

WIRELESS WEEKLY

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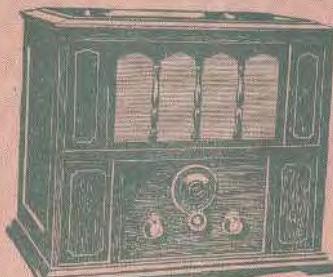
VOL. 7. No. 21.

FRIDAY, MARCH 19, 1926.

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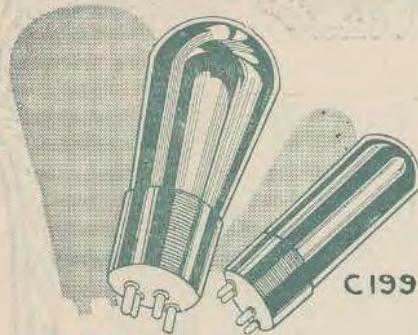
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WIRELESS WEEKLY

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"Questions and Answers." All requests by non-subscribers calling for technical advice or drawings MUST be accompanied by postal note or stamps to the value of 1/-. A maximum of four questions is allowed.

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THE NEW 4QG.

The outstanding feature of the last few weeks in the wireless world has, of course, been the preliminary testing of the new station of 4QG Queensland, controlled by the Queensland Radio Service. The progress made in the erection of this powerful station has been watched closely by Australian and New Zealand radio users, and with a great deal of interest by the people of other countries, as has been shown by the frequent comments in the technical press of Europe and the United States. Quite recently a New York journal unloaded upon its readers the sensational announcement that "away out there in Australia" the broadcasters were actually using a power of 5000 watts, pointing out at the same time that the station being installed in Brisbane was designed to handle this tremendous power. Some of us are perhaps inclined to forget the important fact that in very few places abroad are there broadcasting stations designed to cover such tremendous distances as these Australian stations. In few instances is a power of over 3000 watts referred to in any other terms than "colossal." Here in this country we have broadcasting stations which

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easily rank amongst the "super" stations of the United States and Great Britain, and we should give due credit to the engineers who have successfully designed and erected such apparatus as that used to cope with the tremendous energy at 3LO, etc., whose transmissions provide ample entertainment for Australian listeners and those in New Zealand and the far-off Pacific Islands.

The preliminary tests from 4QG have been entirely successful, so much so that a flood of radiograms, cables, telegrams and letters of congratulation has been loosed upon the Director, who quite naturally is proud of the results attained by this new and gigantic instrument for entertainment that has been placed under his control. If we may accept as a criterion the efficient service put out by 4QG during the months when only temporary apparatus was at the disposal of the management, then we may confidently anticipate big things from the new 4QG. Queensland possesses musical and dramatic talent of no mean order, and in the near future it is certain that the radio public may expect a service from Brisbane at least on a par with that at present given by the other Australian stations.

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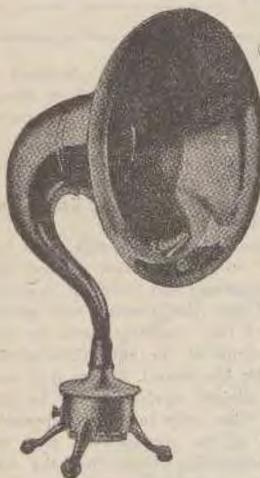
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The Progressive System of Construction

By Wireless Weekly

We have received quite a number of letters from country and city readers requesting publication of a series of progressive articles dealing with the unit system of construction. In order to comply with this request we are commencing with this issue to describe a two-coil tuner crystal detecting receiver. The popular back of panel view showing the wiring and layout of components will be given, and week by week we intend to gradually build up from the humble crystal to the multi-valve receiver employing three and four valves. Every efficient standard circuit will be dealt with in turn.

To those who at present have not sufficient confidence in their constructional ability, we hasten to explain that if they copy our drawings wire for wire, and connection for connection, no difficulty whatever will be experienced in obtaining maximum efficiency with any one of the receivers published from time to time.

Throughout these articles we shall refrain from mentioning the brands or makers of the various components used, but it is only fair to point out emphatically that good quality parts are by far the cheapest in the long run.

NEW READERS.

"Wireless Weekly's" circulation is going up by leaps and bounds, and for this reason we feel sure that there are quite a number of our new readers who are looking for a reasonably priced crystal receiver to which they can add, at some later date, the necessary amplification for pure loud speaker reproduction.

CONSTRUCTION.

Take particular notice of the sized panel recommended in our Fig. 1. This is very important if you wish to take full advantage of these progressive articles without having to purchase separate panels each week. Readers will also notice that we advise a three coil holder. The first and second holders only are in use for the time being, but you may at some later date wish to alter from a crystal detector to a regenerative valve detector, when the three coil holder will be necessary. For this reason don't be tempted to substitute other parts.

Fig. 1 shows clearly the position of the other necessary apparatus, which, for the time being, are two variable condensers (one .001 mfd. and the other

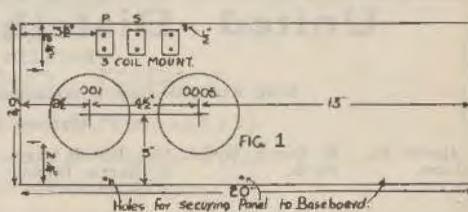
.0005 mfd.) and four terminals. The .001 condenser tunes the primary or first coil and the .0005 condenser tunes the secondary or second coil.

After all the parts have been assembled on the panel and the necessary holes bored to secure the panel to the baseboard, you may commence to wire up the components.

Carefully follow Fig. 2. You will notice that the No. 1 connection links the aerial terminal with one terminal of the .0001 fixed condenser. From the other fixed condenser terminal No. 2 connection goes to the top connection of the first coil holder. No. 3 links this same wire with the fixed plate of the first variable condenser. No. 4 links the lower connection of the first coil holder with the moving plates of the first variable condenser, and No. 5 is another link from this to the earth terminal. No. 6 and 7 connections go to the fixed and moving plates respectively of the second variable condenser. No. 8 links one of the telephone terminals to the fixed plates.

These completed, you should now secure the baseboard to the panel, after which the crystal detector may be mounted on the baseboard and connections Nos. 9 and 10 wired according to diagram.

The plug-in coils necessary for tuning-in the various broadcast stations may be of the honeycomb coil type, or, if preferred, spiderweb coils may be wound by the constructor. Enamel or cotton covered wire is quite O.K., but it is not advisable to use wire smaller than No. 30 gauge; in fact, it will be an advantage to use No. 26 or 22 gauge for all the smaller coils up to 75 turns. The following table shows the gauges of wire recommended. They should be carefully followed by those who are out to obtain maximum efficiency:—





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Gauge Wire.	Number of Turns.	Number of Coils Necessary.
20	15	1
20	20	1
20	35	2
22	50	2
24	75	2
28	100	1
30	150	1

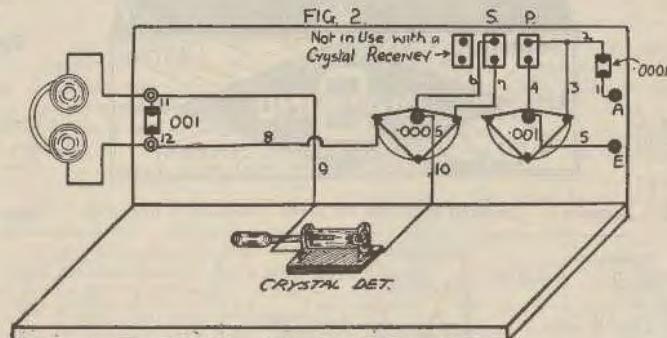
In checking up the number of turns you have placed on the spiderweb former, it is necessary to count the number of wires on either side of the former.

Try to remember that everything you make or

mounted coils are purchased, be careful that the same maker's coils are used throughout, then you may be sure they are all mounted the same way.

No doubt many readers by this time are wondering why it is so important to have all these coils mounted so exactly. If this warning is ignored, and some of the coils are mounted wrongly, home constructors will find that when at some later date they alter their receiver into a regenerative valve receiver reversed reaction will take place, viz., instead of the tickler coil boosting up the volume it will decrease it.

The following coil table shows the sized coils required to tune-in the various broadcast stations for the crystal receiver described in this issue, but



buy will be required to give you long service. No matter what circuit you eventually adopt, the well-made coils will always be very useful.

WARNING.

In mounting the coils to the plugs, whether they are of the spiderweb or honeycomb coil type, be sure that they are all mounted the same way. It is a golden rule when mounting coils to place the outside layer end to the pin connection of the holder and the inside layer end to the hole connection of the holder, being careful that the direction of rotation of the wire is the same in every coil. If ready

readers are strongly advised to read the article on tuning published on page 11.

COIL TABLE.

Station.	Primary.	Secondary.
2WW	20	35
2UE	25	35
2KY	25	35
3BL	35	50
3L0	35	50
5CL	50	75
4QG	50	75
2FC	100	150

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	15 <i>W</i> "Buzzer" b.amp	3/9
	15 <i>W</i> "C" weathertite	5/6
	15 <i>W</i> "Dionion" -	4/6
	15 <i>W</i> "Navy Special" -	3/9
B	6 <i>W</i> Large Type -	25/0
	10 <i>W</i> x 7	
C	6 <i>W</i> Large Type -	20/0
	8 <i>W</i> x 7	
	4 <i>W</i> Bistro -	2/9
	4 <i>W</i> Lge Specal -	12/0
	6 <i>W</i> Ignite -	15/0

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TUNING

By "WIRELESS WEEKLY."

In order that the instructions contained in this article will be of the utmost value to all readers, we are dealing with both crystal and valve circuits. In commencing this week with crystal detector circuits, we would like to point out that if the various local broadcast stations are to be received without interference, present conditions make it necessary to use a two coil tuner, either in the form of a loose coupler or with honeycomb or spiderweb coils, tuned with two variable condensers. Almost every day we receive complaints from crystal users who state that they experience considerable interference from other stations. Inquiries invariably prove that seven out of ten cases where consistent interference is experienced, the listener-in is using one or other of the single coil tuning circuits.

While the two-coil tuner circuits are a little more difficult to operate, the advantage gained by eliminating the unwanted station more than compensates for the extra trouble. Furthermore, when once the positions of the tuning dials have been found for the various stations and careful note of the settings made on a card, they may be pinned up near the receiver. This will enable any other member of the family to tune-in any one of the stations within range, without interference, unless the listener-in is unfortunately located within a mile or so of a broadcast or commercial station, where an extra control in the form of a wave trap will be very necessary to give an extra degree of selectivity.

Another disadvantage met with by some crystal users is that they cannot tune in some of the lower wave stations; quite a number state that they can successfully receive 2KY, 2BL, and 2FC, but that they have never yet heard 2WW or 2UE. This may be due to the fact that they are out of crystal range with these low power stations, but in nine cases out of ten this is not the case. The fault lies in the fact that their primary coils are invariably too large, or in the case of the loose coupler the sliding arm contact will probably not go back far enough to reduce the number of turns in use sufficiently to tune in the lower wave stations.

In either case a very good method of overcoming this difficulty is to place a .0001 fixed condenser in series with the aerial circuit. This will not only increase the selectivity, but will decrease the fundamental value of the aerial-earth system and enable

the listener-in to tune successfully to much lower wavelengths.

All radio circuits are tuned by adjusting their electrical constants, inductance or capacity, or both. In the case of a loose coupler tuner a variation of inductance only is generally made. But with the plug-in coil type of tuner (which is probably the most common type in use at the present day) both inductance and capacity are variable. In the case of the primary circuit the variable condenser may be joined in series or parallel, but the following points are well worth remembering:

When the variable condenser is joined in parallel with the coil (viz., fixed plates to one end of the coil and moving plates to the other end), the total capacity in this circuit will consist of the aerial earth capacity added to that of the tuning condenser. For example, if the aerial has a capacity of .0003 the total maximum capacity will equal .001, plus .0003 equals .0013 mfd, with a .001 mfd. variation.

When the variable condenser is, however, connected in series with the aerial, the effective variable capacity in the aerial or primary circuit will be less than the natural capacity of the aerial. From this readers will readily see that as the average broadcast listener's aerial is usually about .0003 mfd., it is absolutely unnecessary to use a variable condenser larger than .0005 in series with the aerial. Always remember that where two condensers are placed in series in any circuit the total capacity will always be less than the least.

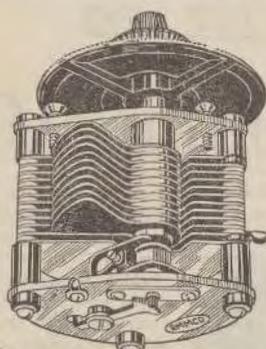
BROAD TUNING.

Tuning is said to be flat or broad when a large change in the setting of a variable condenser is required to give only a small change in the volume obtained.

SHARP TUNING.

Tuning is said to sharp or selective when the reverse action takes place, viz., when a small change in the setting of the tuning condenser produces a large change in the volume. This degree of selectivity depends principally on the effective resistance of the aerial and primary circuits, although the correct ratio of the capacity and inductance has a wonderful effect of increasing selectivity, especially on the lower wavelengths.

How often do we hear that a certain receiver performs wonderful feats on one aerial, but the same



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receiver used on another aerial works far from satisfactory. In most cases where this happens it will be found that the difference in reception is due to faulty aerial construction. Low resistance and selectivity go hand in hand. You cannot get one without the other. Remember this, when soldering your lead in connection to your new aerial. A counterpoise will invariably decrease the resistance of the aerial-earth system and so increase selectivity. For this reason we strongly advise those of our readers who experience interferences to experiment with the use of a counterpoise in lieu of the ordinary earth connection.

TUNING A TWO-COIL TUNER WITH CRYSTAL OR VALVE DETECTION.

Where variable condensers are used to tune both primary and secondary the maximum wavelength value is reached as soon as the fixed and moving plates are entirely intermeshed. The two following rules are applicable to all tuning circuits where variable condensers are joined in parallel: (1) If the volume of a broadcast station gradually builds up as the condenser approaches its maximum position (viz., fixed and moving plates entirely intermeshed), a smaller coil should be used. (2) If, however, the volume becomes stronger as the condenser is brought around to the minimum position (viz., fixed and moving plates right apart), a smaller tuning coil is necessary.

Quite a number of home constructors place their tuning dials on to the condenser shafts in a haphazard manner. This is a bad policy, which causes a lot of inconvenience. The dial should be placed on the shaft so that it corresponds with the position of the moving plates. To do this, turn the shaft until the moving plates are right apart from the fixed ones. Now place the dial so that the 0 degree mark of the dial is straight up and down, then secure with set screws. Next with the sharp nail scratch a line on the panel at the position corresponding to 0 degree mark of the dial.

CHANGE OF ADDRESS.

The address of "Wireless Weekly's" Experimental Station 2WW has been changed to "Krotona," William Edward Street, Longueville, Sydney.

Mr. William Lambert Hamilton, of Vickery's Chambers, 82 Pitt Street, whose advertisement appears elsewhere in this issue wishes to advise that he is in a position to arrange easy terms on Radio Receivers to suitable clients.



My remarks last week were apparently extremely widely read because I am informed by the Burgess people that they have been deluged by applications for their "Index of Broadcasting Stations." They are sending them out as fast as the staff can get them packed up but if the present demand continues the supplies will have run out by the time this column appears. They will be only too glad however, to record applications and those which cannot be completed immediately, will be attended to without delay on the arrival of new supplies from Canada.

Quite my most interesting experience this week was the witnessing of the tests of the new Philco Socket Power A and B. I have made mention of this apparatus before in these notes, but up till last week-end I had had no opportunity of inspecting this contrivance; consequently when invited by the local Philco agents to be present at the tests, I accepted. I am told that stocks have now been cabled for and will be in Australia in a matter of a few weeks; sufficient is it for me to say that the Socket Power worked magnificently and the Battery Bogey would seem to have been definitely laid. The apparatus is a combination of Electrolytic rectifiers and well balanced transformers.

The first and most vital problem in using house alternating current as a source of "B" Power, is to produce reliable rectifiers which will change the alternating current into direct current. These rectifiers should be of such uniformity, that each and all will give thousands of hours of service without attention.

There are two general methods of rectification, first, with tubes; second, with electrolytic cells.

From the standpoint of 100 per cent reliability, certain satisfaction, long life and efficiency, no tube can compare with electrolytic cells for rectification. Therefore electrolytic rectification is the logical method; few, however, have had enough experience to make good cells.

This problem involves the building of electrolytic cells for full-wave rectification—essential for smooth reception—cells free from corrosive acid; cells which never need attention, even the addition of water; cells which operate on low voltage and thus relieve the condensers and tubes of high-voltage strain; cells which will give thousands of hours of unsailing service.

The second problem is to design a filter circuit of such character and size as to assure smooth reception and long life. Skinning and skimping to make a small, cheap unit can be done only by sacrificing reliability, life, quality of reception, or safety.

My remarks on this subject will be continued next week.

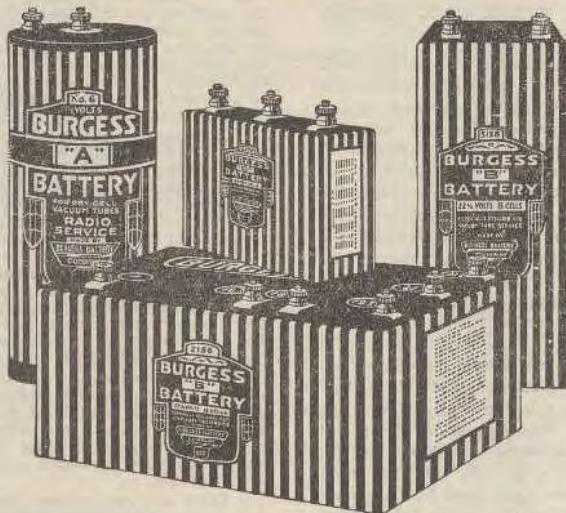
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JUDGING RADIO VALVES

By O. F. MINGEY.

The principal question asked by the average buyer of a radio set is, "Can it wear out?" The answers to this important query are generally many and varied. Very seldom is the interested party fully and clearly informed of the facts, but he quickly becomes aware when his batteries and valves begin to give trouble, and unfortunately he then begins to wonder where it is going to end. It is the purpose of this article to put the broadcast listener in right as to the vagaries of his wireless set and the attention to be paid to the various essential parts.

The most important piece of apparatus in any listening-in set is the valve or valves. By reason chiefly of their economic value, and also their fragility, it behoves the owner to handle them with care.

The valves and batteries are the only things that should wear out in a modern radio receiver; and as there are many makes and types of valves on the market, consideration of the economics of the valve is necessary when any purchase is being made.

In the usual 3-4 or 5 valve radio set, the valves act as radio frequency amplifier, detector, and audio frequency amplifier. In some sets additional duty is placed on the valves, such as reflex action and as oscillators. In view of this, careful attention is necessary. Some many months ago the principal patent rights on valves expired in the United States, and in consequence dozens of manufacturers appeared on the market. The valves made by a few were good and quite up to standard, but the majority were very poor, and, as the writer can personally testify, this majority did not provoke confidence.

With a view to proving what valves were good and what were not up to standard, a test was carried out. In one of America's leading radio laboratories over 100 valves were received for test and duly tested, and of these about 71 valves from eleven different manufacturers were exhaustively tested under all actual working conditions. The average characteristics of these 71 valves are very interesting, and serve as a useful standard by which valves may be compared.

Taking the familiar details first, the majority of valves, say of the 201A type, are sold as having a filament voltage of 5 and a filament current consumption of 0.25 amperes. The test average works out at 0.241 amperes at 5 volts, and the 71 speci-

mens varied from 0.22 to 0.27 amperes. The filament wattage, that is the total power consumed by the valve, is the best guide for filament consumption, and this averaged 1.23 watts; the minimum was 1.1 and the maximum 1.35 watts.

Now, the question before every reader is, no doubt, "What is a good valve?" This involves two factors, first the electrical characteristic, and second the economic factor.

Taking the first factor, the three most important items are:—

1. The amplification constant.
2. The plate impedance.
3. The mutual conductance.

These points are very important to the buyer of radio valves, just as the purchaser of a car inquires into the "stroke," "bore," and "wheel base."

The amplification constant of a valve is a measure of the voltage amplifying ability of the valve, and should, in an amplifier, be high.

The plate impedance is the electrical impedance (resistance offered to the high frequency currents), which the valve places in the circuit in which it is used, and should be low.

The mutual conductance determines the ability of the input grid to control and vary the output plate current which really operates the loud speaker or phones. This mutual conductance should be as high as possible in a good valve.

For audio amplifiers, that is generally the last two valves in any radio set, it is highly important that valves of low impedance be used, specially when quality together with amplification is desired, while in radio frequency amplifiers, valves of low impedance will give greater gain and more stable operation.

NEW RUSSIAN BROADCASTING STATION.

Using the call sign RAW, a new broadcasting station is carrying out test transmissions at Tnapse, in Russia. The power is 4 kilowatts, and we understand that the experimental wavelengths vary between 1,200 and 1,800 metres.

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Rheostats, 20 ohm' with Bakelite Dial, 6/- ea.
Valves, Double Filament, 201A, 5/- ea.
Valves, Bright Emitter, English base, 5/- ea.
Ready Wound Loose Coupler—Secondary Formers 1/6 ea.
Ebonite Panels for Loose Couplers, 7 x 2½ x 1/8 in., 6d. ea.
Wooden Ends (set of 5), 1/3.
N.P. Slider and Bar, 3d.
Cardboard Tube Formers, 3d. ea.

Bevelled Edge Baseboards, 6d., 1/4.
Crystal Detectors, Unas., 1/-.
Crystal Detectors, Glass Enc., 1/6.
Catwhisker Brackets, 3d.
Crystal Sets, Pencil, 2/6.
Crystal Sets, Single Coil 4/6.
Crystal Sets, Loose Coupler, 7/6
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Battery Switches, 2/3.
Bakelite, per sq. in., 1d.
Ebonite, per sq. m., 1d.
B Batteries—
Columbia, 22½v., 12/6
Columbia, 45v., 25/-
Winchester, 22½v., 13/6.
Winchester, 45v., 26/-
Voltmeters, 0-50 volts, 6/6.
Fixed Condensers from 6d.

Variable Gridleak, 4/-.
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.001, 8/6.
.0005, 5/-
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Wellington, N.Z. . .	42 Willis St.
Auckland, N.Z. . .	140 Queen St.

ON THE AIR

SUNDAY PROGRAMME.

On Sunday, March 21st, Station 2BL will transmit the usual church services, and the artists who will be broadcast from the studio will be Miss Dorrie Ward and Mr. W. E. Lewis. These two favourite artists continue to delight the listeners-in, and Miss Ward in particular has been presenting a series of delightful numbers, such as "Dream o' Day" from "Tom Jones" and songs from "The Rebel Maid" and other operas of this type. In duet numbers the voices of Miss Ward and Mr. Lewis blend beautifully, and their rendering of "A Night in Venice" recently resulted in a shoal of letters of appreciation being received. At 3.30 p.m. there will be a studio concert, and at 4 p.m. an organ recital from the Petersham Baptist Church.



REV. A. HAY-HOLDEN, M.A.

The Palmer Street Presbyterian Church is one of the leading churches in that denomination, and its minister is Rev. A. Hay-Holden, M.A., a very popular preacher, who is equally popular with wireless Sunday audiences. Mr. Hay-Holden was one of the first preachers to be broadcast by 2BL, and his popularity has never waned. A brilliant and forceful speaker, he is also a deep student of social and political affairs, who has the courage of his convictions and who calls a spade a spade.

HAWAIIAN TUNES AGAIN.

On Saturday, March 27th, the Honolulu Duo will be heard in Hawaiian numbers. Mr. Fred R. Gooch, the well-known humourist, in numbers at the piano, and Miss Myra Gillon, contralto, in songs.



Herewith we present the important feature of the duo known as the Astloys. Recently we published the picture of Mr. Astley. Now, Mrs. Astley is depicted. They have just finished an engagement at the Tivoli, and their wireless work has gained them an enviable reputation. They are melody-makers in the fullest sense, and all sorts of wind instruments seem to come naturally to them. As first rank artists they have toured the world, and their visit to Australia is necessarily brief. Every effort should be made to hear them while the opportunity offers from the studio of 2BL.

ESSAY COMPETITION.

On Monday last, Broadcasters Sydney Ltd., 2BL, commenced an Essay Competition for boys and girls under the age of fourteen, and the New Zealand Perpetual Forests Limited have been good enough to donate the large amount of £10 for prizes. Particulars of the Competition were given out during the Bedtime Story Hour last Monday and will be broadcast again from 2BL on Friday and Saturday Nights.

QUALITY SPEAKERS



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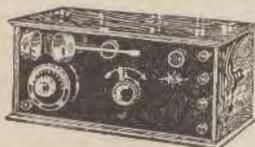


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One Valve Set complete with all panel material, cabinet, wiring wire, wiring diagram, solder, etc.	2 15 0	Two Valve Set complete as illustrated, with wiring diagram, etc.	4 10 0	Three Valve Set complete with all panel material, cabinet, wiring wire, wiring diagram, solder, etc.	6 5 0
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1 Valve	0 17 8	2 Valves	1 15 0	3 Valves	2 12 6
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100 ft. Aerial Wire	0 2 6	100 ft. Aerial Wire	0 2 6 100 ft. Aerial Wire	100 ft. Aerial Wire	0 1 3
15 ft. Lead-in Wire	0 1 8	15 ft. Lead-in Wire	0 1 3 15 ft. Lead-in Wire	Lead-in Wire	0 1 3
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"Bobby" Pearce and S. L. Exton, well-known performers at 3LO-Melbourne.

TRAVEL TALKS.

At 8.30 on Monday, March 22nd, Miss Mary Edwards will deliver one of her delightful travel talks in connection with her artistic wanderings round the world from the studio of 2BL, while Mr. Frank Marshall will be heard regarding X-Radiation.

THE MOVIE WORLD.

Miss Helen Jean Beegling, whose exciting adventures at Hollywood in search of fame in the movie world, continues her talks from Station 2BL, while Mr. T. Alkin will be heard on the subject of "Vitamines and Dietetics."

ENGINEERING LECTURES.

On Thursday, March 25th, the third of a series of lectures entitled "The Romance of Engineering" will be delivered by Mr. N. Warren Waterhouse, B.E., A.M.I. Struct. E.

TRAVELOGUES.

On Friday, March 26th, there will be the travelogue by Mr. J. M. Prentice, in which he will reveal more of the beauties of the Riviera, and on Saturday, Bringa, the noted authority on the Australian aborigines, will be heard, together with Mr. Fitzpatrick, who is so entertaining in his descriptions of sea life.

FAMOUS LOVE STORIES.

It will be remembered by many of the listeners in that the first occasion on which Mr. J. M. Prentice was heard on the air was in a series of famous

love stories. Ever since these lectettes were delivered, constant inquiries have been made to Broadcasters in regard to their repetition, and "Wireless Weekly" is now able to make the exclusive announcement that not only is it the intention of 2BL to repeat the six lectettes that were delivered nearly two years ago, but that in addition Mr. Prentice is engaged at the present time in compiling a series of six further love stories, which will be radioed in due course. Further announcements in regard to dates will be made at a later period.

ENGLISH LITERATURE.

On Monday, March 22nd, Miss Thelma Houston, contralto, and Miss Jean Stones, soprano, will be heard during the afternoon session. Monday afternoons are always devoted to "A Study in English Literature," and this feature is now drawing to a close, after continuing for nearly one year. These talks on English literature have been appreciated by a wide range of listeners-in, and the salient facts concerning the lives as well as the work of the great English writers have been presented in attractive form. In the evening programme the artist chiefly to be heard will be Miss Madge Helmrich, contralto.

DISTINGUISHED SINGERS.

Another orchestra of exceptional merit that has been added to the already long list of orchestras being broadcast by 2BL is that of the Enmore Picture Theatre, presided over by Mr. F. Watkins. This orchestra will be heard on Tuesday, March 23, when its delightful playing will be a feature of 2BL's programme. On the same evening Miss Grace Saville, contralto, will sing excerpts from her repertoire, and Miss Lenore Gotsch will also be heard. Miss Gotsch is one of the most distinguished singers



Mr. A. Gilchrist, of the New Settlers' League, discusses the problem of "Country Week" with Mr. E. J. Lewis, director of programmes of 3LO.

PHILIPS VALVES

BANISH ISOLATION!

Have you yet realised what a tremendous difference RADIO can make to your social life? How it can bring the music of the theatre and the concert hall right into your home? Have you realised the difference between reception from an ordinary valve and one which is made by

PHILIPS?

We specially recommend the following two valves:—

A110. The One Cell Valve. Filament, 1.0 to 1.3; volts, .06 amp. The most remarkable valve yet produced, as it enables you to run each valve for weeks on one Dry Cell, while the volume and tone are exceedingly good.

PRICE 17/6 EACH

B406. The New Wonder Valve. The B406 is in a class by itself, as it is the first Low Frequency Amplifier which attains a saturation current of 30 milliamps with a filament consumption of only 0.1 amp at 32 to 4 volts. Only a two Cell Accumulator or Three Dry Cells should be used, thus showing a further remarkable saving.

PRICE 17/6 EACH

Obtainable from all Radio Dealers.
Ask your Dealer for illustrated folder describing these wonderful Valves.





Miss Nora Hill, Irish soprano, a well-known and delightful singer from EBL.

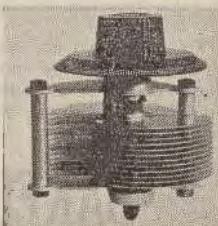
at present broadcasting in Australia. She possesses a truly magnificent voice, and her technique is impeccable. Having studied under some of the finest Continental masters in Europe, Miss Gotsch sings with authority, and her interpretations are of the very highest quality. Another distinguished artist who will be heard on this occasion is Signor Alberto Marini, late principal tenor with the Quinlan Opera Company, who will be heard in a series of operatic arias rendered in English. Signor Marini is an artist who will, it is anticipated, make a great hit with the radio audiences, as his singing is delightful.

AMERICAN CLERIC.

The name of the Rev. J. R. Mott, of New York, is world famous, and his visit to Australia in the interests of the religious uplift of the community is of the greatest importance. A special session, therefore, has been arranged by EBL in order that the reverend gentleman may have an opportunity of publishing his message as widely as possible, this being broadcast at 12.15 on Wednesday, March 24th, when Dr. Mott will speak upon "The World and its Need." On the evening programme at 8 o'clock there is being presented a minstrel show, directed by Mr. Hartley Court, in which the items will be of unusual excellence. Mr. Lance Jeffree, whose delightful tenor voice continues to gain for him the admiration of the listeners-in, will also be heard, and at 9.30 there will be the usual foreign affairs talk and answers to questions. The Embassy Palms Orchestra will provide jazz music for the benefit of those who desire to dance.

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A balanced precision instrument scientifically designed, having extreme accuracy, combined with mechanical strength. Supplied with or without Vernier adjustment.

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1/8in. $\frac{1}{2}$ d. PER SQUARE INCH.

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3 Coil Mounts (British Manufacture) 7/6

5 VALVE NEUTRODYNE KITS, panel drilled, complete with everything ready to build £12

Accuratune Ultra-Vernier Dials, each 25/0

Bakelite Valve Sockets (special line), American, each 3/0

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"LAUGHTER OF FOOLS."

An innovation is being presented by Station 2BL on Thursday, 25th March, when the first act of a delightful play entitled "The Laughter of Fools" will be presented by the Sydney Players. The second and third acts will be presented at intervals. On the same session Miss Hilda Boyle and Signor Ubaldo Russo will present an operatic programme. These two delightful artists appeared recently with the Rigo Opera Company, and are grand opera singers whose work is always sincere and beautiful. The Ambassadors' Salon Quartet will also be heard.

COUNTRY WEEK.

SLO Melbourne will broadcast from 17th to 24th March a week of programmes largely referring to country life and interests. The occasion is Country Week, an annual exhibition of rural produce organised in Melbourne by the New Settlers' League of Australia. Features of the week will be the broadcasting of luncheon speeches from Somerville Fruit Show, a concert from Lake Nagambie, songs and verse about country townships, and State and Inter-State speakers on rural topics. An endeavour will be made to popularise "Advance, Australia Fair," which appears to be practically unknown outside of New South Wales, where it is generally accepted as our National Anthem. The aims of Country Week, which was inaugurated in 1923, are to bring city and country folk together, to stimulate district ambition for increased settlement and production, and to induce town boys to take up farm work.

HARMONY NUMBERS.

On Friday, March 19, from 2FC, the Farmeradio Dance Band. From the studio, Lee and Clinton in harmony numbers; a record of new reviews and a theatrical transmission will be included. In the afternoon Mr. Ewart Chapple will give a music talk.

THE CRYSTAL PALACE.

Saturday, March 20th, from 2FC, a programme with orchestral numbers from the Crystal Palace Theatre; comedy sketches by Walter Hunt and Eve Warhurst; comic items by Wally Baynes; baritone items by R. A. Bartleman; dance music from the Wentworth.

RANDWICK BAND.

Sunday, March 21st, the morning service from 2FC will be taken from St. Mark's Church of England. The sermon will be preached by the Bishop of Armidale. In the afternoon the Randwick Band will play from the beach rotunda at Coogee. The evening service will be taken from St. Mark's, the choir performing Stainer's "Crucifixion." The sta-

dio programme from 8.30 will include items by the Studio Orchestra and a programme of old English numbers supplied by artists selected by Mr. Bennett North.

MEXICO TOO HOT.

Miss Helen Jean Beegling, whose movie talks from 2BL are so much enjoyed, spent three interesting months in Hollywood, and worked in 11 pictures. After that she went back to Los Angeles and got a good position on one of the biggest newspapers of the South-west. She stayed there seven months, and in that time earned enough money to take her way across to New York, back to 'Frisco, and on down by the "El Camino Real" (the State Highway) to San Diego, and on into Mexico. The latter place Miss Beegling found too hot, in more way than one, and the Mexican policemen the fiercest-looking lot of men she ever wants to see. On the way home she spent another six weeks in 'Frisco, and returned to Sydney after an absence of 18 months. To use Miss Beegling's own words, "I lived every single moment of the trip, and got every ounce out of life I could, and certainly had a perfectly wonderful time."

AN APPRECIATION.

To the Editor.

Dear Sir,—Grid Leak's receiver ("Wireless Weekly," 1/1/26) does all he claims for it. I tried it out last night (10/3/26) and received 4QG (Brisbane), 5CL (Adelaide), and SLO (Melbourne) at good loud speaker strength. Speech could be easily distinguished 6ft. from the speaker, and music 30ft. away. Music from 2BL, 2KY, and 2FC could be heard 60ft. away (through a doorway and around two corners outside the house), and at the end of the room (24 x 11) the announcer of 2BL could be heard catching his breath between sentences. He was speaking rapidly at the time, which was just before Mr. Prentiss gave his talk on foreign affairs.

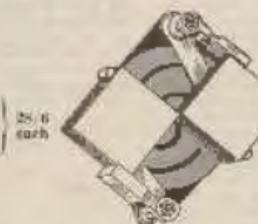
The "B" battery used was 70 volts (one Eveready 30 volt and one 40, in series); the valves were Phillips B2. Not having a variable grid leak of 10 megohms, I used one variable to 6 megohms only.

I found 2KY was loudest with coils 75, serial 100, tickler nearly at right angles; 2FC with coils 250, serial 200, tickler at right angles; and 2BL and other stations with coils 100, serial 200, tickler about 2 inches apart.

FOR SALE—Parts for 3-Valve Set (unass.), including valves, accumulator, phones, coils, etc.; £3. Bargain, 29 Stafford Street, Stanmore.

Separate that Station

The RECORDING Straight Line Frequency Condenser is unique and entirely ~~different~~ from any other condenser because it is built out, and it is at the same time extremely simple and fool-proof. The distinct advantage in the condenser is that it gives true Straight Line T.R.F. Q.S.M.C.T. Characteristics. This is accomplished solely through the use of the Cam controlling the action of the plates.



2000 Series (Made available for the slave condenser) \$4 each

OTHER IMPORTANT FEATURES OF THE RECORDING S.L.F. CONDENSERS:

- (1) Entire elimination of back bias.
- (2) Concentration of electrostatic field within itself alone.
- (3) A balanced condition of the plate assembly, making unnecessary any friction device and permitting a smooth valve action of the condenser.
- (4) The full 180 degrees of the old method.
- (5) The dial shaft is not connected to either set of plates.
- (6) The case throughout, giving a uniformity in protection.
- (7) Comparisons, being no larger than the old semi-circular job.
- (8) The full connection.
- (9) All condensers have provisions for single or double lead mounting.
- (10) Low price for any capacity, .0005, .0008, .001.
- (11) Design which permits mounting of our transmitters directly on the condenser.
- (12) Unusually low resistance capacity in all three cases, giving high tuning ratio.

THE ONLY VARIABLE CONDENSER WITH ALL DESIRABLE FEATURES.

Purity of Reception

ADD one "EVER-READY," No. 120 Cell, to your valve set and note the wonderful improvement in the reception. No doubt many listeners to the following wonderful voltage law 2, 3, 4, or 5 valves set, let what should like purity?

By connecting an "EVER-READY," No. 120 battery in your set the improvement is amazing. But only if the reception improved, but the life of your "B" Battery.



PRICE:
2/-
Each

PRICE:
2/-
Each

Different kinds of valves require different voltages for a field bias. The "EVER-READY," No. 120 Battery is suitable for all types of valves, as it has 8 terminals, giving either 2, 3, 4 or 5 units.

Write and tell us the type and number of valves you are using in your set, and we will supply you with a diagram showing how to connect the "EVER-READY," No. 120 battery to your set.

Complete sets of "EVER-READY" D batteries made in twelve and thirty units.

OUR MAIL ORDER DEPARTMENT, 49 Goulburn Street, is under supervision of a Mail Order Expert, whose services include despatch, careful packing, and all details necessary for an efficient Mail Order Service. We dispatch within 24 hours. May we have your order? Open Friday Nights until 8 p.m. Complete Price for all circuits. Address gratis. Your own Sets Received by Experts. Satisfaction guaranteed. Established over 20 years.

WILES' WONDERFUL WIRELESS and ELECTRICAL STORES

Branch: 384 Pitt Street, (near Circular Quay).

Head Office and Shop at Pitt and Goulburn
Streets, SYDNEY.

Branch: 23 Pitt Street, (near Circular Quay).

WIRELESS DE LUXE.—Can you imagine a Receiver built into an attractive leather case, containing all Batteries and Loud Speaker, which can be used in your home, on your lawn, in your Car—which requires no outside loops or wires—which can be taken anywhere—which will operate even while being carried about—and which will bring in Melbourne and Brisbane Stations without any aerial or earth. This is Wireless-de-Luxe. It has been expected by far-seeing Radio enthusiasts, and it has now arrived. It is the "Hetrola" 7 Valve Portable, and can be seen at the Solo Agents, Parsons & Whittemore Ltd., 30 Market Street, Sydney.

RESISTANCE COUPLED AMPLIFICATION.—The success of this method of amplification is now recognised as having passed the experimental stage. The vastly improved tone against Transformer coupling and the saving in B Battery consumption are the great advantages of resistance amplification. It must, however, be remembered that the correct resistances, fixed Condensers, and the right circuit are most essential, and to obtain the results it is necessary to take advantage of the experience of those who have spent thousands in laboratory tests to determine these main points. The Heath Co. (makers of the famous Non-Dielectric Strictly Low-loss Condensers), in conjunction with the Manufacturers of the Meggit Resistances and Grid Leaks, made a special study and exhaustive tests of this method of amplification, and have brought out a completely wired and assembled Resistance Amplifier known as the "Heath Resisto Former." It is mounted on a bakelite base, with all Battery terminals, and 3 sockets, and is so complete that the only alteration to change a Set over to or add resistance-coupling is to connect a Wire from the plate of the Detector Valve to a terminal, marked "Input" on the ResistoFormer. This alteration or addition is so simple that it can be done in a few minutes by a person without any expert knowledge. In this Heath Resisto Former the famous Meggit Resistances and Grid Leaks are used exclusively, because of their superiority and much greater life, due to the larger resistance element. This is used in other and cheaper makes. These Resistances and Grid Leaks are of the correct values to give ample volume with only 60 volts B current, instead of 150 to 180 volts recommended by makers of other systems. The Heath Resisto Formers are priced at 79/-, and Heath Kit can be supplied at 48/- for 2 stages and 32/- for 2 stages. A Heath 3 Stage Resisto Former with True Blue Non-microphonic Valves is the last word in "perfect music-by-Wireless." They are obtainable at most Radio Stores, and the Solo Agents are Parsons & Whittemore Ltd., 30 Market St., Sydney.

THE SUPER HETRODYNE.—The Super Het. is recognised as being the World's Best Receiver, and those wishing to build their own Super Het. will be pleased to know that next week we will land complete Kits, including everything, even to the drilled panel, with wiring diagram, for a 7 Valve Receiver. Full particulars can be obtained from Parsons & Whittemore Ltd., 30 Market St., Sydney. Solo Agents for the Brewster Super Kits.

WAVE TRAP & METER

Price £3/15/- Complete

We have just landed a shipment of them. High grade General Radio Wave Traps for making your set more selective and cutting out interference from other stations. Attachable without alteration to the Set. Also for use as an accurate wave meter for setting your receiving set to any desired wave length. Price, complete . . . £3/15/-

"King Quality"

5 VALVE NEUTRODYNE Radio Sets

The most popular of all. Featuring simplified control, and guaranteed to bring in Adelaide, Brisbane, Hobart, Melbourne and any station in Australia at loud speaker strength. Wave length 200 to 550 metres. Without accessories. Price, £25

We have just landed complete stocks of the famous high grade General Radio apparatus. Pay a call to our Wireless Shop and see them for yourselves. All accessories are included. Prices are very moderate.

RADIO DEPT. 22 YORK STREET

DAVID JONES'

FROM HERE AND THERE

CUTTING OUT THE CACKLE.

The Radio Vigilance scheme, fostered by the American Radio Relay League, is having fruitful results in locating and suppressing sources of interference to radio reception.

In Vancouver radio interference has been practically eliminated by the efforts of the committee in that district, and similar reports have come from many other busy centres in the United States and Canada.

WIRELESS TORPEDO WONDERS.

New rumours are afloat in the daily press concerning "hush hush" work which is being conducted in Britain, France, and America in the development of the wireless-controlled instruments of war.

One report, by far the most perturbing, comes from the United States and concerns a "flying bomb" which is said to have been successfully directed by wireless to previously-indicated spots 30, 60, and 90 miles away from the point of launching. France, apparently, is concentrating on the pilotless bombing aeroplane, while British researches also tend in this direction.

The secret nature of all these experiments should be remembered, however, and new rumours should be accepted with a degree of caution.

WIRELESS AND WEATHER FORECASTS.

A highly efficient wireless installation has been erected at the Kovno meteorological station in Lithuania for the purpose of preparing weather bulletins. The aim of the officials is to prepare weather forecasts for several days ahead, and it is believed that this undertaking will be materially assisted by the use of wireless.

GERMAN LISTENERS.

At the end of 1925 there were over one million broadcast listeners in Germany.

ENGLAND SPEAKS WITH THE U.S.A.

THE WIRELESS TELEPHONE.

One of the developments of wireless which has been the cause of much interest and speculation for some time past is commercial wireless telephony, which, it is anticipated, will replace the present system of telephonic communication in the near future.

This will mean that we shall be enabled to speak with the other side of the world by means of the familiar process of dropping a coin into a slot.

BURGESS—"THEY'RE USED ON THE UNITED STATES AIRCRAFT"—BATTERIES

The first two-way wireless communication over a long distance occurred on March 7th, when a trans-Atlantic test was carried out between journalists in London and New York. Reception at both ends was remarkable for clarity, and it was stated by conversers that they were able to hear better than over the ordinary city telephones. Reception at both ends was remarkable for its clarity due to the entire absence of atmospherics, the present season overseas being abnormally favourable to wireless communication.

One obstacle yet to be overcome is the problem of atmospheric interference in the static seasons, and in view of this and other problems it will be another six months or so before anything in the nature of a public telephone service between Britain and America is definitely established.

Extensive experiments are now being carried out and it is thought that the establishment of telephonic services to Australia and other countries will depend upon the successful outcome of these tests.

The aerial at Rugby (England) is one and a quarter miles long, supported by five giant masts each 800 ft. high; but the receiving aerial at Wroughton is seven miles long and only 30 ft. high. It is in a straight line during the whole of its run, and points towards the American station at Rocky Point. Power used in the above-mentioned test was 500 kilowatts, as compared with the 50 kilowatts of the Daventry Broadcasting Station.

Officials believe that these tests have brought commercial wireless telephony one step nearer, and it should be possible in a few months for any subscriber in England to be put into communication with any American. Certain it is that this demonstration brings ordinary commercial communication between Australia and England appreciably nearer.

NO NEWSPAPER. RADIO TO THE RESCUE.

Radio is being developed to give a news service at Norfolk Island, which has only a few hundred inhabitants and cannot hope to support a newspaper.

The Administrator of the island, writing to a broadcasting station in Sydney, points out that the islanders are a week behind Australia with the news even when the latest steamer has just arrived, and after that five weeks elapse before they receive further news. There is a cable service to Norfolk Island, but nothing goes over the cable except at ordinary rates of payment.

REDUCED

We beg to advise the Radio Public that the demands on our stocks of

QUALITY RADIO GOODS

have been so large as to enable us to place our orders with the manufacturers for far larger quantities.

The discounts as a result are being passed on to the B.G.L. and Experimenter in the form of

FURTHER REDUCTIONS

HERE ARE A FEW EXAMPLES:-

Certified Low Loss Condensers, .0005, ea.	12/-
Midget Low Loss Condensers, 5-plate, ea.	3/-
Dials, beautifully engraved, 4in., 2/6, 3in.,	1/5
Vernier Adjusters, convert plain condenser into vernier	1/2
Rheostats, Ajax, 30 or 6 ohms	2/1
Potentiometers, Ajax, 400 ohms	3/-
Valve Sockets, Standard American, Metal Shell	1/11
Valve Sockets, Standard 199, Metal Shell	1/6
Valve Sockets, Standard American, Black	2/7
Spring Aerials, ideal for indoor use	5/9
Rubber Ear Cushions, protect your ears and your phones	2/7
Jacks, improved non-solder type, Double 4/4, Single	2/6
Jacks, regular type, best quality, Double 2/4, Single	1/0
Plugs Telephone Plugs, one or two pair phones	1/9
Terminal Boards, complete with 8 engraved posts, each	2/6

Engraved Binding Posts, on cards, set	1/9
Binding Posts, Black Tops, 3d. ea.; per doz.	3/9
Variometers, K. & C., Genuine Bakelite, each	12/6
Audio Transformers, K. & C. Special, 3 to 1, each	13/6
Headsets, K. & C. Special, 2000 ohms, ea.	15/6
Loud Speaker Cords, 5-foot	1/9
Phone Cord, Double	2/3

SOME SPECIALS.

Super Rhoostat, the most high-grade 30-ohm Rheo made	3/6
De Luxe Dials, Genuine Bakelite, 4 inch 199 & 201A Radex Valves, similar valves sell at 15/- and 17/6 elsewhere	3/9
French Dull Emitter Valves, English base, work from 3 dry cells, each	9/9
English Sockets, special base mounting type	8/6
	1/3

Every Friday Evening, see "Insulator," Mr. W. L. Hamilton, at our Sydney Store re your radio problems, FREE.

COUNTRY CUSTOMERS: We cater for you and pay carriage on goods to the value of 10/- and over, except on Batteries and Speakers.

"Yours for Lower Prices."

The ECONOMIC RADIO STORES
28 Royal Arcade SYDNEY
Phone M 3049

569 Hunter St. West
NEWCASTLE
Phone, Newcastle 1622

The Administrator has now secured a radio set, with which he hears not only current items and the like, but the news items that are broadcast each night from Sydney. "These are interesting to me," he writes, "and the delivery of them is all that could be wished from the listener's point of view, but I cannot take down the items as rapidly as they are spoken, and I am not able to remember them sufficiently to pass them on to the few hundred inhabitants for whose benefit I would desire a daily budget of about a foolscap sheet of interesting items."

The managing director of broadcasting station 2BL has replied, suggesting, as there is no shorthand writer on Norfolk Island, that the Administrator install a dictaphone to record the messages sent out by radio. These can then be written out at leisure and posted for all to read.

It appears that this proposal will solve the problem of conveying the news of the world to the Norfolk Islanders.

TRIALS ON RADIO.

AMATEURS IN COMPETITION.

Trial nights for would-be radio artists are always popular with listeners, and hundreds of letters are received by broadcasting station 2BL each week after the amateur trials on Wednesday nights. A feature of the entertainment is that all the performers are in the same competition, whether they are singing, playing a cornet, a fiddle, or a piano.

Listeners are invited to pick the best item, and a prize of two guineas is awarded to the writer of the first letter opened whose judgment coincides with that of the musical director of 2BL. There is no prize for the artists except the honour and glory—and, of course, a chance of being chosen to appear professionally by radio.

To show the interest taken in the trials, it may be mentioned that this week a radio "fan" in Nelson, New Zealand, who has been listening, cabled the name of the performer to whom he considered first place should be awarded.

It is of interest to note that WRNY, the broadcasting station controlled by "Radio News" (U.S.A.), has been carrying out these trial nights for some time, only they go a step further. In a room adjacent to the studio sit half a dozen critics listening to the performers on a loud speaker, but hidden from them. This room is connected through a microphone with the main station. If the turn is not up to standard, these critics, who are armed with klaxon horns, drums, and other noisy instruments, switch in and give the artist "the bird." It would not be hard to imagine the effect on the audience.

BURGESS—"THEY'RE ON THE SPEEJACK'S"—BATTERIES

RADIO BRIDES.

"WEDDING MARCH" BY AIR.

The innovation of playing the "Wedding March" for bridal parties seems likely to become highly popular. Last Saturday afternoon the organist at broadcasting station 2FC played the glad music for a happy couple at Huntley's Point, by whom the music was picked up on a receiving set with loud speaker. Publication of the fact has interested other prospective brides, and station 2FC has already received several requests for the "Wedding March" on dates in the near future. These are being complied with.

A RADIO JOKE. THE BOY AND THE BUTTER.

An amusing incident, which must have been heard by thousands, occurred at broadcasting station 2BL last week. Miss Monica Scully's juvenile pupils were giving their weekly entertainment on the radio for the benefit of children (and grown-ups).

At the conclusion, each of the ten young artists stepped up to the microphone to say good-night to friends who were known to be listening. They were all on their most polite behaviour as they bade farewell to their invisible listeners, except one small boy whose mother evidently had had an argument with her butter dealer. "Well, good-night, Mr. Smith," the boy shouted, "and don't bring us any more bad butter!" Uncle George, who was in charge of the proceedings, forthwith admonished the youth, but all he could say could not recall the infant's remark. Perhaps it is as well, because many listeners considered the little episode one of the best items on the programme.

WORLD INTEREST. LABOUR'S 2KY, BREAKING NEW GROUND.

Mr. E. R. Voight, Chairman of the Wireless Committee of the Trades Hall Broadcasting Station, states that, according to a report to hand published in the "Chicago Tribune," the U.S. Trade Commissioner (Mr. E. G. Babitt, Sydney) has furnished a

FOUR-VALVE SET, in nice Cabinet, complete with four Radiotron Valves, 201A, Amplion Loud Speaker, Western Electric Headphones, 9 Mounted Honeycomb Coils, 6-volt 80-amp Exide A Battery never been used. Everything absolutely guaranteed. Any trial given. Call and hear this set today, 2 New Ever-ready B Batteries, B Batteries any night, £20. This set brings in 3LO and 5CL.

"**YWORRY,**"

Chissold Parade, Camperie.

STOP, LOOK, & LISTENEnglish 4000 ohm Headphones,
15/-

Marvellous Talking Tape, 7/6

The Famous English "FORMO"
Transformer, 16/-Complete Parts for Loess Coupler
Sets, 11/6.Why not increase the volume
of your Crystal Set with our
Single Stage Amplifier, complete
with everything ready for use and
composed of dependable parts for
28/10/-.

Neutrodyne Kite, 16/6 & 27/6.

Valve Sets and Parts sold on
terms if required.**MODEL ENGINES & PARTS.****Slingsby & Coles Ltd.**

The RELIABLE RADIO HOUSE.

482 PITT STREET
(under the Railway, opposite
Marcus Clark's).**HOWELL'S
SALE & EXCHANGE**Large Variety Loud Speakers from 35/- to £3.
Hear them on music.

	s. d.
Jefferson Star Transformers	17 6
.0005 Vernier Condensers	11 6
30 ohm Rheostats	2 9
Panel Wire, per doz.	1 0
Egg Insulators, per doz.	6 6
Bull Nose Insulators, per doz.	3 0
12 Point Inductance Switches	2 6
Single Jack	1 9
Double Jack	2 0
Tunatron 201A Valve	9 9
Standard	1 6
Columbia Cells, No. 6	2 6
Bakelite, cut any size, per square inch	1

HOW TO MAKE THE HOWELL REINARTZ STILL MORE
SELECTIVE.YOU CAN'T IMAGINE HOW GOOD IT REALLY IS.
IF INTERESTED, CALL IN AND SEE US.**19 BARLOW STREET, SYDNEY**

Open till 9.30 Friday Night

Phone MA 1133

"WETLESS" FIXED MICA CONDENSERNew and improved features are incorporated in the Wetless high
quality fixed mica condenser.**WETLESS CONDENSERS** are synonymous with highest grade
workmanship, freedom from moisture, and the best quality mate-
rials.

A TYPE.	B TYPE.	B TYPE.
.0001	.0001	.005 3/-
.00015	.00025	.004 9/6
.00025	.00025	.005 4/-
.0003	.0002	.006 5/-
.0005	.0005	.0075 6/-
.001	.001	.01 7/6
.002	.002	.00025 with clip . . . 3/-
1/8 each.	2/8 each.	

'WETLESS' Condenser Clip, 2/- each.

No need to solder condenser when using this condenser clip; capacities can
be changed in a few seconds.

Invaluable to the Experimenter.

Remember, the "WETLESS" Fixed Condenser has the highest grade Ruby
Mica Dielectric, not paper. So SPECIFY "WETLESS."

AUSTRALIAN MADE.

Phone: Kog. 1166.

Manufacturer:

J. WETLESS, Bexley, N.S.W.**Wm. Lambert Hamilton****Radio Specialist**Bring your troubles to me.
What I will do for you.I will remodel or re-wire
your receiver, making every
valve give of its best. Let
me modernise your receiver.I will build you a set to suit
your local conditions.

I will answer any enquiries immediately.

My charges will be moderate.

I will buy your components
for you at ruling city
prices and despatch them to
you within 24 hours of receipt
of order. I will advise
you as to the quality of the
goods. This service is free.I am at your service in
any radio wants.

City address:

VICKERY'S CHAMBERS,

82 Pitt Street,

SYDNEY.

Phone: B4543.

Private address:

16a Ness Avenue,
Dulwich Hill.

report to the U.S. Department of Commerce, relating to the establishment of the Trades Hall Broadcasting Station, according to the "Labour Daily."

As per the "Tribune," the official report refers to the Sydney Trades Hall as the first organisation of its kind to possess a radio broadcasting station, which was completed by local builders at what is claimed to be materially below the cost of any other station in Australia.

United Distributors is mentioned as the builders of the station, and particulars are given in regard to the power and wavelength, as well as the drive system which is incorporated. This and other reports to hand indicate that the establishment of 2KY is creating a world interest, for it has broken new ground in broadcasting. It is expected that, when the necessary technical and other arrangements have been completed, 2KY will make an attempt to transmit right through to America.

In this event, the organised workers of New South Wales will endeavour to inform their fellow-workers in America all that has transpired in regard to efforts to establish close contact with the workers of the world.

JAPANESE STATIONS.

J. C. Evans, Yandina, Qld., in a letter to us, mentions that he hears JOAK plainly at good strength, the call letters being given in English. Two other unmistakably Japanese stations, one on about 385 metres giving flute solos, and another on about 360 metres. The receiver used is the ordinary PI with two audio stages.

SLO ON CRYSTAL.

Writing to us on March 4th, Mr. E. E. Lomas, Mackay Street, Windsor, Qld., says:-

"I, myself, have heard 3LO on a crystal receiver at the above address. I know three others who have heard the same station in different suburbs of Brisbane, one being about 13 miles from the city. At this distance 4QG comes in very faintly on the crystal, and the owner of the set tells me that 3LO is sometimes stronger than 4QG.

"Re-radiation may be responsible for it, but it is a remarkable thing that we never hear of 2BL being re-radiated, nor is the Adelaide station re-radiated by the local sets. It is always 3LO. There are dozens of people in Brisbane who claim to receive the Melbourne station night after night.

"It would be interesting to know how far a powerful valve set will re-radiate music. I have heard estimates that vary from 'a few yards' to '20 miles.' I think it is most likely that 'few yards' is nearer the mark, for this reason: We have several transmitting stations in Brisbane that are never

picked up on a crystal receiver operated outside a radius of two or three miles, and at the best only faint signals come through. These are real transmitting stations, not sets primarily used for the reception of programmes.

"In conclusion, I might say I was very pleased to see the question taken up by you. We may now get a solution to the puzzle why local sets re-radiate only 3LO."

4QG HEARD IN U.S.A.?

The Director of the Queensland Radio Service is in receipt of a letter from Mr. W. C. Davis, of Jasper, Alabama, U.S.A. In the letter Mr. Davis reports hearing piano forte selections, which he states probably originated from 4QG, Brisbane. The writer states that the station was received between 3.10 and 4.40 a.m.

In reply to the report, Mr. J. W. Robinson, director of the station, states that it is very unlikely that 4QG was the station logged by Mr. Davis, as the temporary conditions worked by the station are against such long range results.

CRIPPLED ONES BRIGHTENED.

"I feel it my duty to drop you a few lines to thank you one and all for the brightening of the lives of all our poor old crippled ones," is the commencement of a letter received at 3LO last week from "An Unseen Guest." "They cannot go out to see anything, but now we have got something to put new life in us and make us forget our pains. I, for one, think the programmes very beautiful, and may God bless the hands which are responsible. The items make us feel we have something to live for, after all." The correspondent expressed a hope that all listeners-in were of the same mind.

SLO AND THE BUSH FIRES.

The influence of wireless and broadcasting is reflected in the generosity of the response to the Bush Fire Appeals. On the first day after the appeal was made money started to flow in rapidly, and within a few days Mr. Bearnp, the 3LO Studio Manager, was counting up as much as a hundred and fifty pounds in one lot of mail. At the time of going to press the 3LO Fund had reached the vicinity of £600, with every indication of going much higher. Parcels of clothing were so numerous that taxis had to be chartered several times a day to keep the studio reasonably clear.

WANTED—Quotations for large quantities of Bakelite or Panel Material. Apply Box 14, "Wireless Weekly."



No. 6A

Cat. No.
15-90List Price Each
13/6

Cat.	Gtd. Shelf	Diameter	Height	Weight
No.	Life.	2½ in.	6½ in.	2 lbs.
6A	12 Mos.			

No. 6A

each 3/6

1½ volts. Supreme in quality and service for all Standard Dry Cell Requirements.

No. 15-90

each 13/6

22½ volts. Five positive brass screw terminals arranged to give 16½, 18, 19½, 21 and 22½ volts from the negative. This battery is specially designed for use with soft detector tubes.

Cat. No.
15-90List Price Each
13/6Gtd. Shelf Life
9 monthsLength, Width,
Height
6½ x 4 5/16 x 3 ¼Weight
5lbs.

No. 30-05

each 26/-

45 volts. 30 cells. Standard square type. Gives most economical service on 3 and 4 tube sets. Six positive brass screw terminals give 16½, 18, 19½, 22½ and 45 volts from the negative. Designed for sets using 45 or 90 volts. Taps make it suitable for use with soft detector tubes.

Cat. No.
30-05List Price Each
26/-Gtd. Shelf Life
9 Montha.Length, Width,
Height
6½ x 8 x 3Weight
9½lbs.

INTERNATIONAL RADIO CO LIMITED

200 Castlereagh St., Sydney — 91-93 Courtenay Place, Wellington, N.Z.

Around the Traders

THE DUBRESCON.

This little instrument, which is available from Amalgamated Wireless (Asia) Ltd., is a special accessory that should be fitted permanently in one of the H.T. battery leads. It then makes a sudden rush of H.T. current impossible, whilst at the same



time it does not in any way interferes with the passage of the H.T. currents. It should be noted that it is quite permanent, and is NOT a fuse.

The Dubrecon is very like a large Mica condenser in outward appearance.

PHILIPS TYPE A110 VALVE.

This valve is a dull emitter, which may be used either as a detector or as an amplifier. It has the remarkably low filament consumption of 0.06 amperes at 1.0—1.3 volts, enabling it to be operated from a single dry cell.

The filament is not coated with thorium oxide like an ordinary dull emitter, but is made by a specially patented process, which, in conjunction with



the high vacuum, ensures uniform operating characteristics throughout the life of the valve (provided the marked voltage is not exceeded) and extremely quiet performance free from all microphonic noises.

A rheostat of at least 12 ohms resistance should be used to control the filament. In a multi-valve set the life of the "A" battery will be prolonged if a separate dry cell is used for each valve.

For detection, the best results will be obtained

with a .0002 to .0003 mfd. grid condenser and a grid leak of 1-3 megohms, using 20-40 volts on the plate.

For L.F. amplification the following negative grid bias should be applied:—1½ volts, with 80 volts on the plate; 3 volts, with 100 volts on the plate.

Wholesale agents: Phillips Glow Lamp Works Ltd

TRANSMITTING CONDENSERS.

The need for a transmitting condenser to stand high voltages has been keenly felt, and it has been extremely hard to procure a reliable job of suitable capacity.

There must be some means of rectifying A.C. so as to make it suitable for the transmitter. This is usually done by means of a chemical or valve rectifier, but even in this condition the current while comparatively pure is by no means suitable, and consequently what is known as a filter is necessary. This usually takes the form of a number of chokes and condensers, suitably arranged to give the best results. The condensers are of the utmost importance, and must be capable of standing high voltages. They usually have a high capacity of about 2 microfarads, and should stand at least a thousand volts.

Condensers to fill these requirements are obtainable at "The Wireless Shop," 6 Royal Arcade, Sydney. They are a product of the National Electric Company of America, and have a capacity of 2½ microfarads.

The condensers have been individually tested on a voltage of 2,000 volts D.C. They are of mica insulation, and are encased in a stout metal housing of convenient size and shape, and can be quite easily incorporated in any type of filter.

PHILMORE PRODUCTS.

Economic Radio Stores have on show an attractive line of jacks and plugs known as the Philmore. The Philmore duo phone plug is designed to take more than one headset at a time. The jacket of the plug is ribbed and has a highly polished surface, while the stem is brass nickel plated. The screws holding in the phone tips or spades are of extra width, so that when screwed down will hold the tips in a tight grip, dispensing with the necessity for soldering. The Philmore jack is made entirely of non-ferrous metals, thus cutting out magnetic influence. The blades are of phosphor bronze, nickel-plated, each blade reinforced by the same material. The blades are of "Crowfoot" type, charged with tin and non-corrosive flux to make soldering easy. All contact points are of pure silver.

Round the Clubs

4WN WOOLOOWIN RADIO CLUB, QUEENSLAND.

Since the last report of this club was published very satisfactory progress has been made. Accommodation has been secured at the residence of Mr. Thomas. The room has been painted inside and out, electric light and power installed and the transmitter assembled. Tests will shortly be carried out on a wavelength of 30 or 40 metres; call sign 4WN. The times and dates of these should appear in the next issue. H. Jier, Liaison Groves, Woolooowin, Brisbane, Secretary.

THE LEICHHARDT AND DISTRICT RADIO SOCIETY, (2LH).

The 165th general meeting of the above club was held at the club rooms, 176 Johnstone Street, Annandale, on 9th inst. The attendance was better than usual, due possibly to the improved weather conditions.

A letter was received from the editor of "Wireless Weekly" suggesting that the club reports be published in "Radio" instead of "Wireless Weekly". After discussion it was decided to fall in with the suggestion, so from now on reports may be looked for in "Radio."

The Hon. Sec. also tendered his resignation from office on account of removal to a distant suburb. The election of his successor was deferred till next meeting.

The lecture of the evening was delivered by Mr. F. J.

Left. This took the shape of the various methods employed in radio and audio frequency amplification. It was very interesting, and from the animated discussion which took place it was evident that some of the points raised were of more than passing interest. A hearty vote of thanks was accorded the speaker for his efforts.

The business for Tuesday, 23rd, will be a sale and exchange evening, when surplus gear will be disposed of to mutual advantage.

Inquiries relative to the activities of the above club are cordially invited, and should be addressed to the Hon. Sec., 176 Johnstone Street, Annandale.

Take advantage of our Morse Code Lessons transmitted on 200 metres every Tuesday and Thursday, 7.30 p.m.—8 p.m.

You can have "Wireless Weekly"
mailed direct to your home for
twelve months for —————— 13/-.



Build a better Set with Igranic Radio Devices—

Whenever you are offered a piece of Radio apparatus bearing the IGRANIC trade mark, rest assured it is the best that Britain produces—and therefore the best in the world.

There is an IGRANIC Radio part for every Radio purpose, each the result of over a quarter of a century of manufacturing experience; all moderately priced, and all pounds cheaper in the long run.

Until you have heard the BROWN Loud Speaker you have not realised how perfect Radio reproduction can be. Every note, every cadence, every inflection rendered with a fidelity that is astounding.

There are now eight models to choose from, ranging in price from £2 to £1 guineas. Here is one illustrated that will appeal to your most critical judgment. British made—and maintains the high tradition that this implies.

—and listen to perfection
on a BROWN Loud Speaker



A typical IGRANIC quality production. The H.F. Transformer with honeycomb windings. Made in four sizes. Price 12/6 up.

Stocked by all the leading Radio Stores.

Write for booklet No. 1.

NOYES BROS.

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SYDNEY: 115 MELBOURNE:
Clarence St. 496 Bourke St.

NEWCASTLE:
11 Watt St. ADELAIDE:
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JENOLAN BY RADIO.**BROADCASTING THE CAVES.****WIRELESS INNOVATIONS.**

Among various attractive items to be placed on the air from the broadcasting stations within the next month or two is a visit by radio to Jenolan Caves, the Blue Mountains, Mount Kosciusko, and other tourist resorts.

These "tours for listeners" are being arranged between station 2FC Sydney and the Government Tourist Bureau, and some of the features will be most entertaining. It is intended, for instance, to take a trained choir into the cathedral of the Lucas Cave. The choir will sing anthems and part songs, which will be picked up by microphone, conveyed by land line to the broadcasting station at Sydney, and there placed on the air.

At various points in the caves microphones are being installed, and from these the voices of the guides will be heard describing the beauties of the scene. Any visiting tourist who happens to gasp out an expression of pleasure—or other emotion—will also have his remarks precipitated over the length and breadth of Australia. Indeed, it is possible that they may be heard still further afield. The fame of the caves is so great that it is intended to try to transmit the description of their beauty to the uttermost ends of the earth. Simultaneously with the broadcasting on Farmer's wave of 1700 metres a short wave will be sent out, which, it is hoped, will be picked up by amateur listeners in at least America and Great Britain—a very nice advertisement for Australia if the ether waves behave as they should.

A concert will be given one Saturday night from the Caves House.

The cars which carry the broadcasting parties from Sydney to the caves will stop at various points on the Blue Mountains, and from there announcers will tell listeners of the beauties all around them.

A good deal of organising remains to be carried out, and probably a month will elapse before this stunt can be put on the air.

As soon as the cool weather sets in and Mount Kosciusko becomes the centre of winter sports, a similar broadcasting stunt will be carried out. A speech by radio is to be delivered by some prominent person from the highest point in Australia, but whether the orator will be the Prime Minister or a personage of lower degree has not yet been announced.

An event that will appeal to many listeners is the broadcasting of the All Schools' Regatta to take place on April 28 and May 1. This will be done direct from the course by station 2BL.

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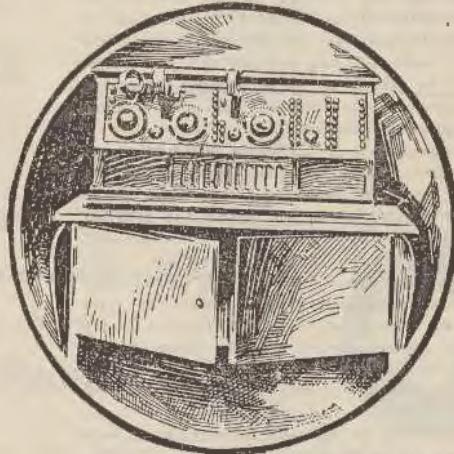
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Broadcasting



4QG

QUEENSLAND RADIO SERVICE.
Wavelength, 385 metres.

FRIDAY, MARCH 19.
Midday Session.

12.55—"Tune-in" Signal.

1—Market Reports supplied by the Council of Agriculture; Stock Exchange Information supplied by the Committee of the Brisbane Stock Exchange; Weather Information supplied by the Commonwealth Weather Bureau; "Daily Standard" News Service; Close down.

Night Session.

8.5—From the Studio: Contralto solo: Down the Vale (Moir); Miss Grace Barnes; Ten Minutes of Melody by "The Spucklers"; Instrumental number: Wonderland of Dreams, waltz (Abbott), The Studio (Trin); lecture: Lighthouses, Mr. F. W. Strevens; Baritone Solo: The King's Gambit (Purcell); Mr. Sam Tamblyn; Australian Vocation selection; waltz: Lovely Lady (Terriss); soprano solo: A Castilian Lament (del Riego); Miss Minnie Nuris; Duo Art Selection; Unrequited Love (Lincke); contralto solo: A Song of Thanksgiving (Thompson); Miss Grace Barnes; violin solo: Air for G. String (Batch); Mr. H. Scott MacCallum.

8.55—Weather Information officially supplied by the Commonwealth Weather Bureau; 8.55—Announcements.

9—Soprano solo: Her Dream (Walton), Miss Minnie Nuris; instrumental number: waltz: Come Back Old Fal (Plunkett), The Studio Trio; baritone solo: The Quaker (Adams), Mr. Stanley Tamblyn.

9.15—From the Tivoli Theatre. By courtesy of the Directors of Haymarket Theatres Limited, three-quarters of an hour's music by the Tivoli Operatic Orchestra (under the baton of Mr. C. Groves), will be relayed from the Tivoli Theatre.

9.55—"The Daily Mail" News Service, 10—Close down.

SATURDAY, MARCH 20.

The complete Morning Service at the Seventh Day Adventist Church at Boronia will be relayed.

10.55—"Tune-in."
11—Church Service,
12.15—Close down.

The Children's Hour.

A Children's Bedtime Story Session is held each Monday, Wednesday, and Saturday evening. At a later date this session will be made a night feature, but in the immediate present, while transmission is being effected under temporary conditions, it is held three times weekly.

6.25—"Tune-in" Signal.

6.30—"The Children's Hour: Nursery Rhymes and Music; Bedtime Stories by "The Sandman." 7.15—Close down.

Night Session.

8.5—From the Studio: Inciting solos: (a) Less than the Dust; (b) Till I Wake (Findeisen); Mr. Roy Best; Duo Art selection, march: Jingle Bells; contralto solo: Creole Cradle Song (Clouston); Miss N. Smith; Australian Vocation selection, orchestra: Desert Isle (Thompson); vocal duet: You Banks and Bras (Moffatt); Mr. Reg. Best and Miss Nancy Smith; Soprano solo: A Birthday (Woodman); Miss Olga Harris; Aeolian Concert solo: band number: Cavalry of the Clouds (Alford); played by the Band of H.M. Welsh Guards; contralto solo: Exultation (Pierce); Miss Nancy Smith; soprano solo: The Rose and the Musk (Lalewies), Miss Olga Harris.

9.20—Weather Information officially supplied by the Commonwealth Weather Bureau.

9.25—Announcements.

9—From Lennox's Hotel: by courtesy of the proprietor of Lennox's Hotel, an hour and a half's dance music by Miss May Doherty's Vice-Royal Orchestra will be relayed from Lennox's Ballroom.

10.30—From the Studio. "The Sunday Mail" News Service; Close down.

SUNDAY, MARCH 21.

Morning Session.
The complete morning service from the Albert Street Methodist Church will be relayed.

10.55—"Tune-in."
11—Church Service.
12.15—Close down.

Afternoon Session.

A special programme of Band Music by the Federal Band (under the leadership of Mr. W. Petersen) will be broadcast from the Studio of 4QG.

3.10—"Tune-in."

3.15—March: The Winner (Bertram); overture: Tarocci (Rossini); concert waltz: Silver Showers (Rimmer); solo: Adeline E. Salvani (Bellini); fun trot: Just for you (Burke); march: Honest Tell (Rhencut). 4.30—Close down.

Night Session.

The complete evening service from the Albert Street Methodist Church will be relayed.

7.35—"Tune-in."
7.30—Church Service.

Band Concert.

At the conclusion of the Church Service the concert provided in Wickham Park by the Greater Brisbane Municipal Concert Band (under the leadership of Mr. E. Jackson) will be relayed. Overture: Morning, Noon and Night (Suppe); concert solo: Old Kentucky Home (Langley), Mr. A. Richwood; song: Blameless (MacMurrich), Mr. T. M. White; selection from "Marlboro" (Walzer); descriptive piece: A hunting Scene (Bacelash); song: Puried (Post); Mrs. M. White; selection from Hello of New York (Kerker). 9.30—Close down.

MONDAY, MARCH 22.

Midday Session.

12.55—"Tune-in" signal.
1—Market reports supplied by the Council of Agriculture; Stock Exchange Information supplied by the Committee of the Brisbane Stock Exchange; weather information supplied by the Commonwealth Weather Bureau; "Daily Standard" news service. Close down.

The Children's Session.

A children's bedtime story session is held each Monday, Wednesday, and Saturday evening. At a later date this session will be made a night feature, but in the immediate present, while transmission is being effected under temporary conditions, it is held three times weekly.

6.25—"Tune-in" signal.

6.30—"The Children's Hour: Nursery rhymes and music; bedtime stories by "The Sandman."

7.15—Close down.

Night Session.

8.5—From the Studio: Contralto solo, Life as the Harb (Allsiten), Miss Dorothy Brown; eleventh number, Laugh and the World Laughs With You (Willcox); Miss Fee Todd; bass solo, The Merry Monk (Bevan), Mr. Stanley Tamblyn; group of banjo numbers, by Mr. N. Gould; soprano (O'Hara), Mrs. Robert Bell; ten min-solo, Spring will Return with You (units of harmony), by the Sparklers; contralto solo, My Dear Soul (Sanderson), Miss Dorothy Brown; eleventh number, Spotty (Llannequin), Miss Fee Todd; group of banjo numbers, by Mr. N. Gould; soprano solo, O Romeo (Louis Wilson), Mrs. R. Bell; bass solo, Song of the Bow (Alyward), Mr. Stanley Tamblyn.

8.55—Weather information officially supplied by the Commonwealth Weather Bureau.

8.55—Announcements.

9—From the Band Room: An hour of music by the South Brisbane City Orchestra, under the leadership of Mr. J. W. Ferguson. Programme—overture, Marlottes (Coriolanus Gurtili); trio, from Cavalleria Rusticana (Massenet); No. 1 March, No. 3 Angelus (Bellini); Miss M. Warren; Barcarolle from Tales of Hoffmann (Offenbach); galop, Midnight Express (Zammerman).

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

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The actual receiver is a 5 valve Neutrodyne — P-one, especially adaptable for Australian conditions, tuning from approximately 280 metres to 1250 metres.

As a Neutrodyne — 5 valves (Detector, 2 Radio, and 2 Audio.)
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Sept. 4, 1925.

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Please find enclosed £2 (two pounds) as promised to cover train fares. Please acknowledge.

I remain, yours faithfully,

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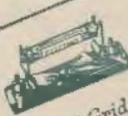
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- tuna, Sonata for Violin and Piano (Mozart).
- 2-Time Signal; Close down.
- Afternoon Session, 3 to 5.40.
- 3-Time Signal.
- 3.1—The Studio Orchestra, Our Miss Gibbs (Caryl),
- 3.15—Kenneth Impett, baritone, Brian of Glenar (Graham), Qui Sut (Chamindale).
- 3.22—Agnes Fortune, pianoforte solo, Impromptu, Op. 90 (Schubert).
- 3.29—Madame McNutt, soprano, Un bel de Vedremo (Puccini), Parted (Toads).
- 3.36—The Station Trio, Valse Song—Faust (Gounod).
- 3.41—The Studio Orchestra, Lilac Time (Clouston).
- 3.53—Howard Eddie, recital, Light of Asia (Sir Edwin Arnold).
- 4.2—The Studio Orchestra, 1st Carmen Suite (Bizet).
- 4.16—Kenneth Impett, baritone, The Tune of Open Country (Martin), My Mary, Sweet and Brown (Kilner).
- 4.23—Dorothy Roxburgh, viola solo, Allegretto No. 1 and 2 (Rehakoff).
- 4.26—Madame McNutt, soprano, Romance (Giocanda), Coming Home (Williby).
- 4.37—The Studio Orchestra, Romance (Tschaikowsky), Chanson Trieste (Tschaikowsky).
- 5—Evening from St. Paul's Cathedral.
- 5.40—Evening signal; Close down.
- 6—Evening Session, 6 to 7.15.
- 6—Children's Stories by Mary Gurney, Poem, Calling for J.H.L., Story for the littlest ones, How a Horse Saved a Baby's Life, Music, Old Mother Hubbard, The Blue Gum Quartette, For boys and girls, True Description of Life Aboard Sailing Vessel "Pennia."
- 6.45—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cables.
- 6.53—Weather synopsis; shipping movements.
- 6.57—Stock Exchange information.
- 7.2—Fish market reports by J. R. Berrett Ltd.
- 7.4—Fruit market reports by the State Fruit Advisory Board.
- 7.6—Market reports by the Victorian Producers' Co-operative Co. Ltd. Night Session, 7.20 to 11.
- 7.29—Madame S. E. Seward, French talk.
- 7.40—Westley C. Peck, Medicinal Fats and Oils.
- 8—The League Orchestra, fox trots, I'm Sitting on Top of the World (Henderson), Dreaming of To-morrow (Sanderson).
- 8.12—Marie Lethbridge, soprano, Dawn, Gentle Flower (Bennett), Juno Music (Trent).
- 8.19—The League Orchestra, fox trots, Memory's Garden (Dennis), Because of You (Florio).
- 8.31—Kenneth Impett, baritone, A Smuggler's Song (Mulliner), I Did Not Know (Trotore).
- 8.38—The League Orchestra, one step, A.U. Double S.I.E. (Crossley), I Miss my Swiss (Gilbert & Baer).
- 8.50—Laurie Burnett, entertainer, I Know a Lovely Garden, I Tried to Keep from Laughing.
- 9—League Orchestra, fox trots, Sleepy Tim Gal (Lorenzo), Sorry (Lewis & Adams).
- 9.12—Norman Bradshaw, tenor, Allsa Mino (Newton), I Know of Two Bright Eyes (Clouston).
- 9.19—League Orchestra, waltzes, When I Dream of the Last Waltz with You (Florian), After the Dawn (O'Hagan).
- 9.31—Marie Lethbridge, soprano, Farewell (Simson), I Heard You Singing (Coates).
- 9.38—League Orchestra, Love Bondé (Rupi), Out of the Dusk to You (Lee).
- 9.50—Kenneth Impett, baritone, The Two Grenadiers (Schumann), Go Not, Happy Day (Bridge).
- 9.57—League Orchestra, I'm Alongin' for You (Hathaway), I'm a Sentimental Dreamer (Kaufman).
- 10.0—Argus and "Herald" news.
- 10.14—Laurie Burnett, entertainer, You Ought to See the Old Folks Now, A Thing he had Never Done Before.
- 10.24—League Orchestra, Simplicity (Lee), My Sweet Australian Wattle Girl (Henlere).
- 10.36—Norman Bradshaw, tenor, The Last Hour (Kramer), Elly Mavourneen (Benedict).
- 10.43—League Orchestra, I Want You to Want Me (Fisher), One Sweet Day (Zamecnik), Ukulele Lady (Kahn & Whiting).
- 11—God Save the King.
- SATURDAY, MARCH 20.**
- Morning Session.
- 11.30—The British Official Wireless Press, received from J.A.W.'s operator from Rugby Super Wireless Station, England; The Age News Bulletin.
- 12—Time Signal, Chimes from the tower of the General Post Office, Melbourne; 1st Weather Forecast; Events of the Day.
- 12.35—Musical Selections, relayed from Hoyt's De Luxe, Bourke Street.
- 12.39—Stock Exchange News.
- 12.43—Market Reports.
- 12.49—Sections from Hoyt's De Luxe, Bourke Street.
- 12.53—Mail Notices; Shipping Movements.
- 1—Close down.
- AFTERNOON SESSION.**
- Moonee Valley Races.
- 2—Description while racing of Yannathan Hurdle, 2 miles.
- 2.20—Result of the Galloping Handicap, 6 fur.
- 2.35—Hoyt's Premier Orchestra under the leadership of Miss Ella'Brien, relayed from Hoyt's De Luxe, Bourke St.
- 3—Result of the Starcourt H'weight Handicap, 7 fur.
- 3.5—Hoyt's Premier Orchestra.
- 3.49—Description while racing of Moonee Ponds Handicap, 1½ miles.
- 4—Time Signalmes from the tower of the G.P.O., Elizabeth Street.
- 4.20—Result of Melrose Maiden Plate, 1 mile.
- 4.25—Hoyt's Premier Orchestra.
- 4.30—Result of Plenty Handicap, 4 fur.
- 4.35—The Evening Announcement Guide.
- 5—Time Signal from Elizabeth Street, G.P.O.; Close down.
- EARLY EVENING SESSION.**
- 6.45 to 7.30—The Children's Corner by Uncle Peter, 1. The Bedtime Story entitled "Yesterdays and the Coblin" (Written by Mr. Frederick Kay) 1st Series; 2. Talk on Hobbits; 3. The Children's Jig Saw Painting Competition.
- 8—Time Signal chimes from the tower of the General Post Office.
- 8.1—Spring Remembrance; Local News.
- 8.15—Dance Night, The Rhythmic Dance Orchestra under the direction of Mr. George Lewis, relayed from the Maison De Luxe, Broadway, St. Kilda.
- 9.30—Week-End Traveller's Information; Supplied by the Victoria Railway's Department and Tramways Board.
- 9.50—The Maison De Luxe Dance Orchestra.
- 11—National Anthem and Close down.
- SUNDAY, MARCH 21.**
- Morning Session.
- 10.30—The Bells from St. James Old Cathedral.
- 11—Services from St. James Old Cathedral. Processional; Psalm 122; Lesson; Ante Communion Service; Psalm; Sermon; Rev. F. W. Robinson, Human.
- AFTERNOON SESSION.**
- 3.30—Concert Relayed from the Queen's Hall, Collins St., Melbourne. By arrangement with the Beding Musical Club. Piano Recital by Mr. Ray Shepherd.
- Evening Session.**
- 6.30—The Bells from St. James Old Cathedral.
- 7—Service from the Collins St. Independent Church. Preacher Rev. George H. Gunnison. During the service, selections will be given by members of the Melbourne Symphony Orchestra, under the direction of Mr. Alberto Zelman.



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Electrad Grid Leak single mounting. Grid Leak clips fitted to a small bakelite panel for readily mounting on panel, only requires one hole drilled to affix to panel. Single Grid Leak 2/9 Mounting. Price 2/9



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Electrad Grid Leak double mounting. Grid Leak Clips fitted to a small bakelite panel for readily mounting on panel, only requires one hole drilled to affix to panel. Double Grid Leak Mounting Price 4/3



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