

# WIRELESS WEEKLY

Registered at the G.P.O., Sydney, for

transmission by post as a newspaper.

VOL. 7. No. 10.

FRIDAY, JANUARY 1, 1926.



## Important Announcement

THE

# MAGNAVOX COMPANY

Oakland, California, U.S.A.

HAVE CABLED THE FOLLOWING :

*"Complete Range New Samples Shipped  
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### THIS MEANS

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Wait for the Latest and Buy the Best

**D. T. HINCHEN**

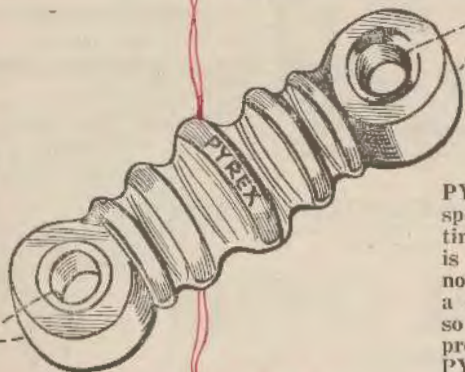
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Very Good  
Receiver

# THE IMPORTANCE OF *PERFECT INSULATION* EMPHASISED



PYREX INSULATORS have improved his radio reception a hundred fold. Now he gets every bit of energy that is on the air. Pyrex Insulators really insulate—they don't let energy leak away.

PYREX is the trade mark of a special composition possessing distinctive electrical characteristics. It is not an ordinary glass—it contains no lead. It is homogeneous and of a continuous uniform structure, and so does not depend for its insulating properties on the surface glaze. PYREX does not absorb water or attract moisture, and its smooth permanent surface prevents the collection of dust. It is mechanically strong and light in weight, and undoubtedly is the best insulating material obtainable.

QUAM CONDENSERS—the world's lowest loss condensers use PYREX insulation throughout.

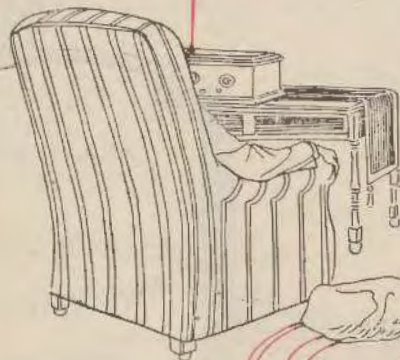
PYREX INSULATORS are now standard equipment with the Udisco Super Six.

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The transmitting and receiving antennas of the MacMillan Arctic Expedition are Pyrex insulated. 34 Broadcasting Stations in the U.S.A. have recently replaced other insulators with Pyrex. The U.S.A. Navy and Coast Guard Lighthouses and Air Mail Service specify and use genuine Pyrex.

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91-93 Courtenay Place, Wellington, N.Z.



# WIRELESS WEEKLY

Phones: Redfern 864 and 936.

Official Organ of the New South Wales Division of the Wireless Institute of Australia, with which are incorporated the Affiliated Radio Societies and the Australian Radio Relay League.

Editor: A. W. WATT

The Editor will be glad to consider Technical and Topical Articles of interest to Australian Experimenters. All Manuscripts and Illustrations are sent at the author's risk, and although the greatest care will be taken to return unsuitable matter (if accompanied by stamps), the Editor cannot accept responsibility for its safe return.

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"Questions and Answers." All requests 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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### A NEW YEAR RESOLUTION.

The birth of a New Year with most of us means the birth of a whole host of good resolutions, some of which we keep, but all of which we intend to keep—at the time.

Most of us have some sort of ideals we try to live up to, and every one of us can without any trouble frame up a set of resolutions or ideals for the other fellow to take unto his bosom.

It is so with broadcasting—not one of us but couldn't run the broadcasting stations far better than those in whose hands the management has rested for the last couple of years, or at least we think so. We are, unfortunately, too prone to underestimate the efforts that have been put forward, especially over the last twelve months by the managers of our broadcasting stations to give us good broadcasting. We have had theatres, concerts, lectures, news, jazz parties, church services, stunts, and a whole trainload of good things designed to amuse, educate, and entertain us. Just try to get the thousands of items lined up into mass formation, and then realise the tremendous amount of labour involved in their preparation.

And realise this—the greater the financial re-

turn to the broadcasters, the better the programme. Most of us cheerfully part up with the amount of the annual license fee with the knowledge that a penny a day for access to the programmes of at least two broadcasting stations isn't exactly an imposition.

Yet, despite this, and despite the fact that as things are, the broadcasters are giving us actually more than we can reasonably expect of them, it is beyond question that there are many who listen-in and enjoy the programmes night after night without a thought of contributing one penny towards the upkeep of the stations that are serving us so well.

In some quarters these people are referred to as "pirates." While this title may be an apt one, it is pure senselessness to risk the unpleasant effects of prosecution for what amounts to a breach of law.

Aside from this, however, it is both mean and paltry to take advantage of what other people uncomplainingly pay for—it amounts actually to imposing upon the other fellow's honesty.

To these pirates, therefore, we extend a suggestion for a very good New Year resolution—to take out a broadcast listener's license. Having made the resolution, carry it out! A. W. WATT.

And now —

# Brandes

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## Introduce the Table-Talker

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Read what Mr. C. MacIurcan, the great Radiolist, has to say about Ever-Ready Radio Batteries:—

"I will be pleased if you will send me half a dozen more large size Ever-Ready 'B' Batteries. The last six which I obtained from you over seven months ago have been in continual use in my Wireless Station for various purposes, and five of them are still going strong.

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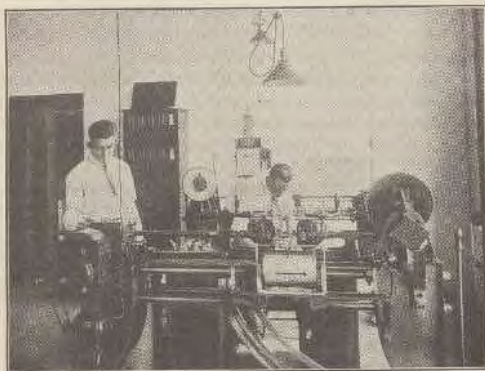


Trade Mark

# What the Average Radio Fan Should Know About Insulation

One of the most important, yet least understood, properties of a radio outfit—the panel, and characteristics of its construction.

Insulation, from the average radio fan's point of view, is one of the great mysteries of radio, for he knows nothing about its real properties except



Physical Test of Panels.

that it is used for panels, dials, insulators, etc.

When he needs a panel he buys a certain one because it has a nice shiny surface, while the important considerations such as phase difference, surface resistivity and dielectric constant mean nothing to him, even though they are the electrical term used in measuring the losses in insulation. The reason being that while these terms are often referred to in radio literature, very few clear descriptions have been given which could be understood by the non-technical radio fan. The following is an attempt to make clear the properties of insulation so that it may be bought on its merits and not at random.

## Kinds of Insulation.

There are two kinds of insulation which are used in radio receiving equipment, in the form of panels, dials, insulators, and other moulded parts. These may be divided into two general groups. The hard rubber compounds and the phenolic synthetic resins. The hard rubber may be classed as a moulded material, that is, the panels, dials and

insulators are moulded from a uniform rubber compound; while the phenolic material is divided into two groups, the laminated, which is made of compressed sheets of phenolic impregnated paper of which the panels are formed, and the moulded material, of which forms similar to the hard rubber are made. Before comparing the qualities of these insulating materials an understanding of the different kinds of losses occurring in the same must first be had.

## Insulation Losses.

This refers to electrical losses in the insulation when subject to radio frequency currents and reduced resistivity due to moisture absorption of the insulating material. The following is a list of the electrical terms used in describing good and bad insulation.

Good insulation.—Low phase angle difference, low dielectric moisture absorption, high resistivity.

Bad insulation.—High phase angle difference, high dielectric constant, low moisture absorption, low resistivity.

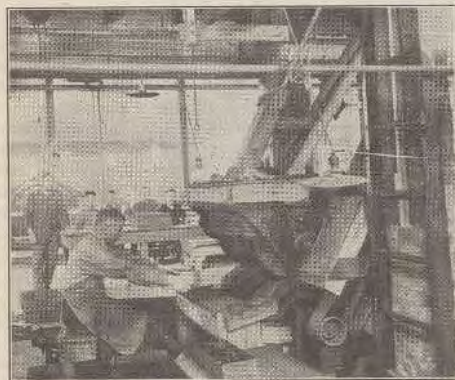
The term phase angle difference, or just phase difference, is the measure of the power loss, or the converting of the electrical energy into heat. A determining factor of this type of power loss is the frequency of the electrical current, that is, the loss increases with the frequency and therefore in



Inspecting Dials.

radio work where the radio currents are of such high frequency (550,000 to 1,350,000 cycles for the broadcast band), it is quite important to make sure that the insulating material used has a very small phase difference.

To properly understand the term "phase angle"



Polishing Panels.

it is necessary to have some idea of the theory of capacity or condensers, and most of us know that a condenser is composed of two or more metal electrodes separated and electrically insulated from each other by some insulating material. Assuming that this material is a perfect insulator, that is, having no power loss and therefore when connected in an electrical circuit supplied with an alternating current, it will cause the current to lag behind the voltage.

The reason for this lag of current is beyond the scope of this article, and must be taken for granted; it is, however, measured in degrees of the circular measure, which most of us will remember studying in school, where the circle is divided into 360 equal parts.

The difference in degrees in which the current lags behind the voltage is 90, or one-quarter of a complete circle (Fig. 1), for a perfect condenser. However, in the dielectric or insulating material in the condenser field, there is a certain absorption of the electro-static energy or charging current, which, when absorbed is changed from electrical energy into heat energy, and therefore is termed a loss or dielectric absorption. It is for this reason that the current does not really lag a full 90 degrees, but instead is a trifle less, the difference as shown in Fig 1 as "X" being given the term of phase difference. It can be understood that an in-

ulating material which has a large phase difference will have a large loss, and this means that part of the radio energy which should be used in producing an increase in the signal intensity, is being dissipated in the insulating material as heat.

The following is a list of the phase difference of vulcanised fibre, phenolic material and hard rubber; these values were determined by the Bureau of Standards after numerous tests:

Vulcanised fibre has a phase difference of 3 degrees; phenolic material (laminated) 1.5 to 4 degrees; phenolic material (moulded), 1.5 to 4 degrees; and radion .5 to .6 degrees.

These values, which were taken at radio frequencies (the same as actual operating conditions) plainly show the difference in the various insulating materials, the vulcanised fibre having the greatest loss, while the radion insulating material the least. It might be mentioned here that radion is a very high grade of hard rubber developed exclusively for radio use, and from the above values can be seen to have a very little small phase difference, which as previously mentioned means high efficiency.

Again referring to capacity, the insulating material or "dielectric" separating the metallic plates has what is termed a dielectric constant. It might be better termed as the ability of an insulating material in increasing the capacity of the condenser. What is meant will be better understood by the following list of insulating materials and their dielectrics:

Phenolic material (moulded), 5 to 7.5; phenolic material (laminated), 4.5 to 6; radion 3 to 3.9.

These dielectric constant values are based on a scale which takes air as "1" or unity. These values have two meanings which must not be mixed. First, it is usually desirable in a condenser to have an insulating material having a high



Chemical Tests.



dielectric constant, which means a high capacity in a small space.

While in insulating materials used as panels, dials, etc., the dielectric constants must be as small as possible, for when binding posts and other metal supports are screwed to a panel they form small condensers, and if the insulating material has a high dielectric the capacity of such condensers will also be increased. This acts as a partial short circuit for the radio currents, and means a decrease in the signal strength (Fig. 2). From the above table it can be seen that the phenolic moulded material will cause some stray capacity loss, while the radion material, due to its small dielectric constant, is less affected by this kind of loss.

This term really explains itself, meaning the amount of moisture (water) absorbed by the insulating material. Pure water has a fairly high resistance (10 megohms or more) but ordinary water or moisture contains a large amount of solid matter which makes it a partial conductor, and it is for this reason that when an insulating material absorbs moisture from the air, it immediately loses its good resistance qualities and allows a considerable amount of leakage of the small radio currents, with a corresponding decrease in the efficiency of the set.

The following is the percentage of water absorbed in 24 hours of immersion of the insulating material:

Vulcanised fibre, 25 to 45 per cent.; phenolic material (laminated), .2 to 1 per cent.; phenolic material (moulded), 1. to .5 per cent.; Radion, .06 to .1 per cent.

The above shows why vulcanised fibre has not been particularly successful as a radio insulating material due to its extremely high moisture absorption, while the radion material has the very lowest, and for this reason no decrease in signal strength is noted in wet weather when the material is used as a panel in the set.

Surface resistivity is the term used in the measurement of the resistance of an insulating material on its surface. It may be usually considered that the volume resistivity of the different insulating materials in use at present is sufficiently high in most cases to allow no appreciable loss through conduction of the radio currents.

In the case of the surface resistance this is a different matter, in as much as the resistance decreases as dirt and dust collect on the surface of the panel. It is for this reason that the insulating material used for panels should have a very smooth surface so as to prevent the collecting of this conducting dust. The following is a list of insulating materials surface resistance in ohms as measures in a humidity of 50 per cent.

Phenolic material, 2,400 by 10 to the 5th power; radion, 1,000,000 by 10 to the 8th power.

Due to the uniform texture of material used in radion insulation, the surface resistance, which, shown above to be higher than that of the phenolic materials, will keep this high resistance after long usage, due to its extremely smooth surface which resists the collection of dust.

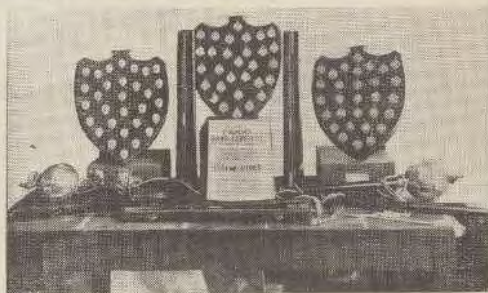
These are the most important electrical characteristics which must be considered when real low loss insulation is desired. Still another important feature is the mechanical quality of the insulation, that is, how will it stand cutting, drilling, reaming and engraving.

In conclusion, it might be said that the best of insulation having all of the good points outlined above, may be purchased for little more than the cheaper grades, and it is therefore poor economy to buy anything but the best when one considers the minute amount of radio energy which is being dealt with.

## SEASONINGS

Friday, 1st January: New Year's Day, 2FC  
Popular programme including Scotch items from the Studio. Dance music from the Wentworth and the first Act of "Leave it to Jane" from Her Majesty's Theatre.

Sunday, 3rd: Morning Service from St. Stephen's Church, Phillip Street. Afternoon concert from the Coogee Beach by the Randwick Municipal Band with descriptions of beach incidents described



Medals presented in connection with a Singing Competition at 3LO.

by the Mayor, Mr. Goldstein, direct from the band rotunda. The evening service from Lyceum Hall, Central Methodist Mission, and band concert at 8.30 p.m. by the Randwick Band, from 2FC.

(Continued on Page 10.)

# NEW YEAR PRICES !

# Radiokes

## HONEYCOMB COILS

### UNMOUNTED

20	TURNS	s.	d.	125	TURNS	s.	d.
25	"	1	8	150	"	2	4
35	"	1	10	175	"	2	6
40	"	1	10	200	"	3	0
50	"	2	0	225	"	3	0
75	"	2	1	250	"	3	6
100	"	2	4				

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## SEASONINGS

(Continued from Page 7.)

Mme. Vera Tasma, the brilliant Australian soprano, who trained under the famous Mme. Marchesi in Paris, and who appeared in opera in France and Italy, will sing from the studio of 2BL on New Year's night and weekly thereafter for several weeks. Mme. Tasma will present programmes of old English and Scotch songs as well as operatic and modern works. Her brilliant performance recently broadcast from the King's Hall has aroused enthusiasm on the part of the listeners-in.

The Smart Set Diggers recently gave a delightful programme from 2BL's studio, and will be heard again on January 8th. This organisation has won golden opinions wherever the company has appeared and give a fascinating entertainment. Solos, sketches and concerted numbers are presented in inimitable fashion and go "on the air" in fine quality. The ensemble is delightfully fresh and free, while the variety of voices is surprising.

A new series of lectures commencing early in January is announced by 2BL, under the general title of "The Romance of Buried Treasure." The lecturer is Mr. G. C. Barnes, president of the Independent Theosophical Society, who has made a deep study of the subject. The listeners-in will be taken to the treasure sources of Egypt, Peru and Mycene, to the desert places and underneath the sea. Spanish galleons lost for ages will be brought to the surface and kings long forgotten will come



The Control Room at 2FC.



Wilfred Thomas, basso. Third in Farmer's Radio Voice Competition, and member of the "Dulcet Four." One of our promising basso voices, who is singing through 2FC.

under notice. Mr. Barnes speaks splendidly on such subjects—his talk on King Tut-ank-amen will be of vivid interest.

The radio question hour at 2BL is growing in popularity and interest. The assurance with which Mr. Prentice, the expert upon Foreign Affairs, unhesitatingly answers questions on matters ranging from China to Peru has caused some listeners-in to think that the questions are prepared beforehand, but this is not so. Any person who has a telephone is invited to ask questions on the special matter of the lecture or upon foreign affairs generally. On each occasion so far the session has had to be extended to cope with the questions which pour in and even then some have had to be held over so that the ordinary programme could be resumed. On Tuesday in each week, Mr. Prentice speaks and arrangements are being made for a further subject to be dealt with, to cover a wider range of interest. This will probably be psychology.

## UP-TO-DATE CALL LIST.

THE NEXT ISSUE OF "RADIO" WILL CONTAIN A LIST OF AUSTRALIAN AMATEUR CALL SIGNS COMPLETE TO DECEMBER, 1925. MAKE SURE OF YOUR COPY NEXT WEEK.

# Wireless Institute of Australia

N.S.W. Div. Inc.

Incorporating the Affiliated Societies and The Australian Radio Relay League



HEADQUARTERS  
Royal Society's House  
5 Elizabeth St  
SYDNEY, N.S.W.

W.L. Carter, Hon. Sec.  
Box 3120 GPO Sydney  
Phone B2235  
A.H. Perrett, Publicity Officer.

## Xmas Festivities and New Year Resolutions.

At this season of the year, which is universally recognised as a season of peace and goodwill, it is interesting to note what progress has been made in amateur radio during the past twelve months. One of the most outstanding features is the growing feeling of harmony and comradeship which is spreading rapidly throughout the Commonwealth.

The formation of the Federal Executive of all Divisions of the Institute at the Perth Conference has had considerable bearing in this respect. The advance which has been made in experimental work, particularly on the shorter waves, has been phenomenal, and no one would care to predict what will take place in the coming year. It is safe to say, however, that the progress that has been made in the past will be fully maintained in the future, and even greater steps are looked for. The activities of the Traffic Branch of the Experimental Research and Traffic Bureau of the New South Wales Division of the Wireless Institute of Australia have already commenced, and with the new year it is expected that this will be increased, and that all members who have signified their willingness to cooperate will be actively engaged in handling traffic. Quite a large amount of organization work has been and is still necessary in this connection, but all will come in time, and the activities which have already commenced must be pushed forward as rapidly as possible.

Another feature that is outstanding in the history of the last twelve months is the activities of the Delegates' Council. Much good work has been done, particularly in the latter portion of the year, and the harmonious feeling which exists amongst the various members of this council must not be marred in any way. The cordial relations which have manifested themselves are reflected in the clubs and their relation one to the other, and to the Institute, and it is sincerely hoped that should there be any feeling still existing which in any way tends to mar the harmonious working together of the Institute and the affiliated clubs, it will be eliminated with the new year. Indeed, this applies with equal emphasis to all those who are interested in the science of "Radio," whether they be amateur, experimenter or broadcast listener. At this season of peace and goodwill let us forever bury the hatchet and commence our new year with nothing to mar the fraternal spirit which should, does, and must exist among all sections of the radio community. There is room in the ether for all. Let each consider, not only what his own particular wish may be, but also what are the rights and privileges of others. Let each one push towards the common goal, and, above all, let us hurry forward with the activities of the Experimental Research and Traffic Bureau, which, perhaps, is the greatest factor in the Commonwealth at the present time, and form an organisation of the utmost national importance in times of emergency. With these resolutions firmly fixed before us, let us fearlessly enter 1926.

## Round the Clubs

The asterisk denotes clubs affiliated with the Wireless Institute of Australia (N.S.W. Division).

### THE LEICHHARDT AND DISTRICT RADIO SOCIETY.\*

(Licensed Experimental Transmitting Station 2LH.)

The 150th general meeting of members of the Leichhardt and District Radio Society was held on Tuesday, Dec. 22, 1925, when a paper was read by Mr. L. Nares, M.A., on the subject, "A Systematic Manner of Tuning," dealt with the proper methods to be adopted in the uses of variable capacities and inductances in wireless circuits, and was excellently handled by the lecturer. A vote of thanks followed the lecture, and the meeting was then closed to enable those present to take part in the society's annual social, which followed immediately. This function was held at the Colonnade Hall, Johnston Street, Annamdale, and was in every respect a great success. There were present by invitation Mr. Wm. L. Hamilton ("Insulator"), Mr. W. L. Carter, representing the Wireless Institute of Australia, and Mr. C. W. Slade, representing "Wireless Weekly" in the absence of Mr. A. W. Watt, who was unable to be present, and from whom an apology was received. Also, the following clubs were represented, viz., South Randwick and District Radio Club (Mr. Southwood), Illawarra Radio Club (Mr. A. E. Atkinson), Cronulla Radio Club (Mr. W. Craig), Strathfield Radio Club (Mr. W. Kent), Marrickville and District Radio Club (Mr. McQuoid), Concord Amateur Radio Club (Mr. Stephenson), the Wireless Society of Newcastle (Mr. C. Luckman), and Waverley Radio Club (Mr. Stewart). In addition to the abovementioned there were present a majority

of members of the society itself, together with a large number of relatives and friends. Apologies were also received from Messrs. C. MacLurean, Phil. Renshaw, A. H. Perrett, H. Brown (Electricity Meter Mfg. Co., Ltd.), and the Northbridge Radio Club.

The proceedings opened with a few words of welcome on behalf of the society to those present, this task being performed by Mr. Kirkpatrick, the society's esteemed President. Mr. Hamilton responded on behalf of the Affiliated Clubs, Mr. Slade on behalf of "Wireless Weekly," and Mr. Carter on behalf of the Wireless Institute of Australia. Dancing was then proceeded with, and throughout the evening several boxes of chocolates were presented to couples. Refreshments were served during the progress of the evening, and a very enjoyable entertainment entitled "Fifteen Minutes of Eastern Mystery," provided by Mr. H. Cleary. Also, Messrs. Carter, Hamilton, and Slade were called upon to perform a very pleasant ceremony, which consisted of the presentation to Messrs. H. Kirkpatrick, Wm. J. Zech, and S. Williams—the society's President, Hon. Secretary, and Hon. Treasurer respectively—of beautifully executed illuminated addresses as tokens of the esteem in which these three gentlemen are held by the general body of members of the society. The recipients of these gifts responded fittingly, and particularly stressed the fact that the success which the society enjoyed was to a very great extent due to the harmony which existed in its ranks.

Next Tuesday evening the society will hold its 38th monthly business meeting, at which applications for membership will be dealt with, and other formal business disposed of. Inquiries regarding the society's activities should be addressed to the Hon. Secretary, Mr. Wm. J. Zech, 145 Booth Street, Annandale.

(Continued on Page 46.)

## H. & H.

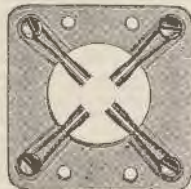


W198 [Porcelain]



W197 [Bakelite]

## Porcelain & Bakelite Sockets



[Sure Grip Contacts]

It is well known that valves are "delicate." They cannot operate to the best advantage when subject to jars and vibrations. Increase the efficiency of your valves by putting them in H & H sockets, and cut down valve noises. All sockets have "Pussyfoot" cushions; even the mounting screws have rubber collars.

In appearance—handsome; in efficiency—highly rated by both amateurs and professionals all over the world.

Note the special contacts: There is a positive bond between valve prongs and the socket contacts. These make a firm positive wiping contact. It is dust proof and noise proof. The Valve guide pin readily fits the socket slot. Just press down the valve gently and easily. The socket prongs go home snugly in the phosphor bronze spring contacts.

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For "Low Loss" work use the H & H Porcelain Sockets.

H & H Radio goods are obtainable at all leading stores, and include:

Sockets (see No-Loss Porcelain Socket)	Jacks and Plugs
Rheostats	Potentiometers
Variable Condensers (Low Loss Type)	Dials and Knobs
Transformers (Audio)	Battery Switches
Push-Pull Transformers	Lever Switches
	Etc., Etc.

Send for the complete catalogue to the Australian Representatives:

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51 York Street, Sydney.  
403 Bourke Street, Melbourne.

## Uncle Jack

Herewith is depicted in serious mood, Uncle Jack of 2BL. We venture to think that when this photograph was being taken, it must have been Mr. J. M. Prentice who was photographed and not Uncle Jack. As a matter of fact we understand that this particular photograph was taken just after our genial friend had emerged



UNCLE JACK.

from hospital, after a tussle with death, which perhaps accounts for the unwanted seriousness of expression. In addition to being the much loved Uncle at 2BL, Mr. Prentice is also widely known as a deep student of Literature and Psychology and also as the Foreign Affairs expert who replies with such calm assurance to questions relating to countries as diversely situated as China and Peru. Mr. Prentice has spent a great deal of time wandering over the surface of the globe and has met many of the distinguished people whose names are heard in connection with matters of state craft and national policy in various capital cities. Notwithstanding the fact that he has met so many distinguished people and looked upon such diverse scenes it is however as Uncle Jack, that in all probability he is best known and best loved.

**WANTED.**—All kinds Secondhand Wireless Sets  
Parts, Speakers, etc. Best prices given. JACK  
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# XMAS SPECIALS

Wireless Sets and Parts make Acceptable Xmas Presents



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Music Master

Amplion Music Master AR15 ..	£8 0 0
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Amplion Junior AR102 .. . . .	£1 15 0
Amplion Gram. Attachment AR67	£2 15 0
Amplion Gram. Attachment AR35	£3 15 0
Brown H1 .. . . .	£7 10 0
Brown H2 .. . . .	£3 5 0
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## Col-Mo Ready to Wire Sets

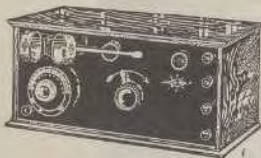
Genuine Radio Sets that Will Work

	£	s.	d.
One Valve Set complete with all panel material, cabinet, wiring wire, wiring diagram, solder, etc.	2	10	0
Accessories required:—			
1 Valve .. . . .	0	17	6
4 Radiookes Coils, Mtd. . . . .	0	19	0
2 1.5 Dry Cells .. . . .	0	6	0
1 High Tension Battery .. . . .	0	9	6
1 pr. Head Phones, 4000 Ohms. . . . .	0	12	6
100 ft. Aerial Wire .. . . .	0	2	6
15 ft. Lead-in Wire .. . . .	0	1	3
	£3	8	3

	£	s.	d.
Two Valve Set complete as illustrated, with wiring diagram, etc. . . . .	4	2	6
Accessories required:—			
2 Valves .. . . .	1	15	0
4 Radiookes Coils, Mtd. . . . .	0	19	0
2 1.5 Dry Cells .. . . .	0	6	0
1 High Tension Battery .. . . .	0	18	0
1 pr. Phones .. . . .	0	12	6
100 ft. Aerial Wire .. . . .	0	2	6
15 ft. Lead-in Wire .. . . .	0	1	3
	£4	14	3

	£	s.	d.
Load Speakers from 35/..			
Three Valve Set complete with all panel material, cabinet, wiring wire, wiring diagram, solder, etc.	5	15	0
Accessories required:—			
3 Valves .. . . .	2	12	6
4 Radiookes Coils, Mtd. . . . .	0	19	0
3 1.5 Dry Cells .. . . .	0	9	0
1 High Tension Battery .. . . .	0	18	0
100 ft. Aerial Wire .. . . .	0	2	6
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Amplion Junior Speaker .. . . .	3	10	0
	£8	12	3

Load Speakers from 35/.. extra.



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1 Valve Set .. . . .	£6 5 0
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THE COMPLIMENTS OF THE SEASON FROM

**COLVILLE-MOORE**  
 WIRELESS SUPPLIES, LIMITED,  
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## 3LO's Christmas Party

AN IMPRESSION OF WIRELESS IN ITS  
"INFANCY."

(By F.R.L.)

After witnessing the delightful demonstration of "Wireless in its 'Infancy'" provided by the management of 3LO Station in the packed Auditorium Hall on Saturday afternoon, the clear impression remains that Father Christmas will have to look to his laurels and set up a broadcasting establishment. Otherwise the dear old gentleman who relies for his popularity exclusively on tradition, wonderful white whiskers, and the ever-increasing temptations of Toyland, will be finding himself seriously rivalled in the collective hearts of Childhood. Twentieth century science has brought along its interlopers, and it is obvious that the children have taken to them like ducks to water. They masquerade under such seductive names in this fair city of Melbourne as Billy Bunny, Little Miss Kookaburra, Mary Gaudleaf and Lady Greensleeves! What is still more serious for Santa, they can woo Girl-and-Boy Land daily and nightly the whole year through, stealing their way to the youngsters' affections by the constant unfold-

ing of an infinite variety of delicious stories. Along side this, the nocturnal visit of Father Xmas down the bedroom chimney only once a year reads like unpardonable aloofness and studied neglect. It is not surprising, therefore, to record the solemn fact that in the midst of all the excitement at Saturday's big party, the elderly toy purveyor's absence wasn't even apologised for!

Pattering feet and childish chatter literally spilled over every part of the great hall. Shy and modest, some would slip into the first seats available, others would calmly decide upon the dress circle with rare dignity, while the more boisterous, with thoughts of "Excelsior!" to inspire them, would not be content until they had reached the uppermost heights of the gallery. But irrespective of site, the prime idea was to get a good view and not miss anything. Such bright eyes! Such keenness! Such spick and spanness! Away with the doleful old croakers who try to tell us that the race is deteriorating and that the girls and boys of to-day are not the equal of those of yesterday. Children are changeless at heart. At times these days they wonder what Granny did when she was a girl in a world that did not know wireless, aeroplanes, and movies, but there are the same sure and secret passages to the heart of the child for those grown-ups who take the trouble to find them. And without a



The Crowded Auditorium.



doubt the 3LO management found them for the Xmas Party. And "fare" provided was of the best and funnest. Cannonades of unrestrained A magician did the same wonderful tricks with coloured handkerchiefs, rings and eggs vanished at his laughter and shouts of high glee greeted each item, touch, yet the audience contained a good many diminutive cynics and doubting Thomases who tried to bowl him out by yelling "The other 'and' or 'It's in yer pocket'" when he invited them to locate the lost article. And what of the dear old-fashioned elown and his "beaut" little performing dogs? Then that wonderful juggling and the man who wore waistcoats enough for fifty! As for the pictures, we had the amazing stunts of Larry Simon (affectionately christened Sourey Lemon by one small wit at my side), coupled with a welcome resurrection of a Chaplin picture that provoked a couple of philosophical lads to observe on their way downstairs that "Yer can't beat old Charlie, can yer?" Over all this great gathering of hundreds of children from homes located everywhere in the city area there ruled a true family spirit. Even the country cousins were remembered. As for the cheers given Billy

Bunny, they were veritable roof-raisers, and the thought arises that Mr. Bruce would have to carefully keep a tight hold on the Prime Ministership if children had a vote! Gifts galore, carrying with them spontaneous and enduring affection, were brought for the favourite tellers of stories, and in the face of such love and gratitude one might be pardoned for thinking that perhaps the Kingdom of Kidland would be a more desirable role to occupy than the wearing of any crown of Europe. Medals, on which no price could be put so far as the juvenile winners were concerned, were presented for competitions conducted by 3LO, and appropriately "a city father" was invited to do the honours. As that great hive of happy children swarmed out to Collins Street to join waiting parents and big brothers and sisters, the writer fell to wondering how these delightful wireless story-tellers will be able to accommodate their "families" of the future. As each Xmas comes round they'll have it forced on them that the famous old woman who lived in a shoe had a mere trifling problem to solve compared with theirs.



#### UNDER SEA BROADCASTING.

This photograph was taken on the occasion of the broadcasting from the bed of Victoria Dock, Melbourne, by 3LO.

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Do you realize that for **£4** down and **£1** a week we will deliver to your home a Super Cabinet Tonophone a Valve Wireless Set, a Pathe Home Cinema and one of Heiron & Smith's Lift-on Billiard Tables!



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SUPERB CABINET  
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Noted for its remarkable reproduction its Tonal Value and exclusive Non-Scratch features. A gem of workmanship in a handsome highly polished cabinet. **£1** down secures immediate delivery. Balance **5/-** weekly.



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SET on an exclusive unit system. This set is built in a handsome foundation cabinet and has 2 valves set with headphones and a loud speaker permanently built in. Applicable to all classes of reception. Extra valves can be added to a full strength 4 valve set without reconstruction.

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Heiron & Smith's Lift-on Billiard Table. Complete for the game of Billiards with cues, balls and mashing board. **£1** down secures immediate delivery. Balance **5/-** weekly.

Call at once with a Pound Note and we will deliver immediately to your Home.

**HOME RECREATIONS LTD**

**388 GEORGE STREET (Opp Beard Watson's)**



# A Receiver which Efficiently Tunes from 50 to 20,000 metres

By "WIRELESS WEEKLY."

As many no doubt will be interested in the Test Transmissions of the Rugby (England) high power station, GBR, we are this week publishing the circuit diagram and back wiring view of the receiver used at our station, 2WW, which has brought in all the transmissions at strength R8 to R9. This English station transmits press news at 11 a.m. and 11 p.m. (Sydney time). The following procedure is used: CQ, CQ, CQ, DE GBR, GBR, GBR. This is repeated several times before commencing the press news and is usually made very slowly so that those who have only very vague knowledge of the Morse code should be able to distinguish the Morse signals which make up the letters as stated above. The actual press message is made at an average speed of 20 words per minute (with no repetitions) so that those who read well should have no difficulty in logging over 80 per cent. of the total number of words transmitted. Static and interference from other stations is somewhat bad, especially during the 11 p.m. transmission. But with a little practice and concentration you will find that what seems at first impossible is after practice, quite easy.

At the end of the British official press news, which usually consists of 400 to 500 words, the station concludes by calling CQ in the same manner as described previously.

## The Circuit.

A glance at the circuit diagram will show you that the hook-up used is a very old one. Nevertheless it has maximum efficiency over a large range. The primary may be tuned for medium and high wavelengths, or where maximum select-

ivity is required. Aperiodic aerial tuning may be used for reception of the short waves or to minimise the number of controls where selectivity is not required.

\* The plate coil may also be tuned at will by closing Link 3 for reception of broadcasting. However, great care should be taken, as the receiver is liable to cause considerable interference with other regenerative sets. Link 2 should always be closed for the reception of GBR. It helps to considerably to reduce interference from other stations as tuning is by no means sharp on the very long wavelengths.

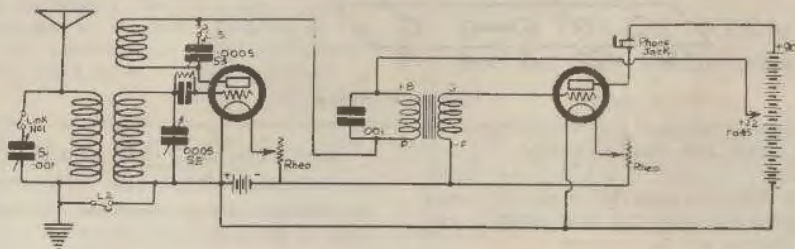
Those who have had no previous experience in tuning in the very long wave stations will be agreeably surprised to notice the vast difference in tuning the long waves as compared with short wave amateurs.

Readers are advised to study carefully the linking arrangement which, without a doubt, is the whole secret of the receiver, giving wonderful efficiency on wavelengths as low as 50 metres and as high as 20,000 metres. Don't be afraid to mount your short wave coils on the ordinary honeycomb coil mount. Be sure however, that your mount is of good material.

The essentials of a short wave tuner is low resistance. A high resistance cannot possibly tune sharply. To prevent this high resistance, wind your own coils for the short waves with either 18 or 20 gauge D.C.C. or even bell wire. For broadcast wavelengths, honeycomb or spider web coils may be used.

## Construction.

The back of panel view (Fig. 2) shows the



layout of the baseboard and panel. The following components are necessary:

- 1 Radion or Dilecto panel 18 x 7 inches.
- 1 .001 variable condenser.
- 2 .0005 variable condensers.
- 2 Rheostats to suit valves used.
- 1 Three coil mount (or 1 panel plug or 2 coupling plugs).

18 Terminals.

- 2 Valve holders.
- 2 Valves.
- 1 Audio transformer.
- 1 Grid leak and condenser.
- 1 S.C. jack.
- 1 Baseboard to suit panel.
- 1 Terminal panel, 6 x 1 inch.

Coils as per table.

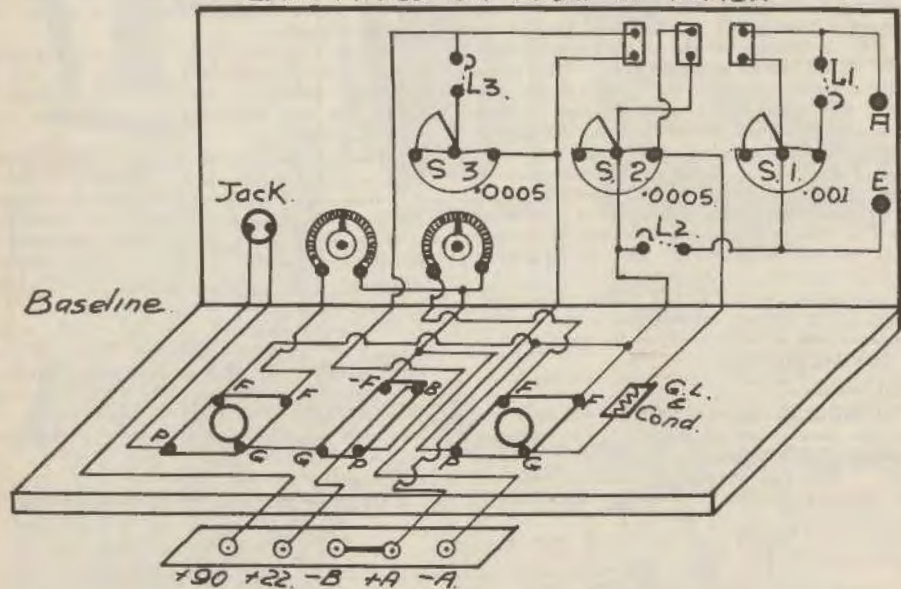
Six of the terminals form the links together

with pieces of shaped busbar wire, all of which should be fitted on the front of the panel. You will see the advantages of using these links as they quickly and efficiently alter the tuning arrangements. Where maximum selectivity is desired the primary should be tuned and link 2 left open. Those who have complained about interference from 2KY when receiving 2BL will find that the above circuit will successfully separate either one from the other by careful adjustment of S1, S2 and the coupling of the coils. Careful experimenting with different plate voltages on the detector valve will also greatly improve the efficiency of the receiver.

This receiver has been experimented with and tested extensively. We can thoroughly recommend it.

See Coil Table on opposite page

### Links Fitted on Front of Panel.



How to Wire Up

#### LISTEN FOR THIS STATION.

GBR, Rugby, England, is a high power station working on 17,750 metres. This station is testing all day long until January 2nd, after which a regular official schedule will be observed.

GBR is easy to log using the three-coil circuit and the following coils: Primary 1250, secondary 1500, and reaction 1600. The speed of transmissions is about 12 words per minute.

**BURGESS—"FOR EVERY CIR CUIT AND VALVE"—BATTERIES**

Table of Coils to be used with Various Link Combinations

STATIONS	L1	L2	L3	LINKS			NUMBER OF CONTROLS
				1	2	3	
Amateurs	5	10	12	Open	Closed	Open	One = S2
"	5	20	15	Open	Closed	Open	One = S2
2KY	20	35	35	Open	Optional	Open	One = S2
2BL	25	50	35	Closed	Open	Open	Two = S1 and S2
*8LO	25	50	35	Closed	Open	Optional	Two = S1 and S2 or three and S3
2FC	100	150	100	Closed	Open	Open	Two = S1 and S2
6WF	150	200	150	Closed	Open	Open	Two = S1 and S2
GBR	1250	1500	1500	Closed	Closed	Closed	Three = S1, S2 and S3

\* See remarks on tuning plate circuit.

**THANKS!**

To the Editor.

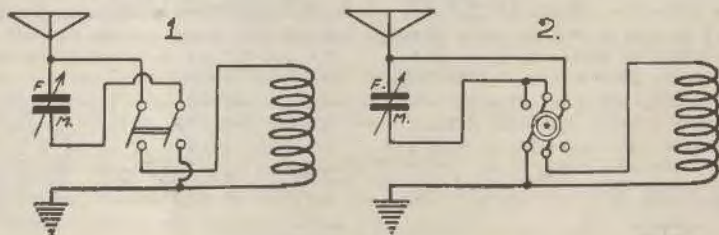
Dear Sir,—Mr. R. C. V. Humphery, in his article "Constructional Notes," advises readers always to earth the movable plates of the aerial condenser, but he states that this is not always practicable when a series-parallel switch is employed (see "Wireless Weekly," 11/12/25).

The following diagrams, however, show that an S.P. switch may be so wired as to earth the movable plates both in series and parallel, and may be of interest to readers of "Wireless Weekly." In diagram 1 the condenser is in series; in 2, parallel.

Yours, etc.,

H. R. CROSKY.

31 Hirst Street, Arncliffe.

**THE FAN'S TRIUMPH.**

Here lies the remains of a radio fan,

Now mourned by his many relations;

He went to a powder mill, smoking his pipe,

And was picked up by twenty-one stations.

—Williams Purple Cow.

Writing from Darwin, N. T., Mr. G.W. Tindill, a subscriber to "Wireless Weekly" says there is a possibility of Darwin Radio being removed to a more suitable site and that great alterations are to be made to the equipment in the way of new and powerful transmitting gear.

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and at Hamilton.

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**THE LARGEST AND OLDEST RADIO  
SUPPLY HOUSE OF THE NORTH.**

# A VERY GOOD RECEIVER

By Grid Leak

One often sees an article descriptive of a circuit for which great claims are made, but which, on test, proves to be very disappointing.

It is not too much, however, to hail as a wonder circuit one that will give remarkable loud speaker reproduction on a single valve without super-regeneration. And the title is further justified when it is found that the addition of a single stage of audio amplification gives such enormous amplification that renders the set almost equal to a four-valve, to say nothing of the clarity which ensues as the result of obtaining this remarkable volume with but a single stage audio amplifier.

Best of all, there is nothing complicated in the manipulation of the controls, only one dial to twirl, and very little setting of the coils. With very little trouble any P.1 circuit can be converted to this circuit, giving a greater degree of selectivity and very much improved reception. The only extra component required is an additional .0005 mfd. variable condenser if the two-valve set is to be transformer-coupled, and an additional .006 mfd. fixed condenser if the single stage of audio amplification is to be choke coupled.

The only peculiarity about the circuit is that the inductances need to be of a somewhat higher value than in an ordinary circuit.

As a guide, it may be pointed out that a 50 turn Honeycomb, duo-lateral, or spider-web coil is used as the aerial-grid coil for 2BL, with one of 100 turns as tickler, and for 2FC a 200 turn coil as the aerial-grid inductance with a 200 to 250 turns tickler.

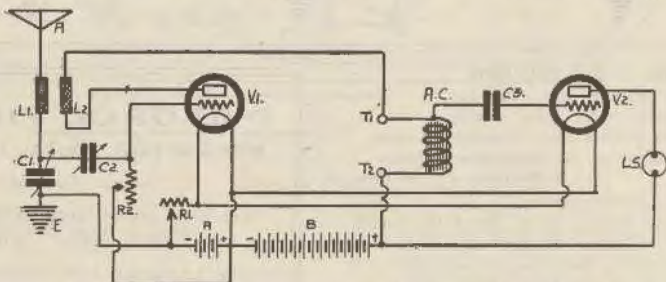
The smaller coils will also bring in 2UE and 2KY.

Examination of the circuit diagram of Fig. 1

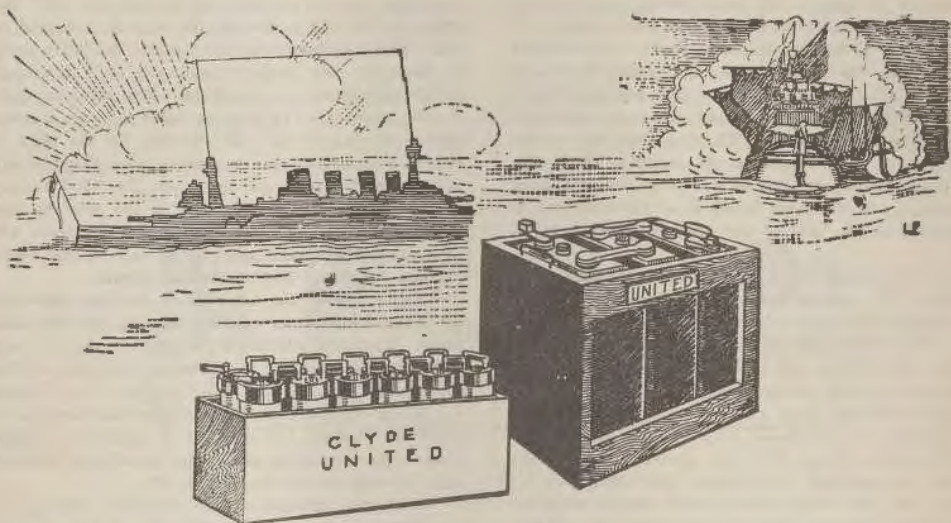
reveals nothing that calls for remark except that the grid connection is taken from the wrong end of the coil—that is, the wrong end as compared with the ordinary circuit.

A variable condenser, C.1, is included in the earth lead, and the grid connection is taken from a point between the end of the aerial-grid coil and the condenser just mentioned. The usual fixed grid condenser is replaced by another variable, C.2, and a variable leak, R.E, is employed, a Bradleyleak of zero to 10 megohms being necessary, as the leak is practically all in when the circuit is being operated. By "all in" is meant that the whole of the 10 megohms is included, as the contact is all but off when the final adjustment is made. If the knob of the Bradleyleak is turned until contact is broken, a low growl manifests itself, which disappears as soon as the lightest of contacts is again made.

Both C.1 and C.2 are variable condensers of .0005 mfd. capacity, and C.1 should be a vernier condenser, C.2 not being at all critical. It is absolutely essential that C.2 be a variable condenser, however. The Bradleyleak, R.2, is connected between the grid of V.1, the detector valve, and the positive of the A battery. R.1 is a 6 ohm rheostat, and controls both valve filaments, no benefit having been found from using separate rheostats for each valve. T.1 and T.2 are the terminals where the telephones would be attached if the set were used as a single valve receiver, and in this circuit the loud speaker leads may be connected to these two terminals, when it is desired to have loud speaker reception on a single valve. Nor is the loud speaker reception on a single valve something one has to



A circuit in which a burnt-out transformer has the secondary winding intact, and which is used as an audio-frequency choke for coupling in the audio stage.



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are installed throughout the ROYAL AUSTRALIAN NAVY because they have satisfied rigorous tests in all weathers and under all conditions, proving themselves to be the best batteries obtainable.

They are specially manufactured by the Clyde Engineering Company, Limited, and are fully guaranteed. They are solidly constructed, ensuring long life, full ampere capacity and sustained voltage. Service bills are now, and the current is always there when most required.

All batteries are enclosed in strong crates with handles.

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S5	Capacity	6 Volt,	44 amp-hours	£4/-/-
S7	Capacity	6 Volt,	66 amp-hours	4/15/-
S9	Capacity	6 Volt,	88 amp-hours	5/5/-
C9	Capacity	6 Volt,	120 amp-hours	6/6/-
C11	Capacity	6 Volt,	150 amp-hours	7/7/-
C13	Capacity	6 Volt,	180 amp-hours	8/8/-

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USE CLYDE UNITED BATTERIES FOR CAR, RADIO AND HOME.

strain for to hear. It is sufficiently loud to be thoroughly satisfactory for a large-sized room.

In Fig. 1, A.C. is an audio choke, and the bars run through the coiled part of the symbol show that it is an iron-cored choke. For this addition to the single valve set the ends of the choke are connected to the terminals T.1 and T.2, and that end of the choke which is connected to the terminal T.1 is also connected to one terminal of a .005 or .006 mfd. fixed condenser, and the other terminal of the condenser is connected to the grid of the audio-amplifying valve, V.2.

T.2 is connected to the maximum voltage point of the "B" battery, which may be anything from 60 volts to 120 volts. For the greatest volumes a 120 volt "B" battery should be employed. The plate of V.2 is connected to one terminal of the loud speaker, the other terminal being joined to the "B" battery maximum voltage point also.

A pair of headphones might be put into circuit at the points where the loud speaker is connected in the diagram, but it is certain that headphone reception on the two valves could not be endured. The choke actually used in elucidating this circuit was the secondary winding of an audio transformer, the primary side of which was burnt out. Very nice amplification is had with this method of coupling, and the volume is great enough to be pleasant in the averaged-sized room.

To run over the connections for the benefit of beginners in construction, and referring to the diagram of Fig. 1, A is the aerial and lead-in, L.1 is the aerial-grid coil, which is a 50 turn coil for the shorter wave broadcasting stations and 200 turns for 2FC. C.1 is a vernier variable condenser placed between L.1 and the earth connection. E is the earth. C.2 is the variable .0005 mfd. grid condenser, and R.2 is the Bradleyleak mentioned. R.1 is the 6 ohm leak controlling both valves. L.2 is the tickler or reaction coil, 100 turns for the short-wave stations and 200 to 250 turns for 2FC. V.1 is the detector valve, and T.1 and T.2 are two terminals where the headphones or loud speaker would be attached if a single valve set were built, in which case the battery leads to the second valve would be omitted, of course.

Instead of the terminals, a jack could be used for the greater facility of being able to couple in the phones or loud speaker with a plug. For the complete two-valve set, one terminal of the secondary winding of the burnt-out transformer used as a choke is connected to T.1 and the other terminal to T.2, and it does not appear to matter which terminal is connected to T.1 or T.2, as the case may be.

As the "B" battery potential is fed to the plate of V.1 through the choke winding, a stopping

condenser, C.3, is necessary to prevent the "B" battery current from finding its way to the grid of V.2. This stopping condenser must be fairly large to pass into the audio currents on to V.2 without undue impedance. A .005 or .006 mfd. is quite ample, however. It may be noted by the diagram that a tapping of the "B" battery for the plate of the detector valve is not shown. This is quite correct, as best results are had when the "B" battery voltage supplied to the detector is the same as that supplied to the amplifier, and whilst 60 volts will give exceedingly good results, 120 volts is the better voltage to obtain the maximum volume.

Fig. 2 gives the connections for the two-valve set when transformer coupling is used for the audio stage. The only additional features are that T.1 and T.2 are connected to the primary terminals of the transformer, which should be one of 5 to 1 ratio, T.1 being connected to the plate terminal and T.2 to the "B" battery terminal. It is important to make these connections the right way round, and this applies equally to the diagram of Fig. 1.

The grid terminal of the secondary side of the transformer is connected to the grid of V.2, and the filament terminal is joined to the negative of a 4.5 volt Eveready "C" battery; the positive of this battery is connected to the negative of the "A" battery. All the other connections are the same as for the choke coupled set.

The volume obtained on two valves with the transformer coupled amplifier is nothing short of remarkable, and is much too loud even for a large room. With this extraordinary amplification the reception is perfectly clear and natural, and the voice of the announcer is heard as clearly and distinctly as though he were being heard without the intervention of the wireless apparatus.

The operation of the set is extremely simple. The .0005 mfd. variable grid condenser, C.2, is turned half in, and the variable, vernier condenser C.1 is turned until the required station is brought in, no further alteration of C.2 being necessary. Before commencing to tune, the two coils are separated as far as possible, the tickler being at right angles to the aerial-grid coil. As has already been pointed out, the Bradleyleak, R.2, is just in contact, and no more.

Another remarkable feature of the circuit is that practically as great volume is obtained without any aerial being attached. The earth connection is joined to the aerial terminal of the set, and the earth terminal left unconnected. In this case the two coils are brought as close together as possible.

Just how the wonderful power of the set is obtained is, frankly, a puzzle at the moment, but it is evidently from the regenerative effect, but differ-

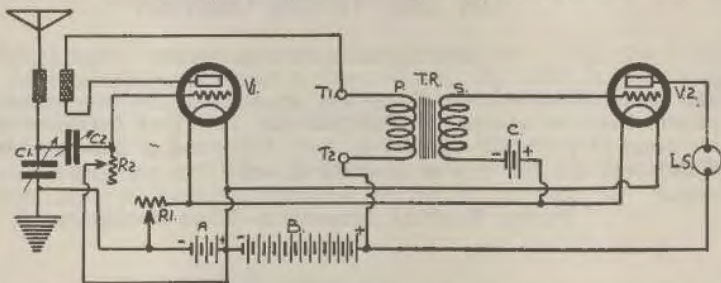


ing very materially from the Armstrong Super-Regenerative and the Flewelling in that it is completely stable, and in the absence of the squeals and howls one looks for in a super circuit. It is super-regeneration with all the advantages of a straight circuit in the matter of clarity and ease of operation.

At the moment of writing there has not been the opportunity to test at what distance from a

ferent tappings, as there will be one on which the loudest reception is had, and which will naturally depend on the kind and size of aerial used. The four tappings should be sufficient to deal with almost any kind of aerial.

Other coils than those just mentioned have been used, and practically as good results have been obtained, and the special coils have been mentioned in



*In this version of the receiver, a 5 to 1 audio-frequency transformer is used for coupling, and very remarkable volume is obtained, even with the aerial disconnected.*

broadcasting station the set will operate without an aerial, with the earth connection on the aerial terminal, and the earth terminal not connected. Perhaps some reader at a distance from Sydney will try this out and report on this point.

To state that the volume obtained with the earth connection alone is enormous is not to overstate facts in the slightest, but the distance from the broadcasting stations is under three miles. An ordinary four or five valve set, with aerial and earth connections, could not give greater volume, and certainly would not be so wonderfully free from distortion; in fact, it would be impossible to obtain the volume on a multi-valve set without distortion. This is such a simply constructed set, and its results so out of the ordinary, that every reader should make it up and report.

It may be pointed out that the results obtained have been achieved with coils wound with No. 20 D.C.C. The 200 turns coils used for the reception of 2FG are home-made honeycombs wound with this No. 20 D.C.C., and for the shorter wave stations a spider-web of 100 turns was used for the tickler, and another spider-web of 70 turns, tapped at 40, 50, 60 and 70 turns, was used as the aerial-grid coil, and both were wound with No. 20 D.C.C.

Grodan spider-web formers were used, and the tappings were soldered to studs placed round the centre of the former, with the moving switch arm connected to the upper connection of the former, so that any turns past the tapping used were short-circuited. Experiment should be pursued with the dif-

ferent tappings, as there will be one on which the loudest reception is had, and which will naturally depend on the kind and size of aerial used. The four tappings should be sufficient to deal with almost any kind of aerial.

The valves used were the De Forest and Audions—D.5.

#### THE R.B. BUREAU.

To the Editor.

Dear Sir,—Your kindly appreciation of the propaganda work of the Radio Broadcast Bureau is much appreciated, and perhaps you will permit me to tell your readers that much of the matter upon which I have been able to build publicity propaganda has been given me by the editor of "Wireless Weekly," so that the truth of your statement that the Bureau is gradually bridging the gulf between sheer ignorance of broadcasting and the stage where the average country dweller begins to wonder what it is all about is at least partly due to your own co-operation.

While on the subject, might I ask readers of "Wireless Weekly" to let me have any tidbits of information about radio which I can use for propaganda purposes.

If all radio enthusiasts will set out to make more enthusiasts, we will soon become so strong a band that we will just have to say what we want and it will be so.—Yours for radio,

C. C. FAULKNER,

Director, Radio Broadcast Bureau.

2 Castlereagh Street, Sydney.

## Selectivity & Efficiency with a MENOMINEE

### Low Loss Variable Condenser

IN the manufacture of these Condensers every safeguard is provided to prevent current losses or leakage. A MENOMINEE Low Loss Condenser will increase the range of practically any Set by many miles, and as there is no body capacity the Station will not detune after a setting is made.

Perfect Electrical Connections—Silent Movements.

**SPECIAL FEATURES.**  
Soldered Rotor Assembly.  
Double Shielded Stator Assembly.  
Clock Spring Figital Connections.



**SPECIAL FEATURES.**  
Adjustable Cone Bearing.  
Adjustable Stator Assembly.  
Efficiency Guaranteed.

Illustration of Menominee Low Loss Condenser

901 mfd. 49 PLATE, WITH DIAL	27/6
3000 mfd. 23 PLATE, WITH DIAL	25/-
3000 mfd. 17 PLATE, WITH DIAL	22/6

#### SLOW MOTION MICROMETER DIALS FOR FINE TUNING.

Replace your existing Dial with a Slow Motion Type and add to the selectivity of your Set.

4th. ACCENTUATE, 100 to 1 Ratio	25/- each
4th. DIALOG, 7½ to 1 Ratio	10/6

OUR MAIL ORDER DEPARTMENT, 60 Goulburn Street, is under supervision of a Mail Order Expert, which ensures prompt despatch, careful attention to packing, and all details necessary for an efficient Mail Order Service. We despatch within 24 hours. May we have your order?

Open Friday Nights until 8.30 p.m. Complete Parts for all circuits. Advice Gratis. Your own Set revised by Experts. Satisfaction guaranteed.

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BRANCH:  
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23 PITT STREET  
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## PURITY OF RECEPTION

ADD an "EVER READY" No. 126 Grid Bias or "D" Battery to your Valve Set, and note the wonderful improvement in the reception. No doubt many listeners are obtaining wonderful volume for their 2, 3, 4, or 5 Valve Set. But what about the purity?

By connecting an "EVER READY" No. 126 Battery to your Set the improvement is astounding. Not only is the reception improved, but the life of your "B" Battery is increased.

Price  
2/9  
each



Price  
2/9  
each

Different makes of Valves require different ratings for a Grid Bias. The "EVER READY" No. 126 Battery is suitable for all type of Valves, as it has 2 Terminals, giving either 1½, 3, or 4½ volts.

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. 126 Battery to your Set.

Complete Stocks of "EVER READY" "B" Batteries made in Australia and always fresh.

## THE KIDDIES' FIRST UNCLE

### His Message

To the Radio Family,

My Dear Children,

Uncle George has been very busy and consequently in the rush of the Christmas work he has been compelled to allow many things to go unattended to. However, in view of the fact that New Year is almost here, I have to send you all my very best wishes and my hopes that in every way the New Year will be happy and prosperous for every one of you.

At the Studio as usual we have all been very busy and the Christmas Season of course required very considerable attention. I want to tell you



Uncle George

that I had the pleasure of taking the little performers who assist in entertaining you on Friday nights to afternoon tea at Griffith Brothers and we had a most delightful time there. All of the little ones, I think, thoroughly enjoyed the tea as I did myself also, and then on the Tuesday before Christmas, I was invited to a special Christmas Tree and Party given to the staff of one of the big wholesale grocery houses, and also enjoyed myself there very considerably.

During the Christmas Season, I was almost

overwhelmed with Christmas cards and presents of various kinds that came from many of you. Most of these have already been acknowledged over the air, but in case any should have been overlooked, I want to say how very greatly I appreciated all these kind remembrances. Naturally I do not expect or look for presents at any time, but these mementos are an indication of the approval with which the Bedtime Stories are heard by all of you.

Many of you will now be spending your Christmas vacations and I should like to conclude by saying that I hope you will all thoroughly enjoy the holidays before school re-assembles. I should like to know that all of you are using the holidays for the purpose of making yourselves thoroughly well before school starts. It always pleases me to hear that so many of you are swimming and surfing and generally going in for health exercises which will build you all up physically and so leave you ready to continue your studies when school re-assembles.

With all my love,

Yours very sincerely,

"UNCLE GEORGE."

## Charles D. Maclurcan

Consulting Radio Engineer

### CALIBRATION CHARGES.

Wavemeter Calibrations with Chart.

From Sub-Standard.

Accuracy under 3 per cent.

Absorption and Buzzer Wavemeters, 15/- with one coil. 5/- per coil extra.

### HETODYNE WAVEMETERS.

£1/10/- with one coil. 7/6 per coil extra.

Calibrations from Standard Precision Wavemeter.

Accuracy under 1 per cent.

Absorption and Buzzer Wavemeters, 25/- with one coil, and 7/6 per coil extra.

Hetrodyne Wavemeters, £3/3/- with three coils. 12/6 per coil extra.

### CONDENSER CALIBRATIONS.

With Chart.

Variable Condensers, 15/- for one condenser. 10/- for extra condensers.

Fixed Condensers, 5/- for one condenser. Extra condensers, 2/-. Special quotations for large quantities.

FRATTON BUILDING,

26 JAMIESON STREET, SYDNEY.

Tel.: B 5925.

## DRY CELLS FOR EVERY PURPOSE

ALWAYS ASK FOR

# Diamond Radio Batteries

MORE THAN A MILLION SUPPLIED ANNUALLY.

TELEPHONE CELLS.

TELEGRAPH BATTERIES.

"Cost  
More  
To  
Build."



"Cost  
Less  
To  
Operate."

"A Radio Set is  
no better than its  
Battery."

"Diamond Bat-  
teries make Good  
Sets Better."

Wireless A B & C Batteries

Produced Expressly for Radio Transmission Reception

Ignition Batteries

**Wholesalers:**  
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F. A. SEGUR LTD.  
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MARTIN DE LAUNAY  
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**Retailers:**  
FARMERS LTD.  
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### Retail Price List

BATTERY	"COIL"	
A	15V. "Coil"	2/6
A	1.5 "Burner" Lamp	3/0
A	1.5 "C" call type	5/6
A	1.5 "Domestic"	4/6
A	1.5 "Navy Special"	3/0
B	60 "Large Type"	25/0
B	45 "Large Type"	20/0
C	4.5 "Blason"	2/9
C	4.5 "L'ge Special"	12/0
C	6.0 "Ignite"	15/0

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MISS WALLACE  
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Public Works  
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Factory Representatives:  
**REG. ROSE & CO.**

"Kembla Buildings," Margaret Street,  
Sydney. Phone, B3872.

Manufactured by

WIDDIS DIAMOND DRY CELLS  
PTY. LTD.,

West Melbourne, Vict.

# Adding Transformer Coupled R.F. Amplification to the Improved Armstrong Receiver

By A. ALEXANDER.

One method of adding radio frequency amplification to the Improved Armstrong receiver, and which was described in "Wireless Weekly" December 18th, made use of an additional inductance coil for tuning the grid circuit of the radio frequency valve, the aerial being "direct-coupled" to the grid. With this receiver, 3LO can be "brought in" on the speaker without a trace of interference from 2BL, at any time,—howling valves permitting—but it is necessary to exercise a certain amount of patience in tuning it.

In some districts, particularly in certain country towns, considerable interference from electrical mains and telephone wires is experienced in receivers employing direct coupled aerial tuning circuits, and reports to hand from experimenters seem to show that of all receivers employing radio frequency amplification the "neutrodyne" is the least affected.

In the "neutrodyne" designs, all tuning circuits including the aerial circuit, are inductively coupled, and if the proper tests were made, it will no doubt be found that it is to this fact that the freedom from electrical interference can be attributed.

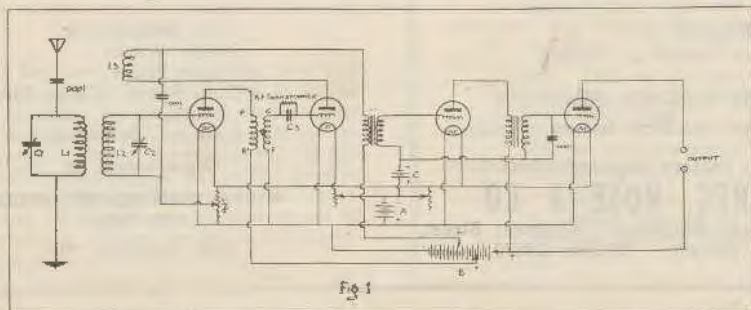
The Improved Armstrong in its original form as a three valve receiver has inductively coupled tuning circuits and so that this arrangement may be retained when adding radio-frequency amplification, a different method of coupling the radio-frequency valve to the detector valve is recommended. The circuit adopted is shown in Figure 1, from which it will be seen that the original aerial tuning arrangements remain unaltered (see figure 3 for circuit of original 3 valve Armstrong receiver).

Following the radio-frequency valve is a R.F. transformer. Thanks to an Australian company it is now possible to obtain a radio frequency transformer which will cover the whole of the wide band of broadcasting wavelengths without using switches to short circuit portion of its windings when changing over from 2FC to 2BL.

The rest of the circuit is not interfered with in any way whatever.

In making the alterations commence by placing the additional valve socket in position, and if possible such that the R.F. transformer can be placed between it and the detector valve. This will greatly simplify the alterations. The potentiometer should be mounted in position before any alterations are made in the wiring. Commence the new wiring by disconnecting the connections between the condenser C2 (or coil L2) and the grid condenser C3, and between the same components and the A battery plus. With the exception of these two, no other connections should be removed.

Wire the potentiometer into circuit and connect C2 or L2 to the grid of the first valve. Next wire the transformer into circuit,—(the terminals are marked as follows P, B+, G, F.)—P goes to Plate, B+ to B battery plus, (45 to 60 volts), G to grid condenser C3, and F to A battery plus. The filament control for the radio-frequency valve, is obtained from the same rheostat which controls the audio frequency valves. If desired a new rheostat can be fitted but it will be redundant. It is not advisable to operate this valve off the detector rheostat, otherwise the receiver will be ruined. From the foregoing it will be appreciated



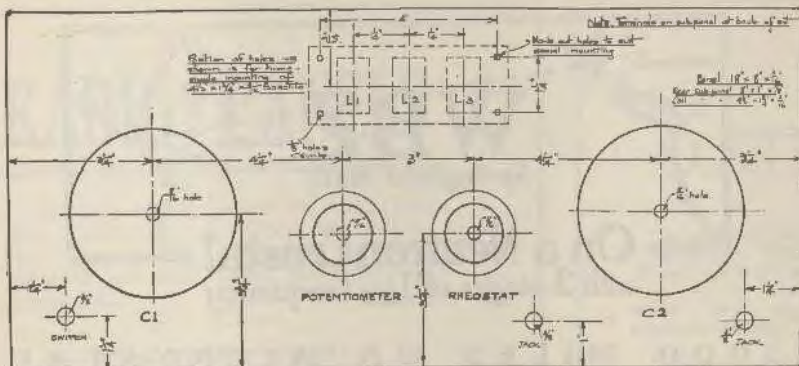


FIG 2

how simple the job actually is—two connections to be removed, and ten new ones to be made and the job is finished.

The additional materials required comprise:—

- 1 Potentiometer.
- 1 R.F. Transformer, A.W.A. type.
- 1 Valve socket.
- 1 Terminal (B+ radio).
- 1 Valve.

For the benefit of those who wish to build this receiver straight out, — and it is worth the trouble,—a new panel arrangement is shown in figure 2. When buying the panel it should be engraved, the cost is small and the appearance of the finished receiver is enhanced.

So that no trouble will be experienced in getting all the parts required, a complete list of everything necessary for the construction of the full set is as follows:—

- 1 panel (engraved), 18 x 8 x 3/16 inches.

- 1 Sub-panel.
- 1 Base—softwood about 10 inches wide x 18 inches long.
- 8 Terminals—Aerial, Earth. A+B—, C+A—, C—, B+ radio, B+ det., B+ audio.
- 2 Rheostats each 30 ohms.
- 1 Potentiometer, 400 or 200 ohms.
- 1 Grid leak.
- 1 Grid condenser (.00025 mfd.) with grid leak mount.
- 2 Fixed condensers .0001 mfd.
- 1 Fixed condenser .001 mfd.
- 2 Variable Condensers .0005 mfd.
- 1 3 coil mounting.
- 4 Valve sockets.
- 1 A.W.A. radio transformer.
- 2 Audio transformers.
- 1 Double circuit jack.
- 1 Single circuit jack.
- 1 Battery switch for A battery.

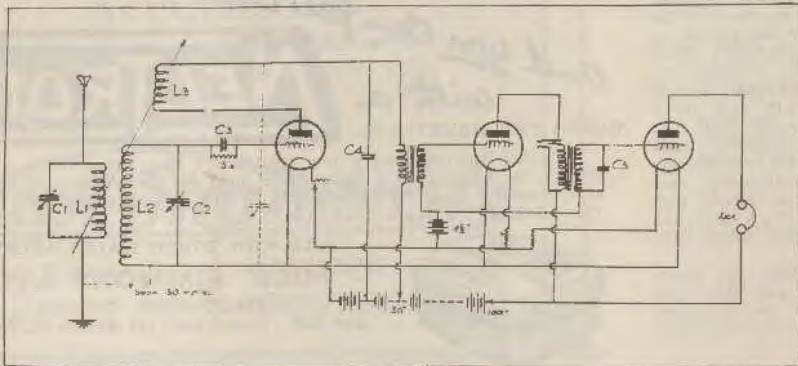


FIG. 3



**WBZ**  
Springfield, Mass.

**On a Neutron Crystal**  
with 2 stages of Low Frequency

## 3000 MILES ON A CRYSTAL

R.A.H. of Chippingham, England, Receives W.B.Z., of America

**T**HIS is, we believe, the record for long-distance broadcasting reception on land. Note that the only amplifier used was a low-frequency one; interpreted to the non-technical, this means that the signals were actually received and rectified by the NEUTRON CRYSTAL, the two valves serving merely as note-magnifiers, and not as "range-increasers."

Here is sufficient proof of the super-sensitiveness of NEUTRON CRYSTAL to justify you in selecting this as your Crystal. Sooner or later you will come to it, in any case, and in deciding NOW for NEUTRON, you will easily save the price of another pair of phones, by saving the expense of further tests.

### "Neutron" gets Sydney from Melbourne

*E.G.W., of Gardenvale, Vic., writes:—*

I thought you might be interested to know that since commencing to use "Neutron" Crystal I have been successful in picking up Farmer's (2FC) every night.

My set is an ordinary home-made two-slider set, and I can clearly hear the various items transmitted, as well as the call sign by the announcer.

### Works a Loud Speaker

ELCO Radio Engineers, of W. Brunswick, Victoria, write:—

We have tried various other crystals, but could not get satisfactory results. When we tried your Neutron Crystal we found it too loud for the phones, so we connected a Small Bull Phone Speaker, with splendid results from 3AR, and, on a lesser degree, 3LO.

The material used was a 50 turn Honeycomb coil, .001 condenser in series with the aerial, and the length of aerial 130 feet.

We wish you every success with this crystal, and you may use this letter as you think fit.

*and you can get the same results with a*

**NEUTRON**

WORTH THE MONEY

Maybe Neutron costs a few pence more than the ordinary Crystal, but it includes a Catswhisker ideal for use with it; no experimenting. Ask for "Neutron" in the Yellow and Black Tin. PRICE . . . . .

2/3



SOLE NEW SOUTH WALES AGENTS:

**MICK SIMMONS LTD.**

Haymarket, Sydney

Aus. Rep.: Parosc Ltd., 113 Gawler Pl, Adelaide

# RADIO PANELS

To those who are about to build their own Radio Set, we submit the following. These prices of Bakelite we would mention are the lowest prevailing in Australia.

## BAKELITE

Cut to any desired size

1/8in. . . . .  $\frac{1}{2}$ d. per square inch

3/16in. . . . .  $\frac{3}{4}$ d. per square inch

## 'NEUTRON' Crystal

Have you tried this wonder Crystal yet? It has been aptly named "The

Crystal with Valve Power" **2/3** each

## Accuratune

Ultra Vernier Dials **25/-** each

To the professional and amateur alike these Dials are known only as the best.

# Mick Simmons Ltd.

THE WORLD'S GREATEST SPORTS STORE

Headquarters: HAYMARKET, SYDNEY

## Q.S.L.

The meaning of the three letters QSL is: "Please give me a receipt" — or, in other words—"Send me an acknowledgement."

There isn't a transmitter on the air now who is not glad to get a report on his signals, whether they are phone or C.W.

You can put everything you want to say on a Publicity Press QSL card. It takes only a minute to fill in and conveys all the information the transmitter wants.

Over the last few months we have printed thousands of these cards for both transmitters and receivers, among them 2UW, 2CX, 2BF, 2LM, 2WW, 4CK, etc.

There is a QSL card for every purpose and they may be had either from stock or to suit individual tastes.

Write, phone or call.

Publicity Press Ltd.

Printers and  
Publishers

12-16 Regent Street  
SYDNEY

Phones Red, 964 & 980.



- 1 4½ volt C battery.
- 1 6 volt accumulator.
- 2 60 volt B batteries.
- 8 Battery leads.
- ½ lb. spaghetti covered copper wire.
- 4 valves—5 volt .25 ampere type.
- 1 Set Honeycomb coils, 35, 50, 75, 100, 150, and 200 turns.
- 1 Pair phones.
- 2 Fone plugs.
- 1 Loud speaker.

It will be noticed that one stage of audio amplification is choke coupled and one stage transformer coupled. This arrangement was adopted as giving the greatest volume that could be needed, whilst preserving the purity of the reception.

Besides, we had only one transformer that was not burnt out on one side or the other, and some day a special article on burnt-out transformers will be inflicted on our readers.

A transformer with the primary burnt out was chosen, as the secondary winding makes the better choke.

One end of this audio choke is connected to a tapping on the "B" battery, which is at 40 volts, this having been found most suitable for the quarter ampere valve in use.

The grid connection for V.2 is taken from that terminal of the choke to which the return lead of the detector plate coil L.2 is joined. Don't couple this in the wrong way round and then swear at this article.

Nothing special about the coupling in of the audio transformer marked T.R. in the diagram. Plate terminal to the plate of V.2. "B" battery terminal to 120 volts "B" battery, and same point to one connection of the loud speaker. Grid terminal on the secondary side of the transformer to the grid of V.3, and one connection of L.3 to the same terminal on the valve holder. The filament terminal of the transformer is connected to the negative of a 4.5 volts "C" battery, with the positive of this to the negative "A" battery.

The battery connections and polarity are clearly shown on the diagram, negative "B" to positive "A" and negative "A" earthed.

We have been travelling along the diagram until we now come to V.3, which is all but connected up, all except the plate which connected to the remaining unconnected terminal of the loud speaker.

L.S. means loud speaker. The term was invented with the circuit.

Now we have to switch back to the tuner.

The aerial-grid coil is in the middle. This position was chosen for two reasons, the first being that it permitted easier access to the tapped grid or secondary coil, and the next reason, quite an acci-

dental one, that reaction on the aerial coil gives somewhat sharper tuning.

L.1, the aerial-earth coil, has 40 turns of No. 22 d.c.c. on a Grodan spider-web former, and is wound counter-clockwise.

L.2 has 100 turns of No. 20 d.c.c., and L.3 is wound with the same kind of wire and is tapped at 10, 40, 60, 80, and 100 turns, and finishes at 130 turns. To get the number of turns of No. 20 d.c.c. on the Grodan former, the wire is wound in every other slot. L.2 is also wound every two slots. Both are wound in a clockwise direction.

In operation L.1 and L.2 are never changed. In the case of L.3, tapping studs are fitted in the centre of the former, and a short switch arm makes contact with any stud. The switch arm is connected to the upper connection of the coil, and the switch thus short-circuits any turns past those included up to the tapping used.

Fitted to a panel set, the coil holder may be placed inside with the control knobs of the coils extended to permit of manipulation from the front of the panel. Flexible leads from the tapped secondary coil can be brought to a set of studs and switch arm inserted in the panel, to admit of easy changing for the different wavelengths.

In operation L.1 and L.3 are brought close together, and L.2 is kept off a couple of inches. For the longer wavelengths L.2 will also be brought in close.

As has been intimated, the variable condenser C.1 is turned in to 50 degrees and left at that. A final adjustment of this condenser can be made when the wanted station has been tuned in.

Once the coils are set, turning C.2 will bring in 80 metres transmission when the switch arm is on the 10 tap. The short wave broadcasting stations are tuned in when the 40 and 60 turns taps are used, and for 2FC the whole of the 130 turns are included.

After the station has been tuned in with C.2 various settings of the coils should be experimented with until the best results are obtained. Just one point about the coils. There is no special reason for winding L.1 with No. 22 d.c.c. No. 20 d.c.c. may be used with advantage. On the other hand, L.3 and L.2 must not be wound with smaller wire than No. 20. If No. 22 is used for L.3, the damping is so great in comparison with No. 20 that tuning is flattened and 2BL cannot be tuned out.

This about covers the requirements of Mr. Listner-in. A single control receiver that is easy to handle. Good loud volume combined with wonderful clarity. It is stable and selective, and, like the donkey in the story, it is always ready for work, provided the battery feed is up to working conditions.

# Broadcasting



## 4QG

QUEENSLAND RADIO SERVICE.

Wavelength, 385 metres.

FRIDAY, JANUARY 1.

There will be no transmission from Station 4QG to-day.

SATURDAY, JANUARY 2.

No midday or afternoon transmission.

Night Session: 8—Tune-in to the Tivoli Theatre. 8.5—From the Studio: Contralto solo, "My Prayer" (Squire), Miss Ivy Rogers; pianoforte solo, "Polka de W.R." (Rackmannoff) (by request), Mrs. B. Woolmer; haritone solo, "Jogging Along the Highway" (Smauel), Mr. R. W. Dimming; aeolian selection, instrumental quintette, "An den Fruhlung" (Grieg); soprano solo, "Sing, Sweet Bird" (Ganz), Miss Lottie Richter; cello solo, selected, Miss Perregulus; haritone solo, "The Late Player" (Allison), Mr. R. W. Dimming; duo art selection, "Sylvia," ballad music; soprano solo, "Tua Don't Believe in Fairies," Miss Lottie Richter; aeolian selection, "The Bird and the Saxophone" (Hager Ring); contralto solo, "When Song is Sweet" (Sans Souci), Miss Ivy Rogers; violin solo, "Cradle Song" (Pechotska), Mr. Scott MacCallum; soprano solos, (a) "The Little Tree" (Garstin), (b) "Smile and I'll Teach Thee" (Mozart), Miss Vera Morcom. 8.55—Announcements. 9—From Lennon's Hotel: By courtesy of the proprietors of Lennon's Hotel an hour and a half's dance music, played by Miss May Dobbyn's Vice-Royal Orchestra, will be relayed from Lennon's Ballroom. 10.30—From the Studio: The "Sunday Mail" news service. Close down.

SUNDAY, JANUARY 3.

Morning Service: The complete morning service in St. Paul's Presbyterian Church, Leichhardt Street, Brisbane, will be relayed and broadcast by 4QG. 10.55—Tune-in signal. 11—Doxology; invocation; hymn, "Great God, we sing"; lesson, Psalm 103; prayer; Psalm 83; lesson, Romans 8; prayer; hymn, "Come, children, join to sing"; address to children; intimations; offering; anthem, "I wait for the Lord"; sermon by the Rev. James Walker, "A New Year Message"; prayer; hymn, "O God, our Help"; Benediction. Close down.

Afternoon Session: The band concert in the Botanical Gardens will be broadcast by 4QG. 8.10—Tune-in. 7.15—Doxology; invocation; hymn, "Thou Glorious God"; lesson, Isaiah 40; prayer; Psalm 23; lesson, Philippians 3; solo, "O Divine Redeemer," Mrs. Rankin; prayer; hymn, "Standing at the Portal"; intimations; offering; anthem, "O worship the Lord"; sermon, "As the Days go thy Strength," Rev. James Walker; prayer; hymn, "The day is past and over"; Benediction. Band concert. 8.30—At the conclusion of the church services the band concert by the Greater Brisbane Municipal Concert Band in Wickham Park will be relayed from Wickham Park and broadcast by 4QG. 9.30—Close down.

MONDAY, JANUARY 4.

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.

Afternoon Session: 2.55—Tune-in signal. 3—By courtesy of the directors of Haymarket Theatres Ltd. an hour's programme of music played by the Tivoli Operatic Orchestra of 20 performers, under the baton of Mr. C. Groves, will be relayed from the Tivoli Theatre and broadcast by Station 4QG. 4—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 season will be made a nightly 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—Tune-in to the Tivoli Theatre. 8.5—From the Studio: Contralto solo, "A Perfect Day" (Carrie Jacobs-Bond, Miss Laura Loch; music-lover's corner, a talk on "Ignition" by Mr. W. J. Donohue; soprano solo, "Martina" (Ellen Cowell), Miss L. Brown; elocutionary number, "On the day I got to Heaven" (Lehmann), Miss

Laura Loch; aeolian selection, whistling solo, "The Bird and the Saxophone" (Hager Ring); haritone solo, "To a Miniature" (May Brahe), Mr. Stuart Patridge. 8.30—From the Tivoli Theatre: Twenty minutes' music by the Tivoli Operatic Orchestra under the baton of Mr. C. Groves. 8.50—From the Studio: Weather information officially supplied by the Commonwealth Weather Bureau; announcements. 9—A dance session of an hour and a half's music by the Elite Orchestra, under the leadership of Mr. T. F. Kendall; vocal numbers between dances by 4QG artists. One step, (a) "Hay, Hay, Farmer Grey" (Edgar Leslie, Charles O'Flynn, Lawrence and Larry Vincent), (b) "Down on the Farm" (Billy Dale and Harry Harrison), the Elite Orchestra; contralto solo, "Asthors" (Trotter), Miss Laura Loch; valets, (a) "In the Garden of To-morrow" (Jessie L. Deppen), (b) "Sad Hawaiian Sea" (Lise S. Roberts), the Elite Orchestra; elocutionary number, "Red Rosa," Miss Agnes Finney; fox trots, (a) "Bambalina" (Vincent Youmans and Herbert Stothart), (b) "When I Think of You" (Vincent Rose), the Elite Orchestra; soprano solo, "Love the Pedlar" (German), Miss L. Brown; one step, (a) "Boquet" (Horatio Nicholls), (b) "Show me the way to go home" (Living King), the Elite Orchestra; elocutionary number, "The Broken Web" (Ogilvie), Miss Agnes Finney; fox trots, (a) "Twelve O'Clock at Night" (Billy Rose, Herman Ruby, and Lou Hartman), (b) "When we are together" (Vincent Rose, Harry Owens, and Richard Coburn), the Elite Orchestra; haritone solo, "Glorious Devon" (Russell), Mr. Stuart Patridge; valets, (a) "Near the Mellow Moon" (Tom Johnson), (b) "Where are You Tonight" (Con Conrad and Al Sherman), the Elite Orchestra. 10.30—"The Daily Mail" news service. Close down.

TUESDAY, JANUARY 5.

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—Tune-in to the Tivoli Theatre. 8.5—From the Studio: Soprano solo, "Roberto O tu che adoro," from "Robert the Devil" (Verdi), Miss Mabel Malouf; pianoforte selection (by request), "Unrequited Love" (Lorenz), Miss L. Brown; "Flower and Star" (Fischer), Mr. W. W. Barry; Eng. lish concertina, intermezzo from "Caval-

leria Rusticana," Mr. E. Powney; soprano solo, "Wake Up!" (Montague Phillips), Miss Mabel Malouf; tenor trombone, "Ora Pro Nobis" (Piccolomini), Mr. Ted Clements; asolian selections, tenor solo, "The Evening Melody" (Spier, Schloss), sung by Mr. Sidney Hamilton; baritone solo, "I Dream of a Garden of Sunshine" (Lohr), Mr. W. Barry; tenor trombone solo, "Love Sends a Little Gift of Roses," Mr. Ted Clements; English march, "Under Freedom's Flag," Mr. E. Powney. 8.50—Weather information officially supplied by the Commonwealth Weather Bureau. 8.55—Announcements. 9—From the Centennial Hall, by courtesy of the lessee, an hour's dance music by the Centennial Hall Orchestra will be relayed by 4QG from the hall. 10—From the Studio: "The Daily Mail" news service. Close down.

## WEDNESDAY, JANUARY 6.

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. Afternoon Session: 2.55—Tune-in signal. 5—By courtesy of the directors of Haymarket Theatres Ltd., an hour's programme of music played by the Tivoli Operatic Orchestra of 20 performers, under the baton of Mr. G. Cross, will be relayed from the Tivoli Theatre and broadcast by Station 4QG. 4—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 nightly feature, but in the meantime present, while transmission is being effected under temporary conditions, it is held three times weekly. 7.45—Tune-in signal. 8—The Children's Hour: Story, plays and music, bedtime stories by "Little Miss Brisbane." 7.15—Close down.

Night Session: 8—Tune-in to the Tivoli Theatre. 8.5—From the Studio. A hot potpourri of Irish melody and mirth by Mr. Chas. O'Mara and Miss Anna Burke. The programme will include—vocal numbers by Mr. Chas. O'Mara, (a) "Will the Pluter be Ball" (French and Collison), (b) "Silhouettes" (Irish diatonic air), (c) "Little Shawl of Blue" (Hewitt), (d) "The Darling Girl from Clare" (French), interspersed with stories by Mr. Chas. O'Mara; vocal numbers, (a) "Danny Boy," (b) "The Girl with a Brogue" (Frankton), (c) "Hills of Donegal," (d) "If Shamrock Grew on the Swanee Shore" (Ball), Miss Anna Burke. 8.45—Lecture, the last of a series of four on "Organized Distribution in Farm Produce," by Mr. R. Wight. 8.55—Weather news officially supplied by the Commonwealth Weather Bureau. 9—Announcements. 9.5—Instrumental number, "Sweet Forget-me-nots" (Miles), the Studio Trio; Scotch songs and patter by Miss Carrie Aitken; picture show news; soprano solos, (a) "Poor Butterfly" (Hiltsell), (b) "Soul of Mine" (Barnes), Miss Eileen MacLennan; duo act selection, fox trot, "Linger Awhile" (Roe); baritone solos, (a) "Ever of Thee" (F. Hall), (b) "She Wore a Wreath of Roses" (Bayley), Mr. Donald McNeill; violin solo, "Pale Moon" (F. Hall), Mrs. E. H. Krieger; Mr. H. Scott MacCallum; soprano solos, (a) "Beneath Thy Window," (b) "Happy Sum-

mer song," Miss Muriel McHugh; asolian selection, fox trot, "In the Garden of To-morrow" (Deppen); contralto solos, (a) "Here in the Quiet Hills" (Carne), (b) "Fair Spring is Returning" (Samson and Deffen); (c) "The Sun" (Miss Blanche Saxon, 9.55—"The Daily Mail" news service. Close down.

## THURSDAY, JANUARY 7.

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—Tune-in to the Tivoli Theatre. 8.5—From the Studio: Baritone solo, "My Old Shako" (Trofey), Mr. Norman Brown; asolian selections, band numbers, (a) "British Legion March" (Greenwood), (b) "Silver Threads Among the Gold" played by the Scottish Pipe Band; Whangarei Society's Prize Brass Band; tenor solo, "In an Old-fashioned Town" (Harris), Mr. J. Trezise; character soubrette, "Somebody's Wrong," Miss Sylvia Post-Mason; vocal duet, "In the Evening by the Moonlight" (Jerome), Messrs. J. Trezise and Norman Brown; violin solo, "Vision" (Drda), Mr. H. Scott MacCallum; soprano solo, "Yang Yang" (Bartok), Mrs. E. G. Allen; character soubrette, "Somebody Loves Me," Miss Sylvia Post-Mason; baritone solo, "Till the Sands of the Desert Grow Cold" (Ball), Mr. Norman Brown; pianoforte solo, "Polonaise A Major" (Chopin), Mr. Arthur Shagman; soprano solo, "Mimi's Song" from "La Boheme," Mrs. R. G. Allen; cello solo, selected, Miss Petropoulos; tenor solo, "When It's Evening in the Valley" (Bartok), Mr. J. Trezise. 8.55—Weather information officially supplied by the Commonwealth Weather Bureau. 9—Announcements. 9.5—An hour's entertainment by the Lyric Quartette Party: male quartette, "The Plomping's Lullaby" (Macy), the Lyric Party; tenor solo, "Parted" (Toeti), Mr. T. Melville; vocal duet, "Your eyes have told me so" (Lohr), Messrs. T. Melville and E. G. Bellgrove; bass solo, "The Bandaler" (Lewie), Mr. S. Tamblin; male quartette, "In Absence" (Dudley Ruck), the Lyric Party; tenor solo, "Come into the Garden, Mando" (Bayer), Mr. Dick Robinson; duet, "Rose of my Heart" (Hertz), Messrs. T. Melville and E. G. Bellgrove; bass solo, "Cloze Props" (Charles), Mr. S. Tamblin; tenor solo, "Sally Hornor" (Anon.), Mr. Dick Robinson; male quartette, "The Soldier's Farewell" (Kinckel), the Lyric Party; duet, "The Moon Hath Raised" (Benedict), Messrs. Dick Robinson and S. Tamblin; male quartette, "Tommy went a-fishing" (Macy), the Lyric Party. 10—"The Daily Mail" news service. Close down.

## 2BL

BROADCASTER (SYDNEY) LTD.  
Call Sign, 2BL. Wavelength, 353 metres.

## FRIDAY, JANUARY 1, 1926

Afternoon Session:  
5—G.P.O. Clock and Chimes. Weather report and social notes from "The Sun."  
5.15—From the Studio.  
5.30 G.P.O. Clock and Chimes. A talk on

"Modern Psychology," by Mr. J. M. Pressley.  
1.45—Music from the Studio.  
1.45—G.P.O. Clock and Chimes. Music from the Studio.  
4.30—Clock and Chimes. Serial story entitled "The Black Cat," by Louis Tracy.  
4.45—Music from the Studio.  
4.55—Late Market Reports from "The Sun."  
5—G.P.O. Clock and Chimes. "Sun" news service.  
5.15—Close down.  
Early Evening Session:  
6—G.P.O. Clock and Chimes. Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.  
6.30—Sporting Resume from "Sun" newspapers. The pupils of Miss Micaela Scully will entertain the kiddies.  
7.35—Late stock, bond and market reports by courtesy of Pitt, Son and Badger.  
7.50—Close down.  
Evening Session:  
Classical programme from the studio, featuring Madame Vera Tsarna, soprano.

## SATURDAY, JANUARY 2.

Afternoon Session:  
1—G.P.O. Clock and Chimes. Special sporting information broadcast direct from "Sun" office.  
1.45—G.P.O. Clock and Chimes. Close down.  
Early Evening Session:  
6—G.P.O. Clock and Chimes. Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.  
6.30—Sporting resume from "Sun" newspapers. Uncle George and the Kiddies.  
7—A talk to the kiddies by Bru-Ga.  
7.45—A talk on "Roads."  
Evening Session:  
Vacant programme from the Studio. Dance Music supplied by Embassy Jazz Orchestra, under the direction of Mr. S. Bennett, by courtesy of Professor Bolini.

## SUNDAY, JANUARY 3.

11—Special broadcast from Chalmers Street Presbyterian Church.  
1.30—Organ Recital broadcast from Chalmers Street Presbyterian Church.  
6.30—Special broadcast (from First Church of Scotland) of the "Black Cat," by Louis Tracy.  
8.10—From the Studio: Classical Concert.

## MONDAY, JANUARY 4.

Afternoon Session:  
1—G.P.O. Clock and Chimes. Weather report and social notes from "The Sun."  
1.15—David Jones Tea Room. Tru.  
1.30—G.P.O. Clock and Chimes. A talk on "A Course in English Literature," by Mr. J. M. Pressley.  
1.45—Music from the Studio.  
1.45—G.P.O. Clock and Chimes. David Jones' Tea Room Tru.  
4.45—Music from the Studio.  
4.50—G.P.O. Clock and Chimes. Serial story entitled "The Black Cat," by Louis Tracy.  
4.55—Music from the Studio.  
4.55—Late market reports from "The Sun."  
5—G.P.O. Clock and Chimes. "Sun" news service.

5.15—Close down.  
Early Evening Session:  
6—G.P.O. Clock and Chimes. Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.  
6.30—Sporting resume from "Sun" newspapers. Uncle Jack and the Kiddies.  
7.30—"Who's On?"—A guide to the visitors and citizens of Sydney.  
7.45—Late stock, bond and market reports by courtesy of Pitt, Son and Badger.  
7.50—Close down.

Evening Session:  
The North Sydney Orphan's Wall, broadcast from Warrington Hall, Neutral Bay. Dance music until midnight, supplied by Ambrose Orchestra, under the direction of Mr. Bennett.

TUESDAY, JANUARY 5.

- Afternoon Session:  
 3—G.P.O. Clock and Chimes. Weather reports and social notes from "The Sun."  
 3.15—Music from the Studio.  
 3.30—G.P.O. Clock and Chimes. A talk on "The Musical Outlook," by Mr. J. M. Praeger.  
 3.45—Music from the Studio.  
 4—G.P.O. Clock and Chimes. Music from the Studio.  
 4.30—G.P.O. Clock and Chimes. Serial Story entitled "The Black Cat," by Louis Tracey.  
 4.45—Music from the Studio.  
 4.55—Late market reports by courtesy of "The Sun."  
 5—G.P.O. Clock and Chimes. "Sun" news service.  
 5.15—Close down.  
 Early Evening Session:  
 6—G.P.O. Clock and Chimes. Pavilion Dinner Orchestra under the direction of Mr. Cec. Morrison.  
 6.30—Sporting resume from "Sun" newspapers. Uncle George and the Kiddies.  
 7.45—Late stock, hides and market reports by courtesy of Pitt, Son and Badgery.  
 7.50—Close down.  
 Evening Session:  
 Programme presented by Messrs. Carnegie & Sons Ltd.

WEDNESDAY, JANUARY 6

- Afternoon Session:  
 3—G.P.O. Clock and Chimes. Weather report and social notes from "The Sun."  
 3.15—Broadcasters' Trio.  
 3.30—G.P.O. Clock and Chimes. Special Musical Session.  
 4—G.P.O. Clock and Chimes. Broadcasters' Trio.  
 4.30—G.P.O. Clock and Chimes. Serial story entitled "The Black Cat," by Louis Tracey.  
 4.45—Broadcasters' Trio.  
 4.55—Late market reports from "The Sun."  
 5—G.P.O. Clock and Chimes. "Sun" news service.  
 5.15—Close down.  
 Early Evening Session:  
 6—G.P.O. Clock and Chimes. Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.  
 6.30—Sporting resume, from "Sun" newspapers. Uncle George and Uncle Jack with the Kiddies.  
 7.40—Late stock, hides and market reports, by courtesy of Pitt, Son and Badgery.  
 7.45—"The Advancement of an Australian Firm"—George A. Bond & Co. Limited.  
 7.55—Close down.  
 Evening Session:  
 8—Programme from the studio, including Hoyts Imperial Orchestra, under the direction of Mr. Lionel Hart.

THURSDAY, JANUARY 7.

- Afternoon Session:  
 3—G.P.O. Clock and Chimes. Weather report and social notes from "The Sun."  
 3.15—David Jones' Tea Room Trio.  
 3.30—G.P.O. Clock and Chimes. A talk on "Studies in English Poetry," by Mr. J. M. Praeger.  
 3.45—Music from the Studio.  
 4—G.P.O. Clock and Chimes. David Jones' Tea Room Trio.  
 4.15—Music from the Studio.  
 4.30—G.P.O. Clock and Chimes. Serial story entitled "The Black Cat," by Louis Tracey.  
 4.45—Music from the Studio.  
 4.55—Late market reports from the "Sun."  
 5—G.P.O. Clock and Chimes. "The Sun" news service.  
 5.15—Close down.  
 Early Evening Session:  
 6—G.P.O. Clock and Chimes. Pavilion Dinner Orchestra, under the direction of Mr. Cec. Morrison.  
 6.30—Sporting resume from "The Sun" newspapers. Uncle Jack and the Kiddies.  
 7.45—Late stock, hides and market reports, by courtesy of Pitt, Son and Badgery.  
 7.55—Close down.  
 Evening Session:  
 8—Concert from the Studio, featuring The Ambassadors Salon Quartette.

2KY

TRADES HALL.

Call Sign, 2KY. Wavelength, 280 Metres.

2KY will be closed on Friday and Saturday, January 1st and 2nd, 1926.

MONDAY, 4th JANUARY.

- 2.30—Afternoon Session: A varied musical vocal programme, closing down at 4.45 p.m.  
 6.30—Children's Hour: "The Man in the Moon."  
 7.45 till 10—Evening Session: Miss Amy Rowland (entertainer), Mr. Davidson (haritone), Mr. J. S. Gordon (lecturer: "My visit to Russia"), Miss Nellie Graves (mezzo soprano), Miss Wood (soprano), and others to be announced.

TUESDAY, 5th JANUARY.

- 2.30—Afternoon Session: A varied musical and vocal programme, closing down at 4.15 p.m.  
 6.30—Children's Hour: "The man in the Moon."  
 7.45 till 10—Evening Session: Mr. B. Whitaker (balletto on result getting radio), Mr. Call (tenor), Miss Outen (contralto), Miss Tibbie Smith (monologues), and others to be announced.

WEDNESDAY, 6th JANUARY.

- 2.30—Afternoon Session: A varied musical and vocal programme, closing down at 4.45 p.m.  
 6.30—Children's Hour: "The Man in the Moon."  
 7.45 till 10—Evening Session: Cec. Morris and his Bluebirds' Jazz Band, Mr. Frank Redman (monologues), and others to be announced.

THURSDAY, 7th JANUARY.

- 2.30—Afternoon Session: A varied musical and vocal programme, closing down at 4.45 p.m.  
 6.30—Children's Hour: "The Man in the Moon."  
 7.45 till 10—Evening Session: Miss Marie Murr (lyric soprano), Renée Helser's Bohemians, Miss Ethel Mann (piano), Mr. T. Burdon (violin), Miss Tanley (soprano), and others to be announced.  
 See programmes in daily papers for times of items.

5CL

CENTRAL BROADCASTERS LTD.

Call Sign, 5CL. Wavelength, 385 metres. Input, 5 K.W.

FRIDAY, JANUARY 1.

- Morning Session.  
 11.30—Stack Duo Art and Aeolian Vocalian recital.  
 12.30—The 5CL Studio Orchestra will play: Selection, "Little Dutch Girl" (Kalman); cornet solo, "Fleurette" (Metcach); fox trot, "Oriental Love Dreams" (Miller); mazurka, "Le Carina" (Günne); waltz, "The Morning After" (Whiting); intermezzo, "Dancing Nymphs" (Breine); selection, "Samson of Delilah" (Saint Saens); violin solo, "Schon Rosmarin" (Kreisler); finale, "Caliph of Bagdad" (Boieldien).

Afternoon Session.

Broadcast from Studio: Stack Duo Art and Aeolian Vocalian recitals. Broadcast from Studio: Serial story.

(Programme continued on Page 38.)

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35	"	" 1/8	" 3/8
40	"	" 1/10	" 3/10
50	"	" 2/-	" 4/-
60	"	" 2/2	" 4/2
75	"	" 2/4	" 4/4
100	"	" 2/8	" 4/8
125	"	" 2/11	" 4/11
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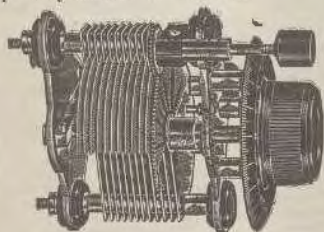
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30 Market Street, Sydney.

## A Plea from Siberia

It is in no spirit of levity that we publish a copy of this letter from Siberia exactly as it was written. Needless to say, we shall mail "Wireless Weekly" every week to our correspondent and we hope that readers will send along some literature.

Krasnoarmeiskaja, Street 66  
Tomsk, Siberia, Russia.

(To the Editor.)

Sir,—I going to you, to beg you, to help me. Let me say some words about myself: I am the son of the University of Tomsk and am interested very much in radio, and also in communication with Australian "hams." I would be with pleasure your subscriber, but I have non money, and thus I beg you very much, if it will be not very difficult to you, to send me your admirable magazine free. I understand that this will be a great kindness from your part, an I am in advance sincerely thankful to you certainly! I will be also greatly obliged to you if you will publish in your admirable magazine "Wireless Weekly" my letter to amateurs, in which mention: (1) that I'll be glad to have a friendly correspondence and a more close acquaintance with them; (2) that I can give them Russian post-stamps, paper-money, emitted during a revolution in Russia, newspapers, etc., (3) that I'll be glad and thankful if they will send me radioliterature; (4) that I beg them because I am not rich and because international postage is difficult to pay me, to send me some international reply coupons; (5) that I ask all letters as well as sendings, send only by registered mail. It is very important (6) that I'll now closely watch now on short waves, and if they will send postage, I'll send them QSL cards, etc.

Let me assure you, that I'll very sincerely thankful you if you will accomplish my askings, and hoping, you will, I am in advance thankful you and remain your truly,

S. KALACHNIOFF.

### Broadcasting Notes.

Saturday, 2nd: Direct from Edward's Beach, Mosman, a special complete description of the carnival, commencing at 3.45 p.m. describing the Surf Girls Parade and transmitting the Children's Pantomime. From 8 till 11 p.m. a complete programme of dance music supplied by Eric Pearse and his Astoria Band. Items by the Brass Band and well known artists from the Cabaret Pavilion on the Beach, through 2FC.

(Programme continued from Page 35.)

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.  
7.40—Sporting talk by "Old Timer."  
8—Special band night. Weather observations and forecast. Station announcements. National Anthem. Close down.

## SATURDAY, JANUARY 2.

## Morning Session.

- 10.30—The 5CL Studio Orchestra will play: Overture, "Northern Lights" (Weidt); cello solo, "Le Soir" (Schumann); fox trot, "Dreary Weather" (Winegar); waltz, "Carnations" (Albers); instrumental trio, "L'Elisir D'Amore" (Donizetti); waltz, "Love's Dream" (Dunnett); Oriental, "Japanese Sunset" (Deppen); melody, "Villanelle" (Dell Aquino); finale, "March Oriental." Announcements. Close down.

## Afternoon Session.

## Sporting results.

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.  
7.40—Results of all sporting.  
8—Popular concert arranged by Mrs. W. Keith Stewart. Weather observations and forecast. Station announcements. National Anthem. Close down.

## SUNDAY, JANUARY 3.

## Morning Session.

- 10.35—Broadcast from Pirie Street Methodist Church.—Divine Service.

## Afternoon Session.

- 2—A programme of Classical Music from the Studio.

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.  
8.50—Broadcast from Parkside Baptist Church—Preacher, Rev. Bernard E. C. Tuck. B.A. Organ Voluntary. Miss G. Gourlay. Service. Introduction. The Lord's Prayer chanted. Hymn 695. Lesson, Philippians 3. Male Quartette. Hymn 456. Announcements and Offering. Organ Voluntary. Solo, "He Shall Feed His Flock" Miss Dorothy Scott. Solo, "Come Unto Me" Miss Doris Hubbard. Prayer. Hymn 403. Address, "Onward and Upward." Dues, "Our Blest Redeemer." Hymns D. Scott and G. Hubbard. Hymn 700. Benediction. Vesper. Organ Voluntary. Hymns from Baptist Hymnal.

## MONDAY, JANUARY 4

## Morning Session.

- 11.30—Stack duo Art and Aeolian Vocal recitals.  
12.30—The 5CL Studio Orchestra will play: Selection, "Cairo" (Fletcher); waltz, "Your eyes have told me so" (Blonfess); fox trot, "Moe" (Pollock); instrumental trio, "Le Berceuse" (Gimond); two dances from "Nell O'Connell" (Gordon); cornet solo, "Soul of You" (Jacobs Band); suite, "Southern Sketches" (Winlow); Intermezzo, "La Bellerina" (Ellifant); finale, "The Smith Family" (Ayer).

## Afternoon Session.

- 3—Relay from "Maple Leaf" Cafe—Orchestral numbers.  
4.45—Broadcast from Studio—Serial Story.  
4—Broadcast from "Arcadia" Cafe—Orchestral numbers.

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.

- 7.40—Swimming Talk No. 1 by Mr. T. A. Boatwright.

## 8.20—Twinklers humorous talk.

- 9—A programme of Band Music by Mitchell Band. Weather observations and forecast; Station announcements; National Anthem; Close down.

## TUESDAY, JANUARY 5

## Morning Session.

- 11.30—Stack duo Art and Aeolian Vocal recitals.  
12.30—The 5CL Studio Orchestra will play: Selection, "Aida" (Verdi); cello solo, "Intermezzo" (Tours); fox trot, "China Girl" (Warner); dance, "Les Sabots" (Elliot); suite, "Tone Poems" (Frederick Hall); caprice, "Autumn Gold" (Tower); waltz, "Louisians" (Freed); violin solo, "Homesqueus" (Dvorak); finale "Sally" (Kern).

## Afternoon Session.

- 3—Relay from "Maple Leaf" Cafe—Orchestral numbers.  
3.45—From Studio: Serial story.  
4—Broadcast from Arcadia Cafe: Orchestral numbers.

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.  
7.40—Physical culture talk by Mr. Noel H. Hubble.  
8—Studio concert arranged by Miss Pensturick.  
9.10—Radio talk by Mr. E. W. J. Gunzer. Studio concert, continued; weather observations and forecast; station announcements; National Anthem. Close down.

## WEDNESDAY, JANUARY 6.

## Morning Session.

- 11.30—Stack Duo Art and Aeolian Vocal recitals.  
12.30—The 5CL Studio Orchestra will play: Selection, "Rebel Maid" (Phillips); cornet solo, "Sincerity" (Clark); fox trot, "I Cried for You" (Tymann); melody, "The Phantom" (Van Biene); novelette, "In a Cottage" (Zamecnik); waltz, "Funny" (Hirsch); selection, "La Traviata" (Verdi); reverie, "Yester Dreams" (Zamecnik); finale, "Doges March."

## Afternoon Session.

- 3—Relay from Maple Leaf Cafe: Orchestral numbers.  
3.45—From Studio: Serial story.  
4—Broadcast from Arcadia Cafe: Orchestral numbers.

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.  
7.40—Boy Scouts' corner.  
8—Jazz night under direction of Mr. Pride: weather observations and forecast; station announcements; National anthem. Close down.

## THURSDAY, JANUARY 7.

## Morning Session.

- 11.30—Stack Duo Art and Aeolian Vocal recitals.  
12.30—The 5CL Studio Orchestra will play: Selection, "The Bohemians" (Puccini); fox trot, "Twilight" (Siniger); cello solo, "Romance" (Bonheur); novelette, "Marionette" (Arnold); waltz, "Close Your Eyes" (Vincent); Polish dance, "Scharvenka"; selection, "No, No, Nanette" (Youmans); violin solo, "Souvenir" (Amour); finale, "Wildflower" (Youmans).

## Afternoon Session.

- 3—Relay from "Maple Leaf" Cafe: Orchestral numbers.  
3.45—From Studio: Serial story.

- 4—Broadcast from Arcadia Cafe: Orchestral numbers.

## Evening Session.

- 6.30—Bedtime stories for the children by Uncle Radio and King Electron.  
7.40—The 5CL Studio weather observations and forecast; station announcements; National Anthem. Close down.  
8—Studio Orchestra in a classical programme, interspersed with vocal numbers: one-act play, directed by Mr. Allen Fitzallen; weather observations and forecast; station announcements; National Anthem. Close down.

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## SATURDAY, JANUARY 2.

Morning Session (11 a.m. to 2 p.m.).

- 11—Time signal; express train information.  
11.3—Musical items by the Studio Orchestra.  
12—Time signal.  
12.2—The Studio Orchestra.  
12.30—"Argus" and "Herald" news services; Reuters and the Australian Press Association cables.  
12.45—"The Studio Orchestra."  
1—Time signal.  
1.2—The Studio Orchestra.  
1.15—"Herald" and "Argus" news services; Stock Exchange information; weather forecast; river reports.  
2—Close down.  
2.30—Result of the Maiden Plate from the Montone Race Club Meeting.  
Afternoon Session (3 to 5.15 p.m.).  
3—Time signal.  
3.1—Result of the Montone Purse from the Montone Race Club Meeting.  
3.5—Musical items from the Studio.  
3.30—Result of the Montone Steeple from the Montone Race Club Meeting.  
3.55—Musical items from the Studio.  
4—Result of the Montone Handicap from the Montone Race Club Meeting.  
4.3—Musical items from the Studio.  
4.30—Result of the Trial Purse from the Montone Race Club Meeting.  
4.35—Musical items from the Studio.  
5—All sporting results; Reuters and the Australian Press Association cables.

Progress results of all sporting events will be given throughout the afternoon as they come to hand, and the results will be given at each hour.

Evening Session (5.45 to 7.15 p.m.).

- 5.45—All sporting results, local country and interstate.  
6—Children's Hour: "Billy Bunny" stories by Miss Ginnifer. For the boys and "Daddy and I" for the girls. "Travel Talk for Xmas England" for the boys. "George St. Venon."  
6.45—Sporting results: "Herald" and "Argus" news services; Reuters and the Australian Press Association cables; market reports; closing Stock Exchange information; shipping movements; weather synopsis. Market reports by the Victorian Producers' Co-operative Co. Ltd.: grain, chaff, hay, straw, etc., dairy produce, potatoes, and onions.

Night Session (7.15 to 11 p.m.).

- Musical Half Hours. Speakers: Mr. W. J. Drummond, Mr. F. Chapman, A.L.S., Dr. J. A. Leach, D.S.C. The Studio Orchestra, Miss Doris McInerney, soprano; M. Syd. Exton, tenor; Miss Grace Jackson, contralto; Mr. Walter Smith, cornetist; Miss Billie

- Jones, soprano; Miss Agnes Fortune, accompanist.
- 7.15—Mr. W. J. Drummond. "The Acid Test on Esperanto."
- 7.30—Mr. E. Chapman, A.L.S. "Sea Urethins."
- 7.40—Mr. J. A. Leach. "Birds of Australia—Introduced Birds."
- 8—Musical Comedy. The Studio Orchestra, "Bohemian Girl."
- 8.20—Miss Doris McInnes, soprano, "The Pipes of Pan"; "Arcadians" (Monckton); "Villa"; "Merry Widow" (Lehar).
- 8.27—Opera. The Studio Orchestra, "La Boheme."
- 8.42—Mr. Syd. Exton, tenor. "Flower Song"; "Carmen" (Bizet). "Vesti la Giubba"; "Pagliacci" (Leonva-vello).
- 8.52—Ballads. The Studio Orchestra, "A Ballad Salad."
- 9.7—Miss Grace Jackson, contralto, "Down Here"; "Thank God for a Garden."
- 9.14—Mr. Walter Smith, cornet solo, "O Dry Those Tears."
- 9.21—Miss Doris McInnes, soprano, "I Passed by Your Window" (Brabe), "I Heard You Singing" (Coates).
- 9.28—Popular. The Studio Orchestra, "Musical Switch" (Alford).
- 9.43—Miss Billie Jones, soprano, "I Wonder if Love is a Dream," "In the Garden of To-morrow."
- 9.50—Miss Agnes Fortune, piano, "Medley of Popular Airs."
- 9.55—Mr. Syd. Exton, tenor, "Indian Love Lyrics."
- 10.2—"Argus" and "Herald" news services.
- 10.5—Something Old. The Studio Orchestra, "Songs from the Old Folk" (Lake).
- 10.20—Miss Grace Jackson, contralto, "Annie Laurie," "A Row of Roses."
- 10.27—Jazz. The Studio Orchestra, fox trots, "Because of You," "Hula Lou."
- 10.37—Miss Billie Jones, soprano, "You're in Kentucky," "Big Bad Bill," "No Wanted."
- 10.47—The Studio Orchestra, "Funny"; waltz, "Close Your Eyes"; fox trots, "Grown a Little Lullaby," "Oh, Heinrich."
- 11—"God Save the King."

## SUNDAY, JANUARY 3.

- Morning Session (11 a.m. to 12.15 p.m.)
- 11—Service from the Collins Street Independent Church. Ministers: Rev. J. Ernest James, B.D., Rev. George H. Gunnson. Hymn 588, "O timely Hymn, timely wise"; prayer of invocation; Lord's Prayer (chant); hymn 621, "The year is gone beyond recall"; Scripture lesson Genesis 1; solo, Miss Gladys Lampe, "Entreat me not to leave Thee" (Gounod); prayer; anthem, "The Lord is my Shepherd" (Schubert); offerings; notices; hymn 619, "Eternal Father, who can tell"; sermon, "The Wonderful Works of God," Rev. J. Ernest James, B.D.; hymn 31, "We sing of life"; Benediction.
- Afternoon Session (3 to 4.30 p.m.)
- 3—Pleasant Sunday Afternoon Service, transmitted from Wesleyan Church, Central Mission. Chairman, Rev. S.

- J. Hoban. Selection by Central Mission Boys' Training Farm Brass Band; hymn, "All people that on earth do dwell"; prayer, Rev. J. H. Cain; hymn, "Lead, Kindly Light"; solo, Mr. Syd. L. Exton, tenor; organ solo, Mr. Walter Smith "The Lost Chord" (Sullivan); selection, Central Mission Boys' Training Farm Brass Band; solo, Mr. Syd. L. Exton, tenor; notices; offering; chorus, Central Mission Training Farm Boys; address, Rev. J. Ernest James, B.D.; National Anthem; selection, Central Mission Boys' Training Farm Brass Band. Benediction.
- Evening Session (6 to 6.45 p.m.)
- 6—Children's Hour: "Billy Bunny" stories, "Bible Battles."
- 6.45—Close down.
- Night Session (7 to 10 p.m.)
- Evening Service from Scots' Church, conducted by Rev. W. Barland, M.A., B.D., organist, Mr. W. E. Ellis.
- 7—Hymn 477, "Our God, our help in ages past"; prayer; Psalm (Metrical) 23, "The Lord's my Shepherd"; lesson, Joshua 3; Prose Psalm 145, "I will extol Thee my God, O King"; prayer; lesson, St. Luke 12, 35-48; anthem, "Turn Thy face from my sins" (Attwood); the Lord's Prayer; sermon "Untrodden Ways"; Hymn 272, "Onward, Christian Soldiers"; offering; hymn 225, "Lord, dismiss us with Thy Blessing"; Benediction; Sevenfold Amen. From the Studio: Speaker, Mr. J. Howlett Ross. Miss Agnes Fortune, pianist; Miss Beatrice Kendrick, of "Alladin," Mr. Stanley Adams and Miss M. Denny.
- 8.30—Miss Agnes Fortune, pianoforte solo, "Reve Angolo" (Rubenstein).
- 8.40—Miss Beatrice Kendrick, of the pantomime "Alladin," by permission of J. C. Williamson Ltd., "Rest in the Lord" (Mendelssohn).
- 8.46—Mr. Stanley Adams and Miss Margaret Denny, sonata for violin and piano in C major (Grieg), (1) Allegro molto ed appassionato, (2) Allegretto espressivo alla Romanza, (3) Allegro animato.
- 9.7—Mr. J. Howlett Ross, "Famous Australians"—Robert Gouger and the South Australian Co.
- 9.27—Mr. Stanley Adams, violin solo, (a) "Romance" (Wieniawski), (b) "Caprice Viennois" (Kreisler), (c) "Tambourin Chinois" (Kreisler).
- 9.40—Miss Beatrice Kendrick, "Arie, O Sun" (Traske-Day), "The Lost Chord" (Dey).
- 9.47—Miss Agnes Fortune, pianoforte solo, "Novelette" (Schumann).
- 9.55—"Argus" and "Herald" news services.
- 10—"God Save the King."

## MONDAY, JANUARY 4.

- Morning Session (11 a.m. to 2 p.m.)
- 11—Time signal; express train information.
- 11.4—Musical items by the Studio Orchestra.
- 12—Time signal.
- 12.2—The Studio Orchestra.
- 12.30—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cables.
- 12.45—The Studio Orchestra.
- 1—Time signal.
- 1.2—The Studio Orchestra.

- 1.45—"Herald" and "Argus" news services; Stock Exchange information; weather forecast; river reports.

2—Close down.

Afternoon Session (3 to 5.15 p.m.)

3—Time signal.

3.2—Musical items by the Paramount Theatre Orchestra under the baton of Signor Vincent Ricco.

3.40—Matron Moreland on "Infant Welfare."

3.55—Musical items by the Paramount Theatre Orchestra.

5—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cables.

5.15—Close down.

Evening Session (6 to 7.15 p.m.)

6—Children's Hour: "Billy Bunny" stories, nursery rhymes, "A Magical Trip," "Houses of the Eagle."

6.45—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cables; market reports; weather synopsis; closing Stock Exchange information; shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd.; Haymarket sales, poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Night Session (7.20 to 11 p.m.)

Something old, something new. Speakers: Mr. G. M. Wallace, Mrs. A. Gilchrist, The Studio Orchestra; musical director, Miss Bessie Gunnson. Mr. J. C. Hickey, tenor; Miss Tasma Tiernan, cellist; Miss Billie Jones, soprano; Mr. Walter Smith, cornet.

(Continued on Page 42.)

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## Amateur Notes

By Q.T.C.

If the 40 metre band of wavelengths keeps on crowding up as it is at present, there is little doubt that some of us will have to shift elsewhere—as we did on 80 metres. The first conclusion is, of course, 20 metres. But just a minute my friend, before you leap. 20 metre work is a vastly different matter from the same thing on 40 metres. In the first place, oscillation is not the smooth, easily controlled animal that it was on the higher band. In your first attempts you will probably either fail to raise a perk or the whole thing will act in a most outrageous manner, only oscillating when our next door neighbour has his water turned on or some such thing. Then again, Henry Ford's genius comes into the picture — if one of the local bone-shakers comes within about a mile of your station you will come to the conclusion that there has been a little earthquake right next door. A Ford is the very essence of all that is nasty when it comes to QRM on 20 metres. These are only a few of the hurdles to get over on the low wave, but the radio ham is the champion high jumper of the world, so we should worry!

I have come to the conclusion that the best Morse in Australia comes from the Seventh District. Our friends on the Apple Isle are absolute artists at the game of key-punching. The sigs from A-7BJ, A-7OM and Co., speak for themselves. "Very QSA, QSB, gd o.m.! F.B. Sevens."

A-3BQ and A-3ZN have been fairly successful with two-way work on five metres. They have been able to work together quite regularly. Although the distance is very small, still, as pioneers, they have achieved something. A-3AP has been coming through well on 40 metres. His note is good and kick quite formidable. 3AP has been a consistently good performer on the ether for many moons now . . . his DX must have reached quite appreciable proportions.

Mr. G. Le Quesne who has been the head-salesman for United Distributors since their starting in the Radio business, has entered the employ of H. J. Hapgood, the new factor in radio. He is located in Challis House. Mr. Hapgood has just left for a week's trip to Melbourne and Adelaide, and Mr. Le Quesne will be in charge during his absence. Mr. Hapgood reports that the amount of business he has done far exceeds his expectations.



## A FURTHER REPORT from KOSCIUSKO

The Wireless Set supplied by David Jones' to the Hotel Kosciusko continues to give excellent results. It has now been in operation several months. Its continued reliability is most gratifying to David Jones' Radio Department and also to Mr. Charles MacLurcan who designed this instrument for the Government Tourist Bureau.

Sets similar to this, and all other radio sets and accessories can be immediately supplied by our Radio Department.

Let our Experts solve your wireless problems. If your set is not giving the best possible results phone City 6336 or B6971 and a qualified engineer will call and effect a repair or alteration at the lowest possible cost. Advice is given freely.

# DAVID JONES

(Continued from Page 39.)

- 1st: Miss Agnes Fortune, accompanist, Pauline.
- 7.20—"The Country Women's Association," by Mrs. A. Gilchrist.
- 7.40—Mr. G. M. Wallace, "A Midsummer Night's Dream," by Shakespeare.
- 8—"The Studio Orchestra, old, "Puet & Pوعات"; (Suisse); new, "Henry VIII. Dances" (German).
- 8.20—Mr. J. C. Hickey, tenor, old, "When the Bloom is on the Eye"; old, "Silver Threads Among the Gold."
- 8.27—Miss Tasma Tiernan, "cello solo, old, "Annie Laurie" (Scott); new, "Lullaby" (Cecil Scott).
- 8.37—Miss Billie Jones, soprano, new, "Wanted Someone to Love"; new, "My Best Gal."
- 8.44—Mr. Walter Smith, cornet solos, old, "Il Mio Tesoro" (Mozart); new, "The Rosary" (Nevin).
- 8.54—Mr. J. C. Hickey, tenor, old, "Alice, Where Art Thou"; old, "The Old Rustic Bridge."
- 9.1—"The Studio Orchestra, old, "Zampa" (Herald); new, "Pink Lady" (Caryl).
- 9.21—Miss Billie Jones, soprano, new, "When We're Together"; new, "Nantucket Nan."
- 9.28—Last act of "Aladdin," transmitted from His Majesty's Theatre by permission of J. C. Williamson Ltd. Entree, "Ting-a-Ling"; chorus; duet, "Albany Bound"; Fliee Allan and Dorothy Dewar; song, "I'm Afraid to Hold my Breath"; Kupper Hazel; song, "Pleasantly Bliss"; Jennie Benson; song, "Seminole"; Bernard Manning and ballet; song, "Kipper"; Bruce Green; song, "You Forget to Remember"; June Elvidge; gymnastic specialty, the Twelve Wonderful Williamson Girls; opening chorus, "Let's Look at the "Aladdin"; Gettets; song, "Lotus Flower"; Bernard Manning; song, "Sunnyside Ssl"; Jennie Benson; song, "Ukelele Lady"; Jennie Benson and chorus; specialty, the world's master acrobat, Walter Nilsson; fencing act by the Twelve Wonderful Williamson Girls; song, "I'm Afraid of Love"; Gus Bluet; song, "Play Town"; Fliee Allan, children and the radiants; dance burlesque, "The Society Dancers"; Male Band and Archie Thompson; finale, "Here Comes the Bride," entire company.
- 11—"God Save the King."

## TUESDAY, JANUARY 5.

- Morning Session (11 a.m. to 2 p.m.).
- 11—Time signal; express train information.
- 11.5—Masked items by the Studio Orchestra.
- 12—Time signal.
- 12.2—"The Studio Orchestra.
- 12.30—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cables.
- 12.45—"The Studio Orchestra.
- 1—Time signal.
- 1.2—"The Studio Orchestra.
- 1.45—"Herald" and "Argus" news services; Stock Exchange information; weather forecast; river reports.
- 2—Close down.

- Afternoon Session (3 to 5.15 p.m.).
- 3—Time signal.
- 3.1—Masked items by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco.
- 3.40—"Au Pair," of Buckley & Nann Ltd., in a fashion talk.
- 3.55—Paramount Theatre Orchestra.
- 5—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cable news.
- 5.15—Close down.
- Evening Session (8 to 7.15 p.m.).
- 6—Children's hour: "Billy Bunny" stories by Mary Gamleaf. "Poems for the Little Ones," "Sand Between the Toes," "Happiness," "The Three Bears" (by request), "Travel Talk 5, Village in England," "George Stevenson."
- 6.45—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cable news; market weather synopsis; closing Stock Exchange information; shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd. Haysmarket sheep sales, poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.
- Night Session (7.20 to 11 p.m.).
- Around the British Isles in song and music. Speakers: Mr. W. F. Gates, Mr. C. R. Long, M.A., Dr. Loftus Hills, D.Sc., The Studio Orchestra, Miss Violet Jackson, soprano, Mr. Bobby Pearce, baritone, Mr. Syd. Eaton, tenor; Mr. Owen Griffith, tenor, Miss Agnes Fortune, accompanist.
- 7.20—Under the auspices of the New Societies League, Mr. W. F. Gates, "Planning the Popularity."
- 7.40—University Extension Lecture, Mr. C. R. Long, M.A., "The Golden Age of Australian Verse Production."
- 8—England. The Studio Orchestra, "Merrie England" (German).
- 8.15—Miss Violet Jackson, soprano, "The Nightingales of Lincoln Inn," "Down Vauxhall Way."
- 8.25—"The Studio Trio," "Two Old English Tunes" (Gutter).
- 8.30—Mr. Bobby Pearce, baritone, "Young Tom o' Devon" (Russett), "The Bells of St. Mary's" (Adams).
- 8.35—Ireland. The Studio Orchestra, selection. Irish Airs.
- 8.52—Mr. Syd. Eaton, tenor, "Eily Mavourneen" (Benedic), "Mother Machree."
- 8.58—Miss Bessie Gaunson, violin solo, "Wearing of the Green" (Moore), "Garryowen" (Moore).
- 9.5—Mr. Bobby Pearce, baritone, "The Little Irish Girl" (Lehr), "The Mountains o' Mourne."
- 9.12—"The Studio Trio," "Londonderry Air" (Kreisler).
- 9.19—Dr. Loftus Hills, D.Sc., "Popular Beverages—Spirits."
- 9.34—Scotland. Miss Violet Jackson, soprano, "Gould thro' the Rye," "Bonnie Mary of Argyll."
- 9.41—"The Studio Orchestra, selection, "Scotch Airs."
- 9.56—Mr. Syd. Eaton, tenor, "Aileen Ming," "Loch Lomond."
- 10.3—"Argus" and "Herald" news services.
- 10.7—Wales. The Studio Orchestra, selection of "Welsh Airs."
- 10.23—Mr. Owen Griffith, tenor, "Men in Gown," "Y Farn at Hahan."
- 10.29—"Back in Australia. The Studio Orchestra, suite, "Australian Summer."
- 10.44—Mr. Owen Griffith, tenor, "Coming Home," "Perfect Day."

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- 10.51—The Studio Orchestra, "Wildflower" (Youmans).  
11—"God Save the King."

## WEDNESDAY, JANUARY 6.

- Morning Session (11 a.m. to 2 p.m.).  
11—Time signal; express train information.  
11.3—Musical items by the Studio Orchestra.  
12—Time signal.  
12.2—The Studio Orchestra.  
12.30—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cable news.  
12.45—The Studio Orchestra.  
1—Time signal.  
1.5—The Studio Orchestra.  
1.45—"Herald" and "Argus" news services; weather forecast; river reports; Stock Exchange information.  
2—Close down.  
2.15—Result of the Two-Year-old from the Epsom Turf Club Meeting.  
2.45—Result of the Open Handicap from the Epsom Turf Club Meeting.  
Afternoon Session (3 to 5.15 p.m.).  
3—Time signal.  
3.2—Musical programme by the Paramount Theatre Orchestra, under the direction of Signor Vincent Ricco.  
3.15—Result of the Brush Steeple from the Epsom Turf Club Meeting.  
3.18—Paramount Theatre Orchestra.  
3.45—Result of the Epsom Handicap from the Epsom Turf Club Meeting.  
4.18—Paramount Theatre Orchestra.  
4.10—Result of the Trial Plate from the Epsom Turf Club Meeting.  
4.18—Paramount Theatre Orchestra.  
4.30—Sister Peck, of the Victorian Baby Health Centres Association, on "Mothercraft."

- 4.45—Result of the Trial Purse from the Epsom Turf Club Meeting.  
4.48—Paramount Theatre Orchestra.  
5—"Herald" and "Argus" news services; sporting results; Reuter's and the Australian Press Association cables.  
5.15—Close down.  
Evening Session (6 to 7.15 p.m.).  
6—Children's Hour: "Billy Bunny" stories, nursery rhymes, "A Magical Trip," "Houses of the Eagle."  
6.45—"Herald" and "Argus" news services; sporting results; Reuter's and the Australian Press Association cable news; market reports; weather synopsis; closing Stock Exchange information; shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd.; Newmarket sales, cattle, pigs, carcass meat, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

- Night Session (7.20 to 11):  
"More Tin Bits."—Speakers: Mr. O. A. Mendelssohn, B.Sc.; Mr. G. O. Johnson, Capt. C. H. Peters, Coburg City Band; Musical Director, Mr. T. B. Davison, Miss Frances Lea, soprano; Mr. A. Borthwick, xylophone; Mr. Allan Mitchell, tenor; Miss Jessie Smith, contralto.  
7.20—Mr. O. A. Mendelssohn, B.Sc., A.A.C.T., Public Analyst, "Chemical control of Industry—Part II."  
7.40—Mr. G. O. Johnson, Chief Ticket Inspector, "Sidelights on a Railway Special Checker's Work."  
8—Coburg City Band, march, "With Sword and Lance," waltz, "Midnight Waltz," soprano cornet solo, "O Lovely Night," Soloist, C. Quinn.  
8.20—Miss Frances Lea, soprano, "Daffodil" (Gold) (Hodgson), "I Love the Moon" (Rubens).  
8.27—Mr. A. Borthwick, xylophone selections.

- 8.42—Mr. Allan Mitchell, tenor, "Through all the Ages" (Coates), "My heart's desire" (C. Clarke).  
8.49—Coburg City Band, selection, "The Merry Widow."  
9—Captain C. H. Peters, "Books, wise and otherwise."  
9.15—Coburg City Band, intermission, "Iola," earnest solo, "The Pal that I Loved," J. Doherty, Soloist.  
9.27—Miss Jessie Smith, contralto, "The Birthday Song" (Woodman), "The Owl" (Wells).  
9.34—Coburg City Band, march, "On Manly Shore," fox trot, "Moonlight and Roses."  
9.44—Miss Frances Lea, soprano, "I am home again" (Wood), "My Mary Sweet and Brown" (Kilner).  
9.51—"Argus" and "Herald" News.  
9.55—Mr. A. Borthwick, xylophone selections.  
10.10—Mr. Allan Mitchell, tenor, "A Farewell" (Liddle), "Sigh no more" (Altken).  
10.17—Coburg City Band, march, "Buchenstein," waltz, "Sunset on St. Lawrence."  
10.22—Miss Jessie Smith, contralto, "Mighty Lull a Rose" (Nevin), "Japanese Love Song" (Brabe).  
10.30—Coburg City Band, selection "Fanny," march, "Student Days."  
11—"God Save the King."

## THURSDAY, 7th JANUARY.

- Morning Session: 11 to 2:  
11—Time Signal, Express Train Information.  
11.15—Musical items by the Studio Orchestra.  
12 noon—Time Signal.  
12.2—The Studio Orchestra.  
12.30—"Argus" and "Herald" news services; Reuter's and the Australian Press Association Cable News.  
12.45—The Studio Orchestra.  
1—Time Signal.  
1.2—The Studio Orchestra.  
1.45—"Argus" and "Herald" News Services. Stock Exchange information. Weather forecast. River reports.  
2—Close down.  
2.15—Result of the Maiden Plate from the Mornington Race Club Meeting.  
2.45—Result of the Flying Handicap from the Mornington Race Club Meeting.  
Afternoon Session: 3 to 5.15:  
3—Time Signal.  
3.1—Musical programme by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco.  
3.15—Result of the Mornington Cup, from the Mornington Race Club Meeting.  
3.18—Paramount Theatre Orchestra.  
3.45—Result of the Trial Handicap from the Mornington Race Club Meeting.  
3.58—Paramount Theatre Orchestra.  
4.25—Result of the Novice Handicap from the Mornington Race Club Meeting.  
4.26—Paramount Theatre Orchestra.  
4.58—Result of the Welter Handicap from the Mornington Race Club Meeting.  
5—"Herald" and "Argus" news services. Reuter's and the Australian Press Association Cable News.  
5.15—Close down.

- Evening Session: 6 to 7.15:  
6—Children's Hour. Billy Bunny stories by Mary Johnson, "Sister Peckling," "Little Blue Bonnet," special story—the last travel talk. G. Louden—George Stevenson—Clocks and Engines.  
6.45—"Herald" and "Argus" news services. Reuter's and the Australian Press Cable News. Market reports, weather synopsis, closing Stock Exchange information, shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd. Newmarket Sales: cattle, pigs, carcass meat, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.  
Night Session 7.20 to 11:  
"Dancers."—Speakers: Mr. A. E. McMeiken, Mr. J. Howlett Ross, Will Quintell and

- the Tivoli Orchestra. The Studio Orchestra (musical director: Miss Bessie Gannon). Mr. T. E. Whidburn, entertainer; Mr. Norman Bradshaw, tenor; Miss Doris McInnes, soprano; Miss Agnes Fortane, accompanist.  
7.40—Mr. A. E. McMeiken, Librarian, City of Prahan, "Popular Antiquities and Customs—Marriage Customs and Ceremonies."  
8—Will Quintell and the Tivoli Orchestra, transmitted from the Tivoli Theatre, by permission of Managers, Theatres Ltd.  
8.30—Mr. J. Howlett Ross, "Famous Australian Women—Marie E. J. Pitt."  
8.50—The Studio Orchestra: Linger Louger, Manawana.  
9—Mr. T. E. Whidburn, entertainer: Murphy's Brindle Cow.  
9.18—The Studio Orchestra: Dream Town, I'm Tired of Everything.  
9.20—Mr. Norman Bradshaw, tenor: The Empty Nest, My Rose (Malcota).  
9.27—The Studio Orchestra: Oriental Love Dreams, If you Kiss Susie.  
9.37—Miss Doris McInnes, soprano: Rosebud (Ardis); Here's to Love (Habens).  
9.44—The Studio Orchestra: Don't Bring Lulu, Flag that Train.  
9.54—Mr. T. E. Whidburn, entertainer: The Bill Poster's Story.  
10.4—The Studio Orchestra—Sweet Little You, I'll Take Her Back.  
10.14—Mr. Norman Bradshaw, tenor: I Hear You Calling Me (Marshall), For You Alone (Ghebel).  
10.31—The Studio Orchestra: Midnight Waltz, Sally.  
10.34—Miss Doris McInnes, soprano: Spring's Awakening (Sanderson), Just for Awhile (Geiger).  
10.41—The Studio Orchestra: Let It Rain, let It Pour, In the Garden of To-morrow, Indian Dawn.  
11—"God Save the King."

## FRIDAY, 8th JANUARY.

- Morning Session: 11 a.m. to 2 p.m.:  
11—Time Signal, Express Train Information.  
11.3—Musical items by the Studio Orchestra.  
12 noon—Time Signal.  
12.2—Studio Orchestra.  
12.30—"Argus" and "Herald" news services. Reuter's and the Australian Press Association Cable News.  
12.45—The Studio Orchestra.  
1—Time Signal.  
1.2—The Studio Orchestra.  
1.45—"Herald" and "Argus" news services. Weather forecast. River reports. Stock Exchange information.  
2—Close down.  
Afternoon Session: 3 to 5.15:  
3—Time Signal.  
3.1—Musical items by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco.  
3.45—"An Fair" of Buckley and Nunn Ltd. in the Fashion Talk.  
5—"Herald" and "Argus" news services. Reuter's and the Australian Press Association Cables.  
5.15—Close down.  
Evening Session: 6 to 7.15:  
6—Children's Hour: Billy Bunny stories; "Nursery Rhymes," "A Magical Trip," "Houses of the Eagle."  
6.45—"Herald" and "Argus" news services. Reuter's and the Australian Press Association Cables. Market reports. Closing Stock Exchange information. Weather synopsis. Shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd. Dairy cattle, sheep, carcass meat, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.  
Night Session: 7.15 to 11:  
Forewell to Gladys Moneroff. Speakers: Mr. Alberto Zelman, Mr. R. H. Wilton, Miss Gladys Moneroff of "The Merry Willow," The Collingwood Citizens' Band, Musical Director.  
(Programme continued on Page 46.)

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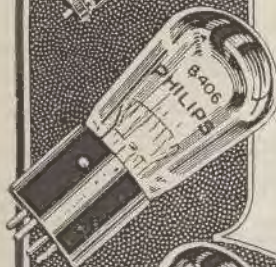
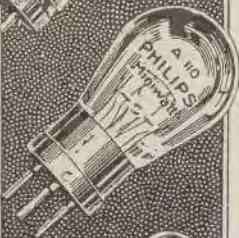
Filament Consumption, 1.0/1.8 volts, 0.06 amp.

Plate Voltage, 20/100.

"A.110 consumes less current than any other Valve yet produced, and makes it possible to operate a set for many weeks on one dry cell. The filament is not coated with Thorium Oxide, as in the ordinary Dull Emitter, but is made under a specially patented process, and as long as the marked voltage is not exceeded, the filament will keep the same characteristics throughout the life of the Valve."

Price 17/6 Standard English

or American Cap. Price 17/6



(Programme continued from Page 43.)

- rector, Mr. F. C. Johnston. Mrs. Rita Hilton, entertainer, Mr. Bobby Pearce.
- 7.15—Mr. R. H. Wilmot: "Everyday Chemistry—Electric Chemistry."
- 7.30—Mr. Albert Zeman, under the auspices of the Develop Australia League: "Let us Develop Australia, especially Australian Music."
- 7.45—Miss Gladys Moncrieff, now appearing in "The Merry Widow" at the Theatre Royal, will speak from her dressing room, by permission of J. C. Williamson Ltd.
- 8—The Collingwood Citizens' Band: March, El Alamo; waltz, Dan Quixote.
- 8.15—Mr. Bobby Pearce, baritone: Marie Marie. I am a Ringer (Mendelssohn).
- 8.22—Mr. B. Spence, euphonium solo. Simple Avon.

3.50—Mrs. Rita Hilton, entertainer: The Bird in Nellie's Hat, Man versus Woman.

8.28—The Collingwood Citizens' Band: Cavotte, Spring's Awakening; march, Washington Bay.

8.50—Mr. Bobby Pearce, baritone: In Old Madrid (Fraser); Elaine (Gould).

8.57—The Collingwood Citizens' Band: waltz, Golden Grain; march, Joyous Tri.

9.10—Transmitted from the Theatre Royal, by permission of J. C. Williamson Ltd. Miss Gladys Moncrieff in the second act of "The Merry Widow": Opening Chorus and Dance, Song, Villa, Gladys Moncrieff and Chorus; Duets, The Cavalier, Gladys Moncrieff and Andrew Higgins; Duets, Simplicity, Mabel Gibson and Herbert C. Walton; March, septet, since,

Arthur Stigon, Herbert C. Walton, Jack Ralston, Edmund Shears, Harry Kettle, James Stephens, Alno Chapman, Duets, Merry Widow Waltz, Gladys Moncrieff and Andrew Higgins; Duets and Romance, Love in My Heart, Byl' Wulky and Herbert Brown. Finale.

10.20—"Argus" and "Herald" news service.

10.24—The Collingwood Citizens' Band, Duets, "A Night in Venice."

10.32—Miss Rita Hilton, Entertainer, "Somebody's coming to Tea," "Whistle It."

10.40—The Collingwood Citizens' Band, Selection, Songs of Scotland."

11—God Save the King.

## ROUND THE CLUBS

(Continued from Page 11.)

### STRATHFIELD AND DISTRICT RADIO CLUB.

Report of Meeting held 18/12/1925.

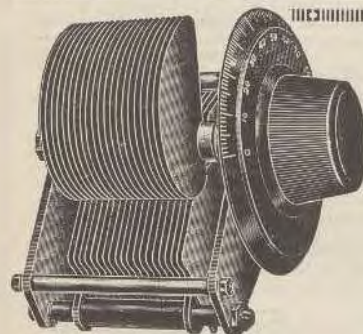
The club's usual weekly meeting was held on Wednesday, Dec. 16, at the clubrooms, corner of Duke and Albert Streets, Strathfield.

After the usual half-hour's Morse practice (a strong feature of the club's activities), general discussion was entered upon a motion by Mr. R. Moore to solicit the opinions of all metropolitan radio clubs on the question of

a radio clubs' picnic. This was agreed to, and the Secretary was asked to communicate with all clubs accordingly.

A much-looked-forward-to item on the club's roster was set down for this meeting—a lecture by Mr. Loanes on the "Construction and Polishing of Radio Cabinets," but, owing to this gentleman's unavoidable absence, the breach was kindly filled by Mr. Nordstrom, of Leichhardt Radio Club, who gave a lecture on "The Construction and Management of the 5440 Circuit." This proved of great interest, as evidenced by the great deal of discussion entered upon on the subject at the conclusion of the lecture.

New members will be greatly welcomed, and all inquiries regarding membership and other matters should be addressed to the Assistant Secretary, Mr. E. Moore, Cameron Street, Strathfield.



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Sydney, New South Wales . . . . .	Broadcasters (Sydney) Ltd. . . . .	2BL . . . .	353 metres
Melbourne, Victoria . . . . .	Aust. Broadcasting Co. Ltd. . . . .	3LO . . . .	371 metres
Melbourne, Victoria . . . . .	Associated Radio Co. . . . .	3AR . . . .	484 metres
Perth, West Australia . . . . .	West Australia Farmers Ltd. . . . .	6WF . . . .	1250 metres
Hobart, Tasmania . . . . .	Associated Radio Co. . . . .	7ZL . . . .	410 metres
Brisbane, Queensland . . . . .	Queensland Radio Service . . . . .	4QG . . . .	385 metres
Adelaide, South Australia . . . . .	Central Broadcasters Ltd. . . . .	5CL . . . .	395 metres

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