order? A D.O. milliammeter in the plate circuit of last valve should show rated current of valve, and should give perfectly steady reading during loud reception.

J.L. (Mosman).—The .00035 condenser can be used for reaction control. Add 10 per cent more turns, using the 26-gauge wire. Aerial O.K.

"Eliminator" (Werris Creek).—Take an additional lead from B plus maximum to one side of a variable 500,000 ohm resistor, and the other terminal of this resistor to B plus R.F. You can then vary the voltage as desired.

General: Can any reader please supply the Query Answer with a copy of WIRELESS WEEKLY containing the Countryman's One Valve? Will pay for copy and postage.

General: A lot of inquiries are to hand for the Countryman's One Valve article, but unfortunately this copy has been out of print for a number of months. In an effort to supply those who are asking for this number, a paragraph will be inserted in these columns where the querist gives permission.

C.W.W. (Manly).—Regret no copies left. See above and below.

General: Can any reader please supply Mr. C. W. Whiting, "Coolangalla," 9 Hilltop Crescent, Manly, with a copy of WIRELESS WEEKLY containing the Countryman's One Valve.

C.D.S. (Rockhampton).—"I have heard what a wonderful little set the Countryman's One Valve is. Would you please insert a par in your paper to the effect that I should like to obtain a copy of the circuit from some reader? My address is: Mr. C. D. Skirving, Maine Street, Rockhampton, Queensland."

"Ajax" (Queensland).—"Would you please print in the query columns a diagram of the Improved Countryman's One Valve. I have heard that it is an excellent little set, but unfortunately I have been unable to obtain the issue in which it was published."

Answer: The circuit of the original (one control) and circuit of the Improved (two control) Countryman's One Valve are published below.

B.L. (North Queensland).—"I am trying to obtain a copy of WIRELESS WEEKLY in which the Countryman's One Valve receiver was published, but have given it up as a hopeless chance. Would you please publish the circuit in your valuable little paper, and oblige?"

Answer: Circuit has been published in these columns, as requested.

R.W.J. (Brisbane).—"Would you please tell me the number of turns on the coils in the 'Improved Countryman's One Valve'?"

Answer: The number of turns on the coils have been marked on the circuit diagram, which is published in these columns.

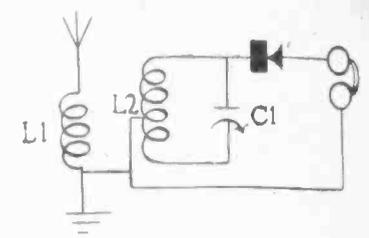
H.A. (Wauchape).—See reply to R.W.J., above.

D.J. (Brisbane).—"I am trying to buy a circuit of an excellent one valve, and heard that the 'Countryman's One Valve' would suit me. Would you please tell me where I can obtain a back of panel wiring diagram?"

Answer: The circuit is an original one, and is not obtainable in blue prints. However, a back of panel diagram of the Countryman's One Valve with a stage of audio added, was published in these columns on March 1, 1929.

R.F.S. (Milken).—"You often make reference to circuits that have been published in query columns, but it is quite easy for one to miss that circuit unless they know the date. Will you please publish a list of circuits published in query columns (together with date of publication)? I am sure it would be appreciated. Since the Improved Radio Information Service only commenced December last, I would suggest you commence from that date. Those interested can complete their own lists, as the WEEKLY is published."

Answer: A good idea. List follows: December 14, 1928, wavetrapp circuit and circuit of one valve amplifier; December 7, 1928, Old Reliable One Valve circuit, one stage resistance coupled amplification circuit, simple selective crystal receiver circuit, diagram showing connections to the double-ended screen-grid valve; December 28, 1928, diagram showing how to connect up "B" batteries and take off various tapplings, circuit of Extraordinary One Valve receiver; January 4, 1929, circuit of Marco Four



This circuit was forwarded by Mr. Cook, who states he is able to hear interstate stations as well in day-time, and all Australian stations at night-time. Though his location is excellent, it must be remembered that city reception will not equal Mr. Cook's claims, but the circuit is worth trying. L1 has fifteen turns on 30-gauge D.S.C. wound on a three-inch former 1/2 inch away as wound L2, 37 turns of same wire. L2 is tapped in the centre for earth. L1 is not essential for country listeners. It may be necessary to reduce L2 to 50 turns to receive 2GB. The crystal is a Harlic semi-fixed detector. Variable condenser has a capacity of .00035.

Valve receiver, circuit of simple one valve receiver, diagram showing how to protect accumulator, wavetrapp circuit, diagram of an interference eliminator, circuit of a short-wave adaptor; January 11, 1929, diagram showing connections for perpendicular type screen grid valve; January 18, 1929, the Inverse Duplex Two Valve receiver circuit, circuit of a two stage transformer coupled amplifier, circuit of Philips One Valve receiver, circuit showing how filament supply should be balanced for A.M. on March 25, 1929, circuit showing how to add Reinartz reaction to any receiver, circuit of a simple crystal receiver with two stage audio amplifier (transformer coupled); February 1, 1929, Trouble-Finding Chart, diagram showing connections for perpendicular type screen grid valve; February 8, 1929, aerial and carb symbols, interference eliminator diagram, simple one valve circuit, circuit of a one valve amplifier, diagram showing protective accumulator fuse, diagram showing how 240 volts A.C. can be stepped down to 6 volts D.C.; circuit of Marnock De-Luxe Five Valve receiver; February 15, 1929, circuit of a D.O. eliminator, circuit showing how to protect valves when earthed type eliminator is used; February 22, 1929, circuit of two valve Reinartz, circuit of two valve short-wave receiver, circuit of crystal set with two stages of transformer coupled audio frequency, circuit of a selective and voluminous simple crystal receiver, circuit showing how to control four valve filament; March 1, 1929, circuit of a Morse code practice outfit, using receiving valve as an oscillator, back of panel wiring diagram of Countryman's One Valve, with one stage of transformer coupled audio frequency added, circuit of one valve amplifier; March 8, 1929, circuit of Three Valve Reinartz, circuit of panel wiring diagram of two valve Reinartz, circuit of Marco Four, using screen grid valve (one stage); March 15, 1929, back of panel wiring diagram of two valve Reinartz, circuit of Three Valve Reinartz, circuit of a 200 metre one valve transmitter; March 22, 1929, circuit of Marnock Five, diagram of Interference Eliminator, circuit of Philadyne One Valve; April 5, 1929, diagram of midgelet condenser, diagram showing how to tap "C" back of panel wiring diagram, circuit showing how to make reaction variable, circuit showing how to repair burnt-out primary of transformer; April 12, 1929, circuit of gramophone amplifier; April 19, 1929, back of panel wiring diagram of a one valve short-wave receiver, circuit of two valve Reinartz; April 26, 1929, circuit of 1929 Solodyne, diagram showing Heavyside Layer effect, circuit of Three Valve Old Reliable receiver; May 10, 1929, circuit showing how filament supply from a step down transformer supplied by A.C. mains should be fed to transmitting valves, correction of Marnock Five circuit, circuit of Countryman's One Valve, circuit showing how to add a stage of screen grid audio frequency to any receiver; June 7, 1929, back of panel wiring diagram of "Radio Ace" circuit; June 14, 1929, circuit of single stage of transformer coupled audio; June 14, diagram showing how to protect main tubes when eliminator is used on set with common earth. From that date, up to the present moment, the Radio Information Service has been overwhelmed with letters, and no circuits have been published. As will be noticed, however, we are in response to many requests, continuing to publish circuit diagrams, etc., when space permits.

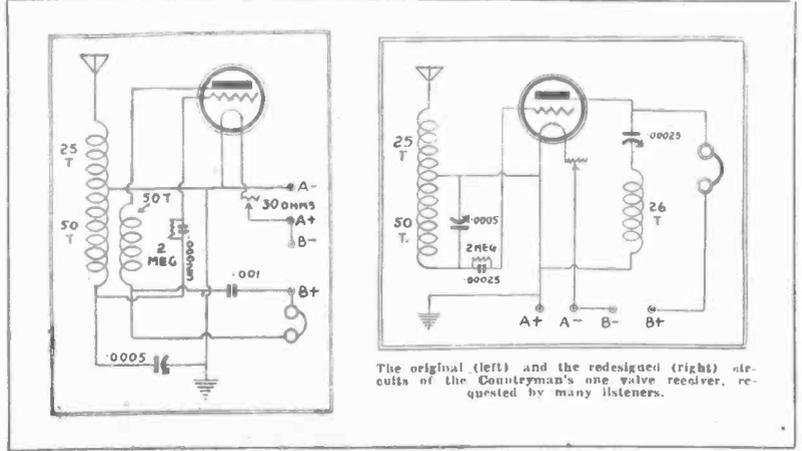
O.A. (Five Dock).—160 turns 30-gauge wire on a 4 1/2-inch diameter former.

G.M. (Waverley).—The Bradleymohm is a carbon compression filament control. Most radio firms sell them. Thanks for kind remarks.

C.T. (Queensland).—Two power valves in the two stages of the set unnecessary. Use power valve of the highest possible rating in last stage only. If you cannot obtain valve required in Queensland, write to Harringtons Ltd., George Street, Sydney. Bias voltages on both amplifiers are of great importance.

A.R. (Mursville).—Number of plates differs will make. Difference between broadcast receiving condenser and S.W. condense is also of great importance. The latter is half and sometimes less than half the capacity of the former, and is usually tuned by a variable.

R.D. (Camusie).—Power pack O.K. Don't let the power amplifier frighten you.



The original (left) and the redesigned (right) circuits of the Countryman's one valve receiver, requested by many listeners.



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