





WIRELESS WEEKLY

March 14, 1924.

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OFFICIAL ORGAN OF THE AUSTRALASIAN RADIO RELAY LEAGUE.

Vol. 3.

March 14, 1924.

No. 24

## The Australian Radio Relay League.

In another portion of this issue there appears an article dealing with the operations of the Australian Radio Relay League. This body was formed early last year, but owing to lack of support did not make much progress. Towards the end of last year, however, a vigorous attempt was made to reor-

ganise it, and this has been quite successful. Its membership is increasing, and with its business affairs and working rules now on a solid basis, it is making good progress.

The Australian Radio Relay League promises to be a body which will give the genuine experimenter something

worth while. It will enable him to work his station from a real experimental point of view, and while so doing will be the means of training him thoroughly.

It deserves the support of every radio enthusiast

## Watch for our New Cover

### Roster for Week ending 19th March, 1924

	7.30 to 8.0	8.0 to 8.30	8.30 to 9.0	9 to 9.30	9.30 to 10
Thur, Mar. 13	2 RA 2 GR	2 IJ 2 JM	2 AR ZG 2 AR	2 UW 2 ZN	2 YI 2 ZZ
Friday, 14	2 IJ 2 GR	..	..	..	..
Saturday, 15	2 RA 2 GR	2 IJ	..	..	..
Sunday, ..16	2 RA 2 GR	..	..	..	..
Mon., .....17	2 RA 2 GR	2 IJ	..	..	..
Tues., .....18	2 IJ	..	..	2 ZN	..
Wednes., ...19	2 RA 2 GR	2 IJ	2 VX	2 UW	..

In addition, the 10 Watters Club is working 2 CDM each night from 10 o'clock onwards.



Wireless Weekly

Subscription Rates:

Single Copies . . . . . 3d, net
12 months (52 issues) . . 13/- post free
6 months (26 issues) . . 6/6 post free

All communications to be addressed to The Editor, Wireless Weekly, 33 Regent St., Sydney.

Advertising Rates on application.

Wireless Weekly Cup Competition

This competition is open to any experimenter in any part of Australia.

Competitors are required to submit:

- 1. One photo not less than 4in. by 3in., showing the set complete.
2. One photo, not less than 4in. by 3in., showing the wiring of the set.
3. An ink diagram not less than 4 in. by 3in., showing the circuit and wiring.
4. A small paragraph of not more than 100 words describing the set.
5. The nomination form shown here, witnessed by a member of the committee of a radio club or any trader advertising in Wireless Weekly, or a local J.P.
6. Entries should be sent to the Editor, Wireless Weekly, 33 Regent St., Sydney, N.S.W., and marked "Wireless Weekly Competition" in the bottom left hand corner.

Send in your nomination form now.

NOMINATION FORM.
I .....
of .....
desire to enter my .....
set in Wireless Weekly Cup Competition. I agree to abide by the conditions set down by the proprietors, and I solemnly declare that I am a wireless amateur as defined in page 2 of W.W., No. 15, Vol. 3, of January 18, 1924.
(Signed) .....
Witness .....

The Broadcasting Regulations.

Conference Urgently Needed

Opinions of Well-Known Firms

On the grounds that the present Regulations regarding wireless are unsatisfactory, the Postmaster-General is being asked to call another Conference.

In considering this request, it should be remembered that when the present Broadcasting Regulations were adopted at the Conference last year, it was agreed that they should be given a trial.

It is nine months since that Conference took place, and six months have elapsed since the first broadcasting service was established. High-class items have been put out daily for some months by the two broadcasting stations in Sydney; and yet, the public will not buy the sealed receivers with which to receive the broadcast programmes.

Reasonable people will concede that if, after six months' trial, this state of affairs exists, then there is urgent need for a fresh Conference to discuss the whole position, and to arrive at some better way of serving the public interests with regard to wireless.

In requesting a Conference, the Association for the Development of Wireless in Australia, New Zealand and Fiji, is supported unanimously by its branches right throughout the Commonwealth. During the last few days nearly one hundred letters have been received from representative firms in New South Wales, stating their opinions and assuring the Association of their support. Extracts from a few of these letters we are printing below, and these will demonstrate that the present dissatisfaction, far from being confined to a few disgruntled traders, as has been asserted, is a matter affecting the whole community.

Hunter Bros., Wagga Wagga.—"We are quite in accord with what your association is doing, and will give support to its resolutions laid out in your circular."

International Correspondence School, George Street, Sydney.—"The consensus of opinion is that the sealed sets are a hindrance in radio development."

W. G. Watson and Co., Ltd., Clarence Street, Sydney.—"We assure you that we will be pleased to do whatever we can to further the interests of wireless in this country."

Burge Bros. and Co., Ltd., Inverell.—"We are in favour of a conference to discuss the present unsatisfactory condition of wireless, and think that wireless will not go ahead until the existing regulations are amended."

McCathie's Ltd., Pitt Street, Sydney.—"We, as radio dealers, must say that we are fully in favour of all the restrictions regarding sealed sets being removed to allow the sale of open sets to the public."

Anthony Hordern and Sons, Ltd., Sydney.—"We are in full accord with the course of action proposed to be taken, in view of the great public benefit which would follow from the adop-

tion of the open sets as compared with the present 'sealed set' principle."

M. Herrmann and Co., Ltd., Coomamble.—"We are very much against the present regulations regarding broadcasting receivers, with its strict limitations, and think the fixed wave lengths not a successful working proposition."

New System Telephones Pty. Ltd., Castlereagh Street, Sydney.—"We are of the opinion that it is necessary to have another conference to consider the present wireless regulations, of which there is no doubt in our minds, are entirely unsatisfactory. It is, therefore, essential for immediate action to be taken to amend the existing regulations, so that the public demands may be met."

M. Campbell and Co., Ltd., Muswellbrook, Scone and Merriwa.—"We are certainly in favour of the conference suggested."

Rodman and Kelaher, 129 Phillip Street, Sydney.—"We are entirely in accord with the resolution passed at the meeting on the 19th February, and also are of the opinion that variable wave lengths should be allowed on all broadcast receiving sets."



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*Bracey's Ltd., Lithgow.*—"We are quite in accord with the resolution, and feel sure that the present regulations do require amending in order to advance broadcasting in Australia."

*Grace Bros. Ltd., Broadway, Sydney.*—"We wish to express our sympathy with the object of the special committee to obtain reform with regard two wireless regulations. We are of the opinion that the conference to discuss the present unsatisfactory conditions of wireless, and to devise means of improvements, is urgently needed."

*The Lawrence and Hanson Electrical Co., Ltd., York Street, Sydney.*—"It is essential the wireless position be reviewed, and we can assure you of our support in the matter."

*William Adams and Co., Ltd., Clarence Street, Sydney.*—"In the opinion of the writer, the existing rule is certainly detrimental to the progress of the wireless industry, and if this rule were amended to allow of variable wave lengths on all broadcast receivers, it would undoubtedly help the industry along."

*P. D. Murphy, Ltd., Cooma.*—"We are very strongly in favour of a conference to discuss the present unsatisfactory condition of wireless."

*L.P.R. Bean and Co., Ltd., Castle-rough Street, Sydney.*—"Until the Government sees fit to alter the existing regulations, radio development will not proceed as regards broadcasting. The writer recently spent some time in America and England, investigating broadcasting problems, and he is of the opinion that the continuance of the sealed set policy will be fatal to radio broadcasting in Australia."

*Harrington's Ltd., George Street, Sydney.*—"We are convinced that no great development of wireless can possibly take place until such time as moderate regulations are introduced to allow of the same freedom in wireless that exists in other countries."

*Burgin Electric Co., 352 Kent Street, Sydney.*—"We find that business today in the wireless industry is such as to warrant early attention, and also an endeavour to find a remedy for the depression. 99 out of every 100 people will not have a sealed set."

And the following, reprinted from "The Bystander," of February 28th, 1924:—

Australian Radio Relay League.

COMMENCEMENT OF OPERATIONS.

THE WORKING SCHEME OUT LINED.

During recent weeks plans under which operations of the Australian Radio Relay League will be carried out have been carefully considered by members of the committee, and some few days ago a general meeting of members was held, at which the whole scheme was finalised.

Working rules have been printed, and have been issued to all members, and special League log forms and working schedule forms have also been compiled and posted to each member.

The Working Scheme.

Briefly, the scheme under which operations will be carried out is as follows:—The State has been divided into nine districts, three of which embrace the metropolitan area (north central and southern portions), and the remaining six of which embrace the rest of the State. It is proposed to appoint a district manager and an assistant manager in each district. These officers will be responsible for the working of the Relay League stations in their own districts, and will see that all League traffic is properly handled.

So far, appointments in four of these districts have been made. In the No. 1 district (Central Metropolitan), Mr. C. D. MacLurean (2CM) has been appointed manager, with Mr. Fry (2KC) as his assistant. In the No. 2 (Northern Metropolitan), Mr. S. V. Colville (2FA) is in charge, with Mr. McIntyre (2VX) as second in command; and in No. 3 (Southern Metropolitan District), Mr. E. B. Crocker (2BB) is manager, and Mr. Marsden (2JM) is assistant manager. The fourth dis-

The men in the wireless business now admit that the warnings given the public not to rush the purchase of wireless receiving sets were well-founded, for it has now been found that the regulation to limit the sale only to sealed sets—that is, each set able to receive messages from only one wave length—is impracticable. The public have wisely stood off the purchase of such sets, and now the companies interested are seeking to have the regulation—which does not obtain in either England or America—wiped out, or drastically amended.

trict, which includes the Blue Mountains, has been placed under the control of Mr. E. T. Vears (2BM), of Katoomba.

It is hoped to shortly publish a map of the State, setting out these districts. This map will appear in the columns of "Wireless Weekly," and an endeavour will be made to have proofs of it printed and posted to each member of the League.

The committee of the League is desirous of hearing from experimenters who are prepared to join and also to take over the control of operations in country districts. Any experimenters who are willing to carry out these duties should communicate with the Honorary Secretary, J. W. Robinson, "Milano," Edward Street, Concord.

Working Schedule Forms.

The working schedule forms which have been issued to members should be filled in as soon as possible, and returned to the secretary. They are really intended to act as a guide to the organising secretary, Mr. Colville, who is desirous of organising a complete working plan as early as possible. On the schedule forms, members should indicate the times and days on which they are prepared to work their stations in connection with League traffic. These particulars should be supplied and filled in on the schedule forms and posted to secretary without any delay.

The Log Forms.

Log forms which have been supplied are intended for use in connection with League transmission, and will be accepted as the official records of working. They cannot be properly used, however, until all members who are ready to transmit have completed the working schedule forms and have forwarded them to the secretary.

The League now promises to be one of the most important and most useful radio bodies in Australia. It has decided to affiliate with the Wireless Institute, and this should strengthen its position. Members are still needed, and particulars will be supplied on request. The fees are as follows: Active member, £1/1/- per annum; associate member, 10/6 per annum.



## Things the Experimenter Should Know.

### Procedure—How Radiograms are Handled.

(By J. W. Robinson, Hon. Secretary, Australian Radio Relay League.)

The Australian Radio Relay League is now commencing the actual handling of experimental traffic on regular lines, and it is highly desirable that members who take an active part in the despatch of these signals and also those who listen-in to them, should understand the exact routine which is applied to messages.

One of the main objects of the League is to train its members in the handling of traffic, and so build up an organisation which will be of great use in time of national danger. In other words, the Australian Radio Relay League really aims at being a national wireless reserve, and a highly efficient reserve, too.

If such an object is to be achieved it is necessary that its members thoroughly understand the procedure which is used in connection with the despatch of messages, and be able to handle traffic according to this procedure. In fact, the rules of the League provide that all traffic be handled, not in a mere haphazard fashion, but in a regular manner according to procedure.

#### Wireless Law.

It is generally known that wireless throughout the world is controlled by an international body, which framed rules and regulations regarding the operating of stations, the handling of traffic, and other wireless matters.

The Government of each country frames its own wireless laws and administers its own regulations, but with one or two exceptions these rules do not contravene the international regulations.

#### Transmission of Radiograms.

International regulations provide a call sign, which is well known to all experimenters, ———, and when it is desired to communicate with a station, this call must be given. The official call for any station comprises this sign given once, the call signal of the station which is being called repeated thrice, the word "de" once, and the call signal of the calling station repeated thrice.

The station which is called answers by giving the calling sign once, follow-

ed by the call sign of the station, which has repeated it thrice, by the word "de" once, and by its own call sign once, followed by the signal, ——— (go) once.

There are, of course, many rules to be observed if the called station is not ready, or if the called station for some reason or other desires the calling station to wait, but it is not proposed to inflict these rules on the experimenter this time. The routine of calling as set out above is, however, very important, and it is highly desirable that all members of the League stick closely to it when transmitting.

#### Example of a Call.

The following example of a call which is taken from the P.M.G.'s handbook (a copy of which should be kept on every relay station) makes the system clear.

Suppose a ship whose call sign is ABC wishes to communicate with a station whose call sign is XYZ; after first having ascertained that the station is not working, the ship will signal: ——— XYZ XYZ XYZ ——— (de) ABC ABC ABC.

And the station which is called will reply:

Example of Reply.  
——— ABC ABC ABC ——— (de) XYZ ——— (go).

#### Special Amateur Call Signs.

The system of calling outlined above should be very carefully adhered to when working a station within New South Wales, but when a New South Wales station works with another outside of the State, a slight departure should be made.

We will consider first of all the procedure to be used when communicating with a station outside of Australia.

In this case, instead of using the word "de" in the usual routine, the letter allotted to the country in which the station is being called is situated is used, and is followed by the letter allotted to the country in which the calling station is situated.

It has been decided internationally

by amateurs that the following signs letters be allotted to countries:—

- A—Australia.
- C—Canada.
- F—France.
- G—Great Britain.
- I—Italy.
- M—Mexico.
- N—Netherlands.
- O—South Africa.
- P—Portugal.
- Q—Cuba.
- R—Argentine.
- S—Spain.
- U—United States.
- Z—New Zealand.

If these letters are memorised the system used will be easily understood. If, for instance, Australian station 2CM calls New Zealand 3YA, instead of using the word "de" to separate his signs he will use the letters ZA instead. The call would thus read:—

——— 3YA 3YA 3YA ZA 2CM 2CM 2CM.

If a New Zealand station called the signals would, of course, be reversed, the letters AZ being used instead of the ZA.

#### Interstate Calls.

When an all station (CQ) call is given and the amateur intends it for other States, he should follow the letters CQ with the number of the State he is inviting replies from. For instance, if 2BB wishes to give a general call to Victoria he would call, ——— CQ3, and would separate this call

Continued on page 6

## J. L. SCOTT Radio Engineers

We are putting on the market an Experimenter's Wavemeter of good quality at a reasonable price.

Experimenter's wants catered for generally.



# RADIO 2 ZZ

By C. P. Smith

A description of my single valve receiver may interest the readers of "Wireless Weekly," especially those who contemplate the construction of a valve set, to which may be added units as convenient. This receiver has given no trouble whatever, and has shown what may be accomplished with one tube with careful handling.

As may be gathered from the preceding paragraph, the set is constructed on the unit panel system, so that radio or audio frequency amplification may be added with a minimum of trouble and time.

The circuit is the well-known but prohibited 3 coil, for which I hold a licence to use conditionally.

From the sketch it will be noticed that the tuning panel is on the right instead of the left, as is generally the case. This was done so as to allow the aerial to come in between the receiver and transmitter, to the change-over switch. The transmitter is, of course, built from right to left.

For those who may wish to build a set of similar type, I will give the dimensions of the panels, leaving the lay-out to the discretion of the reader, as no difficulty should be encountered.

The tuning panel is of Bakelite, 9in. x 8in. x 3-16in. The honeycomb coil mounting is a "Nilecom" panel type, the condensers are "Colno," the primary, right hand side, is .001 mf. capacity, and the secondary, left, .0005 mf.

A "series-parallel switch," made from two "expanse" rotary switch arms, is mounted below the mounting so as to increase the range of the coils. The honeycomb coils are home-made also, wound upon a 2in. former, with 25 pins on each side. The wire used is 28 gauge s.s.c. All terminals are Bakelite tapped.

The second unit is the detector panel, the dimensions of which are 9in. x 5in. x 3-16in., consisting of the V24 valve holder, which is made of aluminium (but I would not recommend any reader to employ this metal, as it oxidises very quickly with the air, and makes imperfect contact), the "B" battery switch to the left, and the rheostat to the right. The rheostat, I find, is unnecessary with this type of valve, though very convenient as a switch. The variable condenser

below is across the phones and "B" battery, and has a capacity of .0016 mf. This condenser was found very necessary in the reception of the American amateurs' during the recent tests, where fine tuning was essential. To bring the set to the oscillation point for maximum signal strength is impossible by altering the coupling between the secondary and tickler coils, without losing the signal, as the wave length has for a factor the degree of coupling between these coils.

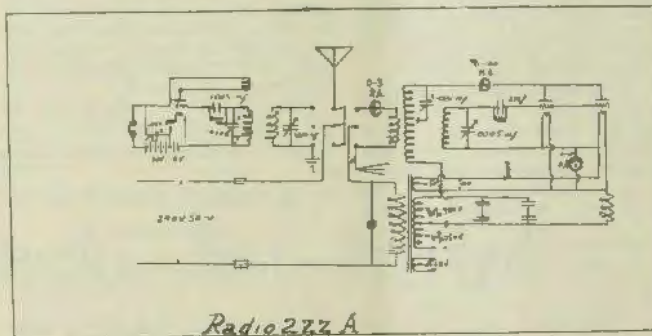
It has been found that the V24 valve functions particularly well as a detector when used in conjunction with a

for receiving, and by itself for transmitting.

The transmitter has not been on the air many months, and so the amateurs who hear this station would be assisting materially if they would send reports.

The transmitter is a 10 watt set, employing two UV202 valves, with 750 volts on the plates.

The plate current is drawn from a transformer giving 1500 volts, which also supplies the filaments of the valves. A kenotron winding is also included. The windings are all on the same leg of the core, so as to ensure



suitable grid-leak, and has at the same time, the advantage of its stability. The grid-leak and condenser is locally made, and consists of copper foil and mica, clamped between ebonite strips, the leak being a pencil line of a suitable resistance between the terminals.

It may be interesting to note that this set will oscillate with 8 volts on the plate.

S. G. Brown's adjustable 'phones are used, their resistance being 2,000 ohms, and have been found remarkable in their sensitivity. If any difficulty arises in the construction of this set, I would be only too glad to give advice for its elimination.

The aerial is a twin, unbalanced T type, 150ft. long, and 40ft. high. A counterpoise, directly under the aerial, is used in conjunction with the earth

maximum efficiency. The transformer is rated at 1/2 k.w. on full load (approx.).

The wave length is approximately 220 metres, and the radiation 3 amperes.

The circuit used is of the three coil type, with a variable condenser shunted across a portion of the plate coil. The adjustment of this condenser is very critical, but has a great effect upon the radiation.

I hope to have 'phone in soon, as Morse is cumbersome for short distance tests. Also a generator will, in all probability be installed for the plate current.

The circuits of the transmitter and receiver are shown in the diagram.

The furthest reports of my transmission to date are from 4AA, 2AC and

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from his own signal by the letter A instead of the word "de." The call would thus read:—

CQ3 A 2BB.

The whole system may at first appear complicated, but if it is carefully studied and a pencil and paper are used to jot down the examples, it will very readily be grasped. Half an hour's uninterrupted study should enable every amateur transmitter to feel confident that he is using the correct call signs.

It will be readily agreed that uniformity is very desirable, and these instructions have been furnished by the writer on the instructions of the committee of the Australian Radio Relay League, which insists on all its own members giving calls properly.

**Radiograms.**

The transmission of radiograms also takes a definite form which should be observed by all amateur operators.

The transmission of a radiogram is preceded by the call sign —, and terminated by the call sign —, followed by the call sign of the transmitting station. All radiograms should bear a preamble which should contain all the necessary instructions, and should be separated from the address by the break sign —. The address should be separated from the text of the message by a similar sign, and the signature should be separated from the text in a similar manner.

The form of a radiogram should be as follows:—Commencing sign, the words "experimental radio," call sign of station of origin, number of words, time, break sign, address, break sign, text, break sign, signature, finish sign, call sign of station calling.

An example of a radiogram from 2FA to 3BY would then be as follows:—

Experimental Radio 2FA 5 words March 3 9.35 p.m. — 3BY — Have increased power 2FA —

The Relay League recommends the adoption of this form of message by its members.

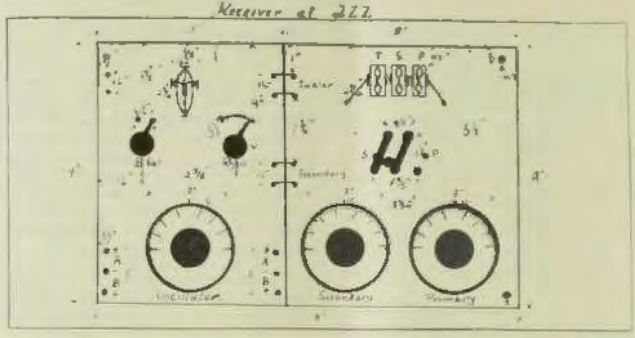
The article by Mr. Malcolm Perry which will be appearing in next week's issue, will be entitled, "Busting The Howling Valve Bogey." Don't miss this.

Tell your friends about "Wireless Weekly"

Continued from page 5

2AP, New Zealand. These three stations report me Q.S.A. Other reports have come from 3DD and 3BD, Victoria. All reports prove a great help

Many other stations were heard, and some of the following on several nights:—1VHT, 1VC, 1OR, 1NCO(?) 2RD, 2AQ, 2FT, 4MI, 4CAY, 4AOV



in balancing the set, and I would be very pleased to receive same from any amateur in any district. Please address to C. P. Smith, 33 Cabramatta Road, Cremorne, Sydney.

Following are the calls logged by 2ZZ during the Trans-Pacific Test.

(?) 5AW, 6KA, 6CKB, 6CKP, 6RL, 6AV, 6GV, 6CPO, 6KKR, 6AOV, 6AOS, 6KT, 6VY, 6AAV, 6CDE, 7GD, 8BAK, 8GZ, 8CM, 8CF, 9ZT, 9MC, 9YA.

9MC and 6CKR were heard testing together.

**Circular to Clubs from Mr. Malone**

The following circular letter has been sent to all wireless institutes and clubs:—

As considerable difficulty is being experienced in the equitable granting of experimental licences, and the observance of the law by licensees, I shall be glad if you will kindly bring under the notice of your members prominently the fact that experimental licences are issued in accordance with the regulations, and the licensee accepts and should understand these regulations. In particular, attention is invited to the following important points:—

- (a) The licensed receiver is for the use of the licensee *only*, and not for the entertainment of, or use by, other people.
- (b) Any form of regeneration or back-coupling which energises the aerial renders the licence liable to cancellation.
- (c) The licence is issued only to enable a licensee to carry out the experiments mentioned in his application. He may be called on at any time to produce

evidence of the work he has done in that connection, so as to prove that he is an experimenter and not merely a "listener-in."

(d) Any contravention of these regulations renders the licence liable to cancellation and the licensee liable to prosecution.

The co-operation of officials of the institutes and all radio clubs is requested in explaining to all concerned the conditions of these licences and of broadcasting (receiving) licences, so as to facilitate our work in granting experimental licences only to those who are entitled to them. And I know this is what the genuine experimenter desires.

Subscribers are asked to notify Wireless Weekly of any change of address. Communications should be addressed to "WIRELESS WEEKLY," 33 Regent Street City.

FOR SALE—Twenty Yard Aerial, complete with fifteen feet masts and Telephone Head Set. Apply, Frank Smith, Box 2234, G.P.O., or City 9148.



**"Wireless Weekly" Transmitting Tests**

March 24th to March 31st.  
 "Wireless Weekly" is organising a Transmitting Test Week, which will commence on March 24th, and end on March 31st.

The object of the tests is to further the experimental movement, and we feel quite certain that the value of such tests will be appreciated by all those who have the progress of that movement at heart.

Country and interstate listeners are especially asked to keep logs and to send along copies of completed logs to the Editor, "Wireless Weekly," 33 Regent Street, Sydney.

Particular note should be taken of the audibility and modulation.

In our next issue will be published the special roster which we are arranging in conjunction with the transmitters in Sydney.

We want transmitters to make a special effort on this test week, and "Wireless Weekly" would be glad if those transmitters who intend to take part will send their names into us *this week*.

**The Call of the Wild**

March 7th, 1924.

The Editor,  
 "Wireless Weekly,"  
 33 Regent St., Sydney.

Dear Sir,—After months of comparative peace in the ether, we are once again pestered with commercial interference. The last two nights VIS has for some reason developed an exceptionally strong harmonic on approximately 225 metres, right amongst the amateur transmitters' wave band; and both local and DX work is badly chopped up.

It is about time that those alleged engineers in charge of our commercial stations took a tumble, and once and for all designed the offending stations to do away with these unnecessary harmonics. We have a striking example in our midst in the shape of VKQ (Garden Island), whose family of harmonics is a by-word both in commercial and amateur circles. Here we have the alleged naval base station, the perfection of all in naval radiotelegraphy, with the most notoriously badly tuned arc and valve transmitter in the Southern Hemisphere. The writer has had bad tuning from VKQ

300 miles inland on VKQ's 9th harmonic.

Local transmitters have suffered patiently for years under this ridiculous state of affairs, but our good old Australian Naval Authorities, what care they—not a darned sou. The last straw has broken the proverbial camel's back with VIS's latest harmonic, which, by the way, is as strong as his proper wave length.

Cannot something be done to try and pull wireless together just a wee bit in this country of ours? What with darn fool regulations, sealed sets that won't gee, and commercial stations splattering the ether like a fire engine hose, it's a wireless man's paradise just for two—VIS and VKQ. If our amateur transmitters had the slightest pretence to harmonics, VIS yells out like a spoilt child, QRT so and so. The poor experimental transmitter though, cannot, or at least for policy's sake does not, reciprocate with many a well earned QRT on VIS and VKQ's respective parts. It is a wonder that those who are responsible for the design of VIS haven't faded into oblivion after the comments on the last two nights' exhibition of QRT.

Yours faithfully,  
 —"R.C.M."

**New Stocks Just Arrived**

Mullard "Ora" - - - - -	20s. 0d.	Mullard Weco Valves - - - - -	37s. 6d.
4 Pin Valve Sockets - - - - -	2s. 6d.	Mullard Valve Bases - - - - -	10s. 0d.
4 Pin Valve Insulators - - - - -	1s. 6d.	Mullard 70,000 ohm Resistance - - - - -	5s. 9d.

**CHELSEA EQUIPMENT**

Variable Condensers, Panel Type with Dial '001 - - - - -	33s. 6d.	- '0005 - - - - -	30s. 0d.
Variable Vernier Condensers, Panel Type with Dial '001 - - - - -	45s. 6d.	- '0005 - - - - -	42s. 0d.
Audio Frequency Transformers - - - - -	35s. 0d.	- 199 Sockets - - - - -	4s. 0d.
Variometer—with Vernier - - - - -	53s. 6d.	- Variocoupler - - - - -	53s. 6d.

We also stock **KELLOGG, D. FOREST, KILBURN & CLARK, REMLER, MASTER, MURDOCH** and **OTHER APPARATUS**

**BURGIN ELECTRIC CO.**  
**WIRELESS ENGINEERS AND SUPPLIERS**

Show Rooms and Sales Department: 1st Floor, Callaghan House,  
**391 GEORGE STREET, SYDNEY**



### Professional Men's Attitude Towards Experimenters

The following letter from the Secretary of The Radio Telegraphists' Institute is self-explanatory.

My Dear Watt.—Apropos to our recent conversation as to whether some steps could not be taken whereby the work of the Professional Institute and the Amateur Institute could be co-ordinated for the purpose of facilitating the development of Wireless, I am directed by the Committee of Management to forward for your information a copy of a letter sent by us to the "Evening News" (which was printed) on August 15th, 1923.

This letter was written owing to some trouble-maker endeavouring to stir up strife between the professional and the amateur wireless man. It lays down definitely how the professional men regard their amateur brothers, and could well form the basis of a real good co-operative understanding.

With kindest regards and best wishes, I am, yours faithfully,

S. TOOMBS,  
General Secretary,  
August 15th, 1923.

The News Editor,  
"Evening News,"  
Market St., Sydney.

Dear Sir,—In your column, "The Magic Spark," upon wireless matters, in last Saturday's issue, it is made to appear that there is likely to be some friction between the amateur and the professional wireless man, and further, that the idea originates in Victoria.

I am directed by the Executive of the Radio-Telegraphists' Institute of Australia, to state as follows:—

(1) There is no person in the Southern Hemisphere outside the city of Sydney, who has any authority to make any statements on behalf of the said Institute.

(2) That there never has been, and we sincerely hope there never will be, any friction between the amateur and professional wireless man.

(3) That professional wireless men consider the strike weapon an insult to their intelligence, and use brains,

not brute strength and ignorance to better themselves professionally, hence they are not concerned with strikes or strike-breakers.

In conclusion, we are pleased to have on our books prominent amateurs who are Associate members, and we feel sure that these gentlemen are of far too honourable a character to use their position to the detriment of the Institute.

As professional wireless men, we are out to develop, advance and popularise wireless, and the amateurs have quite a legitimate function to perform in regard to these three matters, hence we hasten to assure our amateur brothers throughout the Commonwealth, in fact, as the ether is without limits all over the world, that they will always not only receive a fair deal from the professional wireless man, but his assistance whenever it is asked for.

On behalf of the Executive, I am, yours faithfully,  
(Sgd.) S. TOOMBS,  
General Secretary.



**IMPORTERS STOCK**

**PENBERTHY PRODUCTS**

**2000-4000 OHM**

**Head Phones**  
The Perfect Headset

**Crystal Receiving Set**  
As Illustrated

**Multi Point Detectors, etc.**

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## Jefferson Transformers.

The claim that Jefferson transformers create volume and eliminate distance is literally true, as is vouched for by the many thousands of users all over the world.

The audio frequency transformer is one of the most important integral parts of a receiver, and the five Jefferson types meet the demand for an audio frequency transformer for every requirement. The very fine materials and the exclusive engineering and manufacturing features incorporated in Jefferson transformers ensure maximum results. Distant stations are tuned in with ease, and the extreme sensitivity, quietness and freedom from distortion are highly pleasing.

Jefferson transformers are designed with low core densities at normal operating frequencies. They will operate with tubes having impedance from plate to filament of 20,000 to 30,000 and grid to filament 200,000 to 300,000.

The coils are machine wound to insure accuracy and uniformity. The

finest rolled Silicon steel is used for the magnetic circuit, which is so designed and assembled as to insure even distribution of flux through the entire circuit. This feature enables a number of stages of amplification to be arranged in close proximity, without the customary noises.

Jefferson transformers are substantially and neatly assembled. Nos. 37, 38, 41 and 45 are assembled in nickel-plated mounting brackets with nickel binding posts, and terminal lugs for soldering connections. The upper terminal block is of genuine Bakelite, clearly marked for proper connections. The star type is assembled in a black enamelled sheet metal housing with nickel trimmings, winding ratio 3 to 1 and 6 to 1.

Nos. 41, 45, 38 and the star type, are designed for operation with all standard valves, while No. 37 is designed primarily for operation with WD11, WD12, UV201A, C301A, UV199, C299 and 216A valves.

### A Radio Home is a Radiant Home

*If your purchases are made from me.*

Jefferson Star Transformer . . . . .	28/6
Complete Vernier Rheostate . . . . .	9/-
Double and Single Jacks, 4/6 and . . . . .	3/3
Dials, 3/4in., 3in. & 5in. 2/3, 1/9 and . . . . .	1/4
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**A SAVING ON EVERY ARTICLE.**

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# ANNOUNCEMENT

## American Radio Apparatus Wholesale Only

**PACIFIC ELECTRIC CO.**  
SECOND FLOOR, KINCOPPAL CHAMBERS  
No. 38, MARTIN PLACE - SYDNEY



# NEWS IN BRIEF

### MISHAP TO 2CDM.

It is reported that the generator of 2CDM's transmitter has been burnt out.

2CDM has been holding many New South Wales, Victorian and New Zealand transmitters very well.

### 2YG BUSY.

The well-known 2YG, Mr. Ray Allsop, is again tickling the ether.

### FROM 2CDM.

The following was logged by a local experimenter on the night of Saturday, March 1st:—  
2CM, an, 2CDM.

Music. ICW and CW, QSA. In future number all messages consecutively and we will report any message. Calls received to-night are:—QSA, 2JM, 3SF, 3JH, 3JU, 2AM, 3JF, 2IJ, 3AR, 2RA, 3ZN, 2YL. Distance 900 miles.

### WHERE IS 2CDM?

If any station has heard 2CDM since Sunday, March 2nd, information would be appreciated by Mr. F. Basil Cooke, or by Mr. R. C. Marsden, both of David Jones, Ltd., Sydney.

## BOOKS ON WIRELESS

*Construction of Crystal Receivers for Broadcast and General Reception*, by A. Douglas. Price 2/3 posted.

*How to Make a "Unit" Wireless Receiver*, by E. Redpath. Price 2/3 posted.

*Wireless: Popular and Concise*, by C. Crawley. Price 2/3 posted.

*A.B.C. of Wireless: A Popular Explanation* by P. Harris. Price 10d. posted.

**N.S.W. Bookstall Co. Ltd**

276 George Street, City

### GOOD DX WORK.

#### CAN YOU BEAT THEM?

Mr. C. W. Slade ((2SX), at 8.8 p.m. on March 6th, logged the following: 2AP an 3BH (both Victorian transmitters), QRK, SA, QRA. My address, C. R. Whitelaw, Mooroolbark, Victoria.

Mr. P. Nolan (2YI), on March 6th, at 10.30 p.m., logged 3JU calling 2CDM. 2YI spoke direct to 3JU (Mr. Hull, St. Kilda, Victoria), who reported 2YI 'phone very strong. Signals which were then exchanged with 3BD (Mr. Cox, Victoria), were very strong both ways. 2YI, using 10.5 watts, radiates .75 amps. His aerial is 55ft. long one end, 34ft. the other, and consists of a six wire cage 74ft. long. The receiver is tuned impedance circuit, using one stage R.F., detector, and two audio, with which N.Z. amateurs have frequently been heard. On many occasions 2YI has reproduced 3JU, 3BD and several Melbourne stations on a loud speaker. 3BD complains during the above tests of QRM from VIS harmonics.

### LUNCHEON TO MR. G. A. TAYLOR.

The members of the Association for the Development of Wireless in Australia, New Zealand and Fiji, are arranging a luncheon for Mr. G. A. Taylor, president of the association. The function will take place on Wednesday, March 12th, at the Ambassadors.

Among those who have signified their intention of being present are His Excellency the Governor, Sir Dudley De Chair, and the Lord Mayor, Alderman Gilpin.

The following is a copy of a cable received by Broadcasters (Sydney) Ltd., from Mr. Barrington, Marton, N.Z.: "Receiving concerts regularly; quality superb, especially violinist, 27th."

An article by Mr. C. W. Slade, entitled, "Note Magnifiers," will appear in next week's issue; also an article by Mr. Malcolm Perry.

On the night of Wednesday, March 5th, a Sydney experimenter logged the following message from 2CDM:—"Received music O.K. Weather bad."

### IMPORTANT ANNOUNCEMENT.

Commencing from our next issue, a series of constructional articles will be published in "Wireless Weekly." These articles, which will be conducted by a well-known experimenter, who will write under the nom de plume of "Insulator," will be particularly designed to assist the absolute beginner. All details of construction and operation of inexpensive sets will be fully explained, and "Insulator" will be pleased to advise and as far as possible assist any experimenter.

Don't miss these articles!

The  
**Home Electric**  
106a King Street, Sydney

Highest Quality

Receiving and Transmitting Sets and Parts.

See Our Display

Catalogue sent on receipt of postage



March 14, 1924.

WIRELESS WEEKLY

11

**Experimenters' Rally**

*Mr. P. Renshaw's Message*

Reveille sounds! Let all be up and doing! In these days of progress there is no time to do things by halves. Unless the foundation is well and truly laid the building will show cracks.

The foundation is ready, it is time now to commence work on the building. The building, is UNITY of aim and purpose, and the work must go on now.

All radio clubs and societies at present existing in New South Wales must concede that the pioneering work which has been accomplished by the Wireless Institute has been through long, tiresome and arduous. We are only to give credit where credit is due, and the outstanding feature of the existing situation is the faithful way in which the Institute has guarded the interests of all concerned in radio in Australia. Against tremendous odds it has struggled gamely and faced most awkward and critical situations with confidence that it would win through, and it has done so, and won the place it holds in the estimation of the public, which is well merited, and we know will be even improved as time goes on.

Now the Institute has come forward with definite proposals for the co-ordination of all radio clubs in New South Wales.

It is up to all experimenters to see that their clubs take this matter seriously. On the 19th March, at 8 p.m., in the Royal Society's Hall, 5 Elizabeth Street, Sydney, the Institute Council will meet one delegate from each radio club and discuss the proposals for co-ordination. Each radio club has been requested to empower its delegate to speak and act on that evening with full authority of the club, in order to facilitate the business, and assist in taking matters into the realms of accomplishments.

We little know what is ahead in the development of our wonderful science, and remember each and every experimenter to-day has a tremendous obligation to take the fullest interest in radio development and shoulder his share of the burden.

All clubs known to the institute have been circularised, giving full particulars of the meeting, so please do your bit, Mr. Experimenter, and see you are properly represented on this important occasion. Don't leave it to the other fellow; jump in and see to it yourself.

EVERYDAY QUESTIONS AND ANSWERS.

*By the Little American.*

Q.: What can I do to tune out nearby stations and hear the long ones?

A.: Some local stations are so strong that they are hard to tune out. A number of things can be done to reduce such interference. (1) Use an aerial 60ft. in length, one wire. (2) If your set has a primary variable condenser, keep the setting near the minimum, using a greater amount of inductance in the primary tuning coil. If your set has a fixed primary condenser, or a condenser mounted on the same shaft as the tuning coil, you will find that it is easier to tune out interfering stations with a small variable condenser (3 or 5 plates), connected between the lead-in and the set. (3) Eliminate the ground connection, and in its place connect another aerial (counterpoise). For very best results this should lie under the main aerial, but any such aerial will serve. Results that are obtained from such a combination are fully equal to the results that are obtained from the use of a ground, and the counterpoise is often better. Practically all transmit-

*Continued on page 20*



## Radio Company

Limited

15 LOFTUS STREET

Circular Quay

SYDNEY



# A FREE Wireless Set

For use as a "Stand-by" Crystal Receiver to all Experimenters purchasing any Standard Dry-cell Tube, including

**WD11 42/6, WD12 42/6**

**UV199 42/6**

We have only a limited number of these Crystal Sets in stock, and as they will go quickly, this REMARKABLE OFFER REMAINS OPEN FOR A SHORT TIME ONLY



## BROADCAST RECEIVING SETS AND LICENSE FORMS

Together with the FREE SERVICE of  
Broadcasters (Sydney) Limited  
may be obtained from the following

**L. P. E. Bean & Co.**

229 Castlereagh St., Sydney.  
Telephone: City 353.

**Continental Radio & Electric Company**  
Equitable Buildings, George St., Sydney  
Telephone: B 2467.

**United Distributing Company Ltd.**  
(Wholesalers)

28 Clarence Street, Sydney.  
Telephone: City 3566.

**W. Harry Wiles**

60-62 Goulburn Street Sydney.  
Telephone City 3688 1 door from Pitt St.

**Wireless Supplies Ltd.**

21 Royal Arcade, Sydney  
Telephone: M 3378.

**Pitt, Vickery Ltd.**

335 Pitt Street, Sydney  
Telephone: City 6053.

**E. R. Cullen**

96 Bathurst Street  
Telephones: City 869, 2596.

**Radio Company Limited.**

15 Loftus Street, Sydney.  
Telephone: B 5586.

**Radio House**

619 George Street Sydney  
Telephone: City 1487.

**Colville-Moore Wireless Supplies**

10 Rowe Street Sydney.  
Telephone: B2261.

**Ramsay, Sharp & Co. Ltd.**

217 George Street, Sydney.  
Telephone: City 3176.

**The Home Electric**

106a King Street, Sydney.  
Telephone: B 5565.

**Pacific Radio Co.**

Temporary City Address:  
2nd Floor, 121 Pitt St., Sydney.  
And 38 Donnelly St., Balmain.

**O'Sullivan's Electric Shop**

(Frank E. O'Sullivan)  
296 Pitt Street, Sydney.  
Telephone: City 8070.

**Swains**

119-123 Pitt Street, Sydney.

**N. P. Olsen,**

18 Hunter Street, Newcastle.



WITH JUSTICE FOR ALL.

By the Courtesy of "Radio Broadcast."

And still they ask: "Who is going to pay for broadcasting?" Several performers recently demanded pay for their services, their managers having refused to allow them to appear before the microphone without suitable remuneration. Certainly the radio public should pay. But how much, and how?"

The tactics of the self-styled American Society of Composers, Authors and Publishers, in trying to force stations to take out licences for the privilege of putting their jazz on the air have been frequently commented upon and frequently condemned. The arguments of their counsel at meetings of the broadcasters, as well as at court proceedings were specious, beside the point, frequently untrue. Their statements were conjecture rather than fact. On investigation, it was found that the society did not include as much musical talent as its high-sound-

ing name would lead one to believe. A survey showed that among the members were only 253 out of 5,000 authors and composers. The conservative writers and publishers were not appreciably represented in their membership, and it was found that much of the most successful music of the day did not originate in this society. This is true, for instance, of such popular hits as "Three O'Clock in the Morning" and "No Bananas."

Representative broadcasters ignored altogether the demands of the small but noisy band of jazz writers. As we have mentioned before, the outcome was the formation of the National Association of Broadcasters. A successful business man, having intimate knowledge of the musical game, Mr. Paul B. Klugh, was selected as executive chairman to guide the destinies of this new society which is attempting to solve the question of broadcast-

ing rights and income for the broadcasting station. The story of their present and anticipated activities convinces one that they are attacking the problem in a fair and unbiased fashion.

The Broadcasters' first activity was devoted to the question as to whether or not broadcasting did have a real advertising value. So they set about to get real information on the matter. Two experiments they made show, beyond peradventure, how powerful an agent radio is in making songs popular. The result of such advertising was sure and decisive. In one case, a two-year-old song was selected as a test piece. This song had been put on phonograph records, but the sale had not been large. At the time of the test, the piece was stagnant, most stores reporting practically no sales. An inventory of the records in stock

Continued on page 17



BRANDES

The superior is the standard in its class. The "Featherweight" headband makes fitting easy and comfortable. The six-foot "No noise" conducting cord has a red tracer woven into the lead for connection with the positive terminal to prevent demagnetization. The highest manufacturing ideals control the quality of the product.

PRICE - Brandes Superior Matched Tone headset with polarity-indicating cord 40/-

RADIO ENTHUSIASTS

Inspect the wonderful range of Wireless Supplies at our Radio Dept., 1st Floor, 386 George Street

All Remler, Kilbourne and Clarke Goods and many Crystal Novelties.

The Latest Speaker is

Brandes Table Talker

Special Price 80s. Come in and hear it.

Harringtons LTD

386 GEORGE STREET

Branches in all States.



### Headquarters of 2 CDM

The photo shows Messrs. C. MacLurcan (left) and J. Davis (right) and the special cabin erected on the stern of R.M.S. Tahiti.



Another view of the Cabin



#### REPLY TO Mr. MINGAY

Woollabra,  
6/3/24.

The Editor,

"Wireless Weekly."

Dear Sir,—In replying to Mr. Mingay's letter, in your paper, I would wish to point out that it would be manifestly unfair to compel all experimenters to subscribe to the broadcast services in which they have practically no interest.

Of course, we all recognise the fact that a comparatively few of those holding experimental licences at the present time, are really experimenting, and that the others are enjoying the broadcast programmes free of cost, but we must agree that the real technical amateur has little interest in broadcasting, and practically never tunes it in.

A better scheme would be to increase the standard of technical knowledge required to obtain an experimental licence, and to institute a second-grade licence for those experimenters who are unable to pass the test. This second-grade man would have to pay the full fees to assist broadcasting, as his knowledge would be insufficient to enable him to carry on important research work, and he would spend most of his time listening to broadcasting. On the other hand, a first-grade experimenter could be charged a minimum fee for his licence, as he is a really valuable asset to the country, and some incentive should be given to others to work up to his standard of knowledge.

By the time that the experimenter could pass the examination for first-grade, he would have lost the first flush of interest in broadcasted programmes, and would be chiefly interested in amateur transmission, and the broadcast companies could not fairly demand his contribution towards the services in which he is no longer interested.

Of course, the ordinary person who has no interest in the technical side of wireless, and simply wants the broadcasted entertainments, should be made to pay for them, as they are for his benefit.

We are all perfectly in agreement with Mr. Mingay that the regulations require drastic amendment, but I, for one, do not wish to see the valuable body of amateur radio scientists, that is just springing up, penalised to pay for the amusement of the broadcast "fans."

Yours faithfully,

RAYMOND H. SHAW.



## During Office Hours

By The Little American.

Come in. Yes, that is a radio set. Will it receive music from New York? Oh, no! It has not grown up enough yet.

KGO, the new station of the General Electric Company has opened with programmes on Tuesday, Thursday and Saturday of each week. It uses a wave length of 322 metres at 1000 watts input in the aerial. It is hoped soon to relay broadcast programmes from KDKA at Pittsburg, through the station at Omaha, Nebraska, on 100 metres or under, and broadcast through KGO.

How many valves does it use? Oh, only eight. It is a super-heterodyne. What makes it so long? The cabinet does. It was built that way.

A recapitulation of radio broadcasters in the United States at the beginning of the year shows fewer but better broadcasting stations. The stations listed by the Department of Commerce are 534. The loss is not regarded as serious to the popular industry, however, although many fans hated to see some of their old friends depart. The remaining stations are reaching a higher

place of efficiency and rendering better programmes with necessarily less interference.

Of the existing stations, 290 are of class A, 46 in class B, and 2 in class C. In the past two months 67 stations ceased broadcasting and 24 opened, showing that the decrease in numbers is gradual but steady. The prophecy that soon there will be fewer, but better stations is being fulfilled.

Does the spider-web framework really catch the sound you hear? Oh, no! It is to attract the flies' attention so as not to interfere with radio waves.

Broadcasting has developed a new test for the nerves, according to several radio broadcast managers.

"Stage fright," "movie nerves" and "buck fever" are all well-known to the public, but the little metal microphone, "the door to Radioland," has sent terror to the hearts of many seasoned entertainers, who have performed before packed houses without a tremor.

Appearing for the first time before the "Mike," the artists, almost without exception, ask: "How many people

will hear this? What tone of voice shall I use? Do you think I have a good voice for the work?" And many other questions indicating nervousness.

Having performed before "Mike," who is cold and unresponsive, the artist waits impatiently for letters from the invisible fans, whose faces he could not read, to learn whether or not his act "went over." Unless he receives letters of applause his fever is likely to rise until it becomes dangerous.

You are looking for the manicurist? Right across the hall, madam. Good day.

### WIRELESS APPARATUS

New or Second-hand,  
Bought, Sold or Exchanged

HOWELL'S

19 Barlow Street

An illustration of our

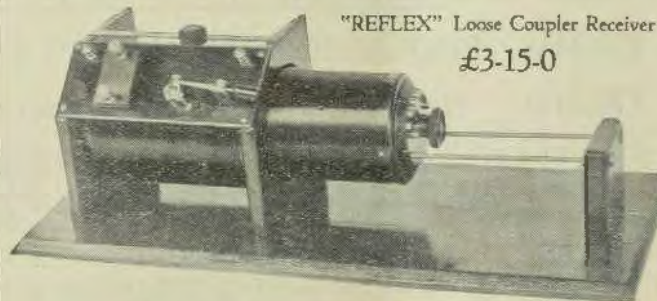
## 'REFLEX'

Loose Coupler  
Receiver

as Quoted in our Price List

### Special Features

Bakelite Panel with Aerial and Earth Terminals; Detector; Phone Condenser and Phone Terminals mounted over Primary Coil; Secondary Coil Selector Switch and Studs mounted on Circular Ebonite on end of coil; Nickelled Terminals; Slider and Running Rods; Polished Maple Woodwork.



"REFLEX" Loose Coupler Receiver

£3-15-0

Complete Set of Parts to make the above Set 36/6

Postage 1/6

RADIO HOUSE  
619 George Street, Sydney







**MARRICKVILLE AND DISTRICT RADIO CLUB.**

This club met as usual, in the School of Arts, Hawarra Road, Marrickville, on 3rd inst. Mr. W. I. Hamilton, president, Mr. A. W. Watt, editor of "Wireless Weekly," was welcomed by the president, who, on behalf of the club, thanked Mr. Watt for the splendid effort he was putting forward to make his weekly a paper of interest to the experimenter. Mr. Watt, in replying, advised all present that the experimenters' interests were his interests, and as such the amateur could look to "Wireless Weekly" in future as being a sound organ.

Arrangements having been made to give a demonstration of radio music

to the members of the School of Arts, the club adjourned to the new billiard room, on the occasion of the opening of which a social function was in progress.

With apparatus kindly lent by the firm of W. Harry Wiles, Mr. W. H. Weston and Mr. W. F. Allworth entertained the 350 people present, who heartily applauded each item. Altogether a most enjoyable evening was spent.

Secretary A. W. Henning would be pleased to hear from local experimenters who wish to join the club.

**WENTWORTH RADIO CLUB.**

The club met on March 5th, there being a good attendance. Mr. W. Cottrell gave a splendid lecture on "Radio Frequency."

The amateur situation was discussed very fully, and it was decided to affiliate the club with the Wireless Institute of Australia. Mr. R. C. Marsden was appointed delegate.

**THE LEICHHARDT AND DISTRICT RADIO SOCIETY.**

There was the usual good attend-

ance of members of the Leichhardt and District Radio Society at the 17th monthly business meeting, which was held at the club-room, 176 Johnston St., Annandale, Tuesday, March 4th.

The chair was occupied by the President, Mr. H. Kirkpatrick, and after the minutes of the February meetings had been read and confirmed, four new applications for membership were dealt with, all being passed unanimously.

A motion was then carried that the Society donate the sum of £1/1- towards the Moore Relief Fund, this motion meeting with the hearty approval of all present.

On Saturday, March 1st, a party of members paid a visit of inspection to Broadcasters (Sydney) Limited, and thoroughly enjoyed the outing.

On March 25th, the fourth lecture of the syllabus will be delivered by Mr. F. Thompson, who will deal with the important subject of telephones.

All inquiries regarding the activities of the Society should be addressed to the Hon. Secretary, Mr. W. J. Zech, 145 Booth St., Annandale.

ASK YOUR RADIO DEALER FOR

TRIMM "PROFESSIONAL" HEADSET 45/- per set  
3000 Ohms

TRIMM "DEPENDABLE" HEADSET 32/6 per set  
2,400 Ohms

BAKELITE—SHEET ROD AND TUBE—FOR PANELS, KNOBS, ETC.  
 Higher Insulator than Ebonite, is mechanically stronger, can be machined, takes a high polish, does not crack, warp or discolour with age, and stands the Highest Electrical Test.

WIRES BELDEN MANUFACTURING CO.'S PRODUCTS.  
 COPPER—Beldenamel DCC SCC DSC, for general purposes and panel wiring.  
 Resistance—1A1A, 193 Alloy, Nichrome, etc., for Resistances and Rheostats.

INSULATIONS—MICANITE & INSULATORS Coy. Ltd. PRODUCTS  
 Empire Cloth and Silk, Leatheroid, Friction Tape, Terminals,  
 Resin Cored Solder, and Fibre Sheet, Rod and Tube.

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**O. H. O'BRIEN & NICHOLL (Sydney)**  
**37-39 PITT STREET, SYDNEY**

Phone : City 3302.

Phone : City 10592.



*With Justice for All*

*Continued from page 13*

was then taken by an agent of the broadcasters. A short time after a good station had broadcasted this song, using an accomplished artist to "put it over," another canvass of the stores showed that 80 per cent. of the phonograph houses had sold out the record. With such facts to go on, the broadcasters knew what they were talking about.

A composer now sends in his song, and it is examined by well-qualified musical critics. If it passes the judges, the members of the association put it on the air. If the song is a hit, the author at once begins to receive whatever royalties on the sheet music the copyright law entitles him to. With no advertising expense of his own, he begins to reap the benefit of the radio advertising. If the song proves sufficiently popular to justify its reproduction for the phonograph and player piano, the broadcasters begin to get some return for selling the song to the public. Their contract with the author stipulates that a certain reason-

able percentage of the mechanical royalties shall accrue to the Association of Broadcasters; if the song is successful, the author receives all the royalties from the sheet music sales. But he shares the royalties from the records and piano rolls, with the National Association of Broadcasters.

This solution of the problem looks logical, and eminently fair to the author. He stands to lose nothing if his song doesn't "go," and if it does, his interests are identical with those of the Broadcasters' Association, so he may be sure that his song will be given as much prominence as possible. We hope the new scheme proves a success.

**TO RADIO CLUBS**

Wireless Weekly will be glad to publish reports of meetings held by all Radio Clubs.

We would like copy to reach us before Friday in each week in order to ensure its publication in the ensuing issue.

Address all communications to The Editor, Wireless Weekly, 33 Regent Street, Sydney.

Messrs. Harringtons Ltd., whose advertisement appears in another portion of this issue, have recently opened a Radio Department, where a large stock of up-to-date apparatus, which has just arrived, is available.

4AA (N.Z.) reports by Radio that 2 CDM has burnt out twelve 5 watt oscillators. He is at present using one oscillator and is radiating 600 milliamps.

Dinny: "Mother, when did you first meet father?"

Mother: "He was introduced to me at a dance."

"Aha! I've often wondered why he told me to keep away from dance halls!"—Judge.

"Did you kill the rooster for tomorrow's dinner?"

"No, Ma; I went out there, but I thought it would be better if the poor fellow got a good night's rest first, 'cause he's got such a hard day before him tomorrow."—Life.



Complete Stocks of all parts for Amateur Construction. Being direct importers, we are continually adding many new and interesting lines to our stocks. Members of Broadcasters (Sydney) Ltd. and agents for Farmer's Broadcasting Service. We pay carriage throughout N.S.W. Send for Complete Price List.

**W. HARRY WILES**

ELECTRICAL AND WIRELESS SUPPLIERS

60-62 GOULBURN ST., SYDNEY

One door from Pitt Street



## The Moore Fund

### Further Appeal to Clubs

To date nine Clubs have forwarded amounts for this very worthy appeal. In Sydney and suburbs there are something like forty Radio Clubs, and we want the secretaries of those Clubs which have not yet subscribed to bring the matter up again before their members. The need is urgent, so we ask you not to put this aside until a later date, but act upon that time-worn motto and "do it now."

The Waverley Club is carrying on a week by week appeal to its members, and a lump sum will be forwarded at a later date. We offer this as a suggestion to others.

### Appeal to Traders.

Recently, the Wireless Institute has made a special appeal to Traders, some of whom have generously responded. To those who have not, we want to stress the fact that their subscriptions will be welcomed to the fund.

Send along the contributions to the "Wireless Weekly," 33 Regent Street,

Redfern, or to Mr. Phil. Renshaw, Box 3120 G.P.O., Sydney.

The funds will be handled by a Board of Trustees, consisting of Messrs. F. Basil Cooke, Phil. Renshaw and J. W. Robinson. These gentlemen will see that the money is properly disbursed.

A considerable portion of the wireless apparatus belonging to the late Mr. Moore is on sale at the shop of Miss Wallace, Royal Arcade, Sydney. Call in and see whether there isn't something worth having. Every item purchased means a little extra to the fund.

The owner of the late Mr. Moore's residence has requested the removal of the aeriols, in order to make way for new tenants. Will some one make an immediate offer for the gear as it stands?

The mast is of wood, in two sections, each 40ft. high. The top section is so constructed that it may be lowered by sliding down the lower section. The aerial is of the umbrella type, comprising four squirrel cages, each about 80ft. long.

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EARL PAGE,  
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**Questions and Answers**

*Continued from page 11*

ing stations use a counterpoise in preference to a direct ground connection.

**Q:** Can two radio sets use the same aerial?

**A:** As a rule this is not satisfactory. Re-radiation from each receiving set tends to produce squeals and howls in the other.

**Q:** Can more than one pair of 'phones be used?

**A:** Yes. There is little loss of efficiency when more than one pair of 'phones are connected. In all cases the 'phones should be connected in series, that is, tip to tip, with the two free tips inserted in the "phones" binding posts or plug.

**Q:** Is it absolutely necessary to insulate an antenna?

**A:** In dry weather an uninsulated antenna may be used without much leakage. In damp weather, however, it is quite necessary to have the antenna insulated at all points of support. Ordinary porcelain insulators are suitable.

**Q:** I follow instructions on tuning, etc., but I cannot hear the long distance stations unless the vacuum tube is burning very brightly.

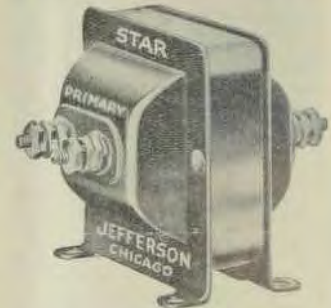
**A:** A number of things may account for this. (1) The tube may be defective. Try it out in friend's set. (2) Your aerial may be of poor design. An aerial longer than 150ft. will make the set act this way, and so will an aerial that is parallel to other wires which are grounded. If the aerial is very low, say, ten feet above the ground, and over a hundred feet long, the same effect may be noticed. (3) The voltage of the B battery may be too low, due to use, old age, dropping or other mistreatment.

**Q:** Is it advisable to burn a vacuum tube filament very brightly?

**A:** No, it is not advisable to burn it any more brightly than is absolutely necessary. Burning it less brightly increases its life and very often a weaker signal in the head-phones is more advisable than a very brilliantly glowing filament. It has been found that if a filament is operated with a constant voltage between its terminals its life is very greatly increased.

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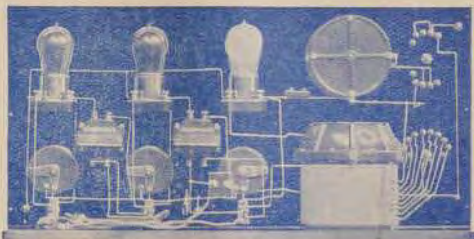
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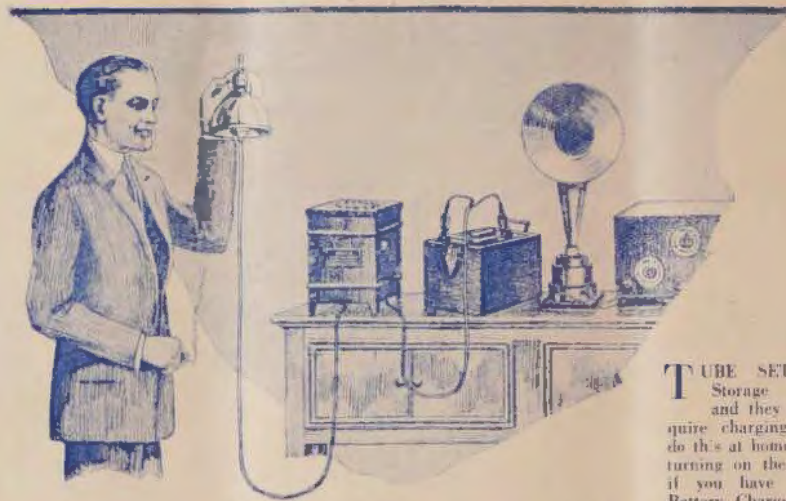
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