

A TALK WITH WIRELESS WEEKLY

Wireless telephony is now out of the experimental stages, as far as appliances up to a thousand miles are concerned, and it is time for the authorities came to realize this.

Every evening, at present, the principal Australian coast stations send out a radiotelegraphic weather report for the benefit of shipping, and very useful the report is, too.

But what about the man on the land somewhere in the interior of our widespread continent? In many cases he is as badly in need of a weather report as the mariner.

To carry telegraph or telephone lines to these lonely settlers costs a deal of money, and there is also maintenance to consider. But what about the radiophone?

As has been stated, the weather reports are now sent out in the Morse code, and very few people in the country have the time to learn the code in order to receive the reports, even if they had the apparatus.

Here is a suggestion for the authorities: Send out the nightly reports by wireless telegraphy for the benefit of those who can read the code, and immediately afterwards broadcast it by radiophones.

The man outback, if this is done, will be only too willing to install a receiving set. It will not be long before we have plenty of radiophones broadcasting in Australia, and the farmers' set will be the means of supplying

him and his household with entertainment they now lack.

It cannot be contended that the scheme is not workable. True, the argument of the authorities may be that they have not the equipment, but this is merely evading the matter. Soon, the coast stations of Australia will have to be equipped with a radiophone. Why not now?

But as it seems to be the Government policy to be years behind the world in all things—including wireless—it is probable that this suggestion will fall on barren ground.

Officialdom is certainly not the happy hunting ground of progress!

A good grounding system is as necessary as a good aerial. The water pipe is not always satisfactory. If you have the opportunity, bury a large coil of fencing wire in a spiral form six feet; it's good.

PLAY THE GAME.

APPEAL TO AMATEURS.

In this country, unfortunately, there are a few experimenters who are dabbling in Radio without the necessary Government licence, and it is up to these persons to get busy to procure one.

Through the thoughtlessness of a few people, the whole body of Radio experimenters are jeopardised, and it's not playing the game to the genuine person who abides by the laws as laid down by the authorities. These unlicensed experimenters believe they are perfectly safe from detection, but some would get a shock if they knew their names are in the hands of the powers that be. It is only a matter of time before they will pay the penalty for it.

Restrictions will never be eased if this sort of thing is going to continue. Radio in Australia is just about to step into the limelight, and it is to the experimenters that we make this appeal.

Once more let us impress on those few to play the game, and in doing so, make Australia an experimenters' paradise.

If you have a "L" type aerial and change it to a "T" type, you cut down the natural wave length considerably.

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PESSIMIST AND OTHERS.

(By W. Bird.)

Two Radio amateurs met the other day in a Sydney street. One was a pessimist, and the other an optimist.

"Everything that is isn't," said the pessimist; "nothing can be not to rights."

Optimist replied: "You are wrong, friend; everything that isn't is. From nothing everything was created. For everything wrong there is a remedy." Then the pessimist challenged him: "Come, my friend, let us take a walk together; we shall see what we shall see."

They had just started when they were overtaken by another Radio amateur. His face had no trace of bitterness, and pessimist felt indifferent towards him. Optimist, too, was unattracted. But the newcomer seemed civil enough, so they invited him to join them.

A little further along the road they met another young amateur, who was in a fix. He told them that a gale had twisted his aerial. The four started off to look at the aerial. When they reached his station the pessimist said to the optimist, "he will never get that twist out."

"Oh," replied the optimist; "he will get it clear all right. Some fellow that can climb will sure to be along bye and bye." They both turned to the amateur, who had overtaken them, for his opinion, but he had his coat off and was climbing the mast.

They watched in silence. He slid down again, and said to the young amateur, "hold this rope," and with a few pulls on another rope set the aerial free again.

It occurred to optimist and pessimist to ask his name.

"Friends, my name is Peptimist. I am by occupation a doer. What is not, I cause to be; what is wrong, I right. My tools are thought and action."

The moral of the tale is this: The men we want at the present time in the amateur Radio game are those of thought and action.

CAST OUT.

The amateur climbed the golden stairs,
St. Peter asked him in,

And he passed the gates of Paradise,
Thankful he had no sin.

They gave him wings and snowy gowns,
He thought it good, but yet—

He yearned for his box of Radio junk
And a nice receiving set.

The amateur nosed about a bit,
But nary a set saw he.

And he asked his fellow harpists
How came this to be?

They told him the sorrowful story:
The boys had spoiled the show;
Unlicensed receiving principally,
(The sets were sent below).

They cast him out of Paradise,
He did create a din;

(If they'd have known him earlier
He wouldn't have got in).

For he pulled his harp to pieces,
And working on in bliss
Was making a set, he told them,
To work with V.I.S.

SLIDER HINT.

A slider for a tuning coil can easily be made by soldering a piece of brass to the base of a terminal to make contact with the coil.

The rod may be a length of brass wire of such a size that the terminal slides on freely. The slider is clamped by means of the terminal set screw.

MARCONI'S TEACHER.

Prof. Auguste Righi, of Bologna, died at the age of 70 recently. It was he who taught the wonders of the Hertzian wave to the boy with the Italian Father and the Irish Mother, and his tutorship bore the fruits of Marconi's great invention, a system of radio-telegraphy, using the principle that between the ether waves there was a "filler" which could be made to transmit energy through space. The invention, which has been the means of saving many lives, has proved a great blessing to mankind.

TELEPHONY HINTS.

For experimenters who are about to dabble in the reception of Radio telephony, a few useful hints will suffice.

You know that at a certain time, and on a given wave length, Mr. So-and-so will be broadcasting telephony, and you wish to pick this up. To do this expeditiously, follow these instructions:—

Adjust your receiving set to approximately the desired wave length, and if you are using a regenerative circuit, just get your valve oscillating, and bring back the Rheostat a fraction of a turn.

At the time the telephony is due to be broadcasted, "search" with your condensers until you hear the carrier wave, which is easily recognised by the shrill whistling note. Wait a little till you hear signs of speech, then loosen your coupling, and make the final adjustments on your primary and secondary condensers, after which again adjust your coupling, till you get the clearest and loudest speech.

If you are using a soft valve, it will require a delicate adjustment on filament and plate. Capacity effect of the hands coming in contact with the controls, at times causes a lot of delay in getting the desired adjustment, but practice will enable one to obviate this on future occasions.

AMATEURS!

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AN ATLANTIC EPIC.

Imagine a small tramp steamer pitching and rolling in an Atlantic gale. Imagine a tiny radio room on the vessel, and the operator hanging to his chair and adjusting his apparatus as best he can. Imagine the feelings of the operator when he is told the vessel is sinking.

All this occurred recently, and the operator sent out his S.O.S., intermingled with jests.

The steamer in distress was the Grontoft, and her distress signals were picked up by the Estonia, which rushed to aid her. The conversation was as follows:

11 a.m.: Grontoft sends second S.O.S., and operator adds: "Well, the steward is making sandwiches for the lifeboats. Looks like we were going on a picnic."

THE LAST WORD.

11.30: Grontoft sends: "The old waggon has a hot like a rundown heel. This is no weather to be out without an umbrella."

Estonia replied: "Hold on, we'll go alongside soon."

12.19: Grontoft sends: "We are sinking stern first. The boats are smashed; can't hold out any longer." The operator added: "The skipper dictated that; he ought to know.....Where did I put my hat?.....Sorry, we couldn't wait for you.....Pressing business elsewhere.....Skoll" (the Norseman's "Chin Chin").

That was the last word of the Norwegian tramp. The sublime courage of the operator was in keeping with the highest traditions of the sea. The science is thrice enhanced by such men as he.

A POTENTIOMETER.

A potentiometer may be easily and cheaply constructed from a carpenter's lead pencil, by taking out the lead and clamping it on a suitable mounting, with a brass strip across each end. Mount a slider above the lead on two small brackets, and the job is complete.

THE MORSE CODE.

ALPHABET.

a ---	j -----	t ---
b ----	k -----	u ----
c -----	l -----	v -----
ch -----	m -----	w -----
d ---	n ---	x -----
e -	o -----	y -----
f ---	p -----	z -----
g ---	q -----	
h ---	r -----	
i ---	s ---	

FIGURES.

0 -----	5 -----
1 -----	6 -----
2 -----	7 -----
3 -----	8 -----
4 -----	9 -----

You can learn it in a day or so.

SUBSCRIBERS.

Intending Subscribers may write to Wireless Weekly, Box 378 G.P.O., Sydney, enclosing Cheque or Money Order. Subscriptions in Australasia: 17/1 per annum Post Free.

The "Wireless Weekly" will be on sale each Friday at all newsagents. Order your copy now.

Letters for publication must be addressed to the Editor, Box 378, G.P.O., Sydney. In all cases where it is desired, letters will be published under initials or a nom de plume, but the writer's name and address must be given as a guarantee of good faith.

In wiring up a valve control panel, take care that the wire from the Grid does not run parallel with the plate lead, as if it does, you get inter-action in your set, which is heard in the 'phones, and tends to inefficient working.

IN AN EMERGENCY.

During the recent heavy weather my aerial was put out of commission, so I looked on to a single wire which had an average height of about 8 feet from the ground. The results certainly surprised me. V L W, V I T, V I H were copied with the greatest of ease, while Mr. MacLurcan's 'phone came in strongly, the distance from him being about 14 miles. A valve detector only was used.

—W.D.



Note these Ear Pieces

The nickel-plated brass noses are machined to give strength where needed and to reduce weight where possible. The

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is rigid and hard-wearing without being overweight. The one-piece Special Tungsten Steel Magnets insure permanence under severe conditions; and note the comfortable adjustment arrangement.

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MAKE YOUR OWN.

A RADIOTRON HOLDER.

To make this socket you will only require two scraps of ebonite, four bolts and nuts, and four small scraps of brass.

In fig. 1, "e" is a piece of ebonite 2 inches square, with a circle

held in position by the four bolts "b"; and four tubes, each an inch long, separate the top and bottom pieces of ebonite.

The small pieces of brass "c" are held in position under the

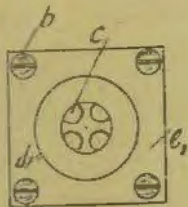


fig 1

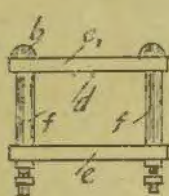


fig 2



fig 3

cut out in the centre 1 1/2 inches in diameter, and a small slot "d."

In fig. 3, "e" is the other piece of ebonite also 2 inches square, with a 3/4 inch circle cut out. This forms the base.

The two pieces of ebonite are

bottom piece of ebonite by the nuts shown in fig. 3. Two small pins "d" in fig. 2 hold the valve in position.

If the brass parts are nickelled, a very effective little job will be obtained. Patent applied for.

ANOTHER DETECTOR.

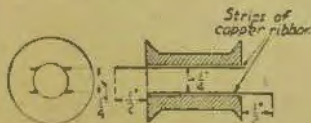
After a particularly trying time with his detector, an amateur began to cast about for some way of maintaining a permanent, sensitive adjustment, and finally hit upon the following plan, which he describes in "Radio News":—

A common spool was taken and

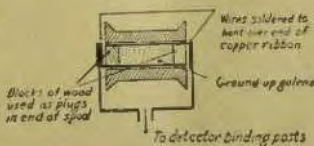
a quarter of an inch apart. One end of each strip was made flush with an end of the spool in such a way that each strip projected 1/16 in. beyond the end of the spool, with each projection at a different end of the spool.

Two small blocks of wood, cut so that they fitted snugly between the strips of ribbon and the surface of the spool, were next made.

One of these was inserted at one end of the spool and pounded firmly into place. Then a quantity of crystal sufficient to nearly



four lengthwise slits were cut in the surface of the hole which runs through the middle of the spool. Two strips of copper ribbon, 3/16 in. in width, and 1/16 in. longer than the spool, were then cut. These were inserted in the slits so that they formed two parallel surfaces,



fill the space between the strips was ground to a mixture of powder and fine granules. This was poured in between the strips and the other wooden plug pounded firmly in.

The projecting ends of the copper ribbon were then bent over flush with the ends of the spool and a short piece of wire soldered to each. These wires were led to the regular binding posts of the detector and the work was completed.

This detector was found to be in adjustment when first connected, and the inventor has since been unable, either by a gentle tapping or by the most vigorous shaking, to impair the fine degree of sensitivity the detector provided.

The crystal used in the spool was galena, but some other crystal, or perhaps the mixture of two or more kinds, might give even better results.

RADIO PHONES.

Special features are embodied in telephone receivers for use in wireless telegraphy.

The ordinary low wound receivers are not suitable, as there is not sufficient turns on the winding to make the weak currents energise the pole ends and affect the diaphragm.

The receivers are usually wound with a very fine silk covered magnet wire, which allows of a large number of turns to be placed in a small space. The standard resistance for each receiver is 1,000 ohms.

The diaphragm is made very thin, as it has been found that the best results from weak currents are given with this type.

It is possible to use a valve receiving set, using the iron of potential of the "A" in place of the "B" battery with excellent results. In other words, no "B" of any description is required.

For short wave work, variable capacitors are the most efficient tuning elements known, the degree of selectivity being most marked.

AN AMATEUR LOOKS BACK.

Mr. R. C. Marsden's Memories.

Yes! I can remember it as if it were only yesterday. When 18 years old I first got the fever to probe the latest fascinations of wireless.

In those days I lived in Potts Point and the neighbours looked on me as a budding genius just because I struck out in the unique hobby of studying wireless telegraphy. At the time I took this science up (from an amateur's point of view) I was also endeavouring to learn the necessary subjects to pass the Matriculation but I am afraid the wireless got more of my attention than it really should have had. However, it was instructive, and as it happened, I didn't waste my time.

What prompted me to interest myself in it was a book I happened to see, telling how it was possible to build a home-made set for a ridiculously small sum. It strongly appealed to me and then and there I decided to get busy as per the instructions.

All this happened at the end of 1909, and as I had just recovered from a serious operation, outside sports were debarred, and this hobby was the means of spending many happy hours of my leisure. In those days it was practically impossible to buy any kind of wireless instruments in Sydney, and immediately difficulties cropped up.

PHONE TROUBLE.

One of my chief was to get a pair of phones sufficiently highly wound to be of practical use for wireless work, and I had to get over this difficulty by purchasing a pair of ordinary watch type Ericson telephone receivers. The next difficulty was to find the necessary fine gauge wire to wind same, and the person capable of doing the job satisfactorily.

During my wanderings I came across a man in Elizabeth Street who decided to take on the job, and a jolly good job he made of them too.

Having successfully overcome the biggest difficulty, my next

trouble was how and where to obtain the necessary minerals for crystals. Eventually I decided to pay an unofficial visit to the Mines Dept. where after an interesting talk with the gentleman in charge I opened my heart to him. He being a thorough good sport gave me samples of nearly every mineral then known and after thanking him for his kindness I proceeded home with my precious parcel.

The next thing was to install an aerial, and I read in that little book that it was essential to have it as high as possible. So immediately on the top of a 40ft. house I erected a 30ft. mast. The other end ran to the top of the stables, a span of 250ft. (approximately) and 30ft. from the ground. There were 6 wires in the aerial, each wire 75ft. long, and the aerial was of the "T" type.

THE EARTH.

The lead in wire caused a whole heap of trouble. I got busy with a hammer and cold chisel and succeeded in dislodging more of the masonry than I should have. However I fitted in a heavy glass tube within a fibre tube and protected it as much as possible from the effects of moisture, etc.

The earthing system was composed of a heavy gauge wire to the water service and also to an old metal bath buried in a permanently damp spot where the sun never could get at it. To make it more so, a buried water pipe in the proximity was caused to spring a small permanent leak.

Coming to the set itself I had a transmitting and receiving set, and I will deal with the former first. The main source of power for the transmitter was supplied by a 6 volt accumulator, hooked up to an induction coil capable of giving a 4 inch spark. Four Leyden jars lent their aid to make this set a potent factor in the immediate vicinity. A key and helm, together with the ne-

cessary switch gear, completed the transmitter.

The receiving set was composed of a 2-slide tuner coupled to a detector board, on which nestled 4 types of crystal detectors, including silicon, iron pyrites, molybdenite and galena. A Blocking condenser across the phones and as a detector, switching gear about filled the bill.

In those days Sydney Radio was on the top of the Hotel Australia and the call letter was A.A.A. They were rapturous wireless days; no licenses for amateurs, and all was a garden of roses.

THE ROOF LEAKED.

I had a friend down the street who was also an enthusiastic experimenter. He had a sending and receiving set and between us we had a lot of fun. I remember the day we put up his aerial on the top of a roof of a terrace of houses. The terrace was of ancient structure and our work on the roof did not improve its weather resisting capabilities, for when heavy rain set in the ceilings of the wretched places showed up our tracks along the whole length of the top rooms.

The outcome was that the landlady lost her tenants and forthwith ordered the removal of the aerial. Later, I may mention, the offending tenant also made tracks.

Even in those days we did good work for amateurs, and I can remember hearing a warship in Hobart calling, quite an achievement in those days.

One day the household cat took a fancy to sleeping where my aerial and earth wires ran closely, stretched across these leads. Being like most small boys I had to do it. I pressed the transmitting key down good and hard. With a howling squeal poor old tom leaped feet into the air, and I can assure you he was a very sick cat for many days. It was a remarkable thing that it took several days for his hair to adopt a horizontal position.

On that station is the only time that I've seen lightning jump between the aerial and earth switch. Many times since have I tried to induce it to do so, but without success.

August 11th. 1922

WIRELESS WEEKLY

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Make it a golden rule to always keep the connections on your set clean and free from dust. Terminals not nickelled are apt to get very dirty and they should be cleaned frequently. Good signals will be impaired by neglect of this task.

An amateur down in Rose Bay put a bombshell amongst us one day. "It's alleged that he did see Q.R.M. on his "grid," and the plate Q. R. Teed., so they say.

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THE TRANS-PACIFIC TESTS.

For the "Wireless Weekly," by Q.R.M.

George had a new valve set, and it was the pride of his young life.

From his home in a Sydney suburb he "listened in" nightly, changing this and that, adding and taking away. In an endeavour to get long distance stations. He was fairly successful, too.

One night, when the family were out, George switched on his valve and adjusted the phones. It was an ideal night for working, and he had a feeling that he would do some good work. VIS was very active, so George switched off for a while and changed over to a circuit of his own that he had been working on for some time.

When next the valve glowed George was surprised by the excellence of the signal. "Now," he thought, "I am going to get something good." He had been reading about the amateur trans-Atlantic tests, and was fired with enthusiasm at the results. In fact, he had told his pals at the club that there should be trans-Pacific tests, and they had laughed at him.

Adjusting his set for 200 metres, George listened carefully. He knew that there would be nothing on this short wave, but something prompted him to do it. Suddenly he started violently, seized a pencil and pad and began to write. There was a very faint,

but readable signal coming in, and the dots and dashes spelt "Australia -Australia -Australia." Then he began to write, and the words on his pad were:—

"Californian Amateur Radio Association to Australian amateurs. We send you greetings."

The message was repeated several times, and then there was silence.

George was wildly excited. He dashed off and told all his pals he could find at home, but they did not believe him. Next morning there was published a cable telling of the endeavour of the Californians to get their message across. George was elated. He produced his message, gave times, and it was officially proved that he was the only amateur in the Commonwealth to get the tests. The feat was featured in the Press, and George's photograph was eagerly sought. This was fame indeed!

* * *

Bang! Crackle!! Crackle!!!

George sat up sleepily and rubbed his eyes. His valve burned brightly, and old VIS was going for his life. The watch on the table showed 9.30, and George had sat down at eight. The trans-Pacific test? He remembered, and pulled his pad toward him. A look of disgust came over his face.

The pad was absolutely clean!

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IMPORTANT CONFERENCE.

Club Delegates Meet.

Following are the minutes of the meeting of delegates from wireless clubs and societies of Sydney, held at the Wireless Institute's clubrooms, Dalley Street, Sydney, on Friday last.

Mr. P. Renshaw was appointed chairman. The following clubs were represented by the delegates mentioned:—

Military Radio Association: Messrs. Marsden and Mingay.

Wireless Institute (N.S.W. Division): Messrs. Renshaw and Perry.

Metropolitan Radio Club: Messrs. Marsden and Best.

Waverley Wireless Club: Messrs. Burrows and Thompson.

Western Suburbs Wireless Association: Messrs. Challenger and Slight.

Illawarra Radio Club: Messrs. Atkinson and Hewitt.

The Concord Radio Club and North Sydney Club were absent from the meeting.

Mr. Charlesworth was appointed minute secretary to the meeting.

The chairman pointed out the purpose of the meeting, and invited discussion.

Mr. Best moved that in his opinion the proposed mass meeting was not justified.

Mr. Perry, supporting Mr. Best, urged that the meeting discuss the matter of co-operation of existing clubs and others likely to spring up.

NO MASS MEETING.

Mr. Mingay moved:—"That no mass meeting is justified at the present time." This was carried unanimously.

Mr. Mingay proposed that full press publicity be given to the results of the meeting. The motion was seconded by Mr. Burrows and carried.

Mr. Mingay moved: "That this conference discuss ways and means of forming an association of radio societies to be called 'The N.S.W. Association of Radio Societies.'" He stressed the necessity for such a central body to

control the interests of experimenters, and be their watch dog. He suggested that the Society be unlimited in its lines of action. Mr. Best supported this.

Messrs. Perry, Burrows, Challenger and Marsden all spoke in favour of the proposal.

Mr. Mingay's motion was carried unanimously.

Mr. Perry proposed that delegates to form the Society be appointed proportionately to licensed club members.

NUMBER OF DELEGATES.

Mr. Dewis expressed the opinion that this was not a good idea, and suggested that clubs eligible for representations must hold a certain number of license holders.

Mr. Burrows expressed the opinion that a club should not necessarily be composed of all license holders.

Mr. Perry disagreed, and explained that no member can be a wireless enthusiast without holding an experimental licence. Mr. Best said he would like to see Mr. Dewis' proposal put into effect, and not a proportional system.

The chairman then asked for suggestions as to how many members (licensed) a club must have to be eligible.

Mr. Best suggested that over 10 licence holders and up to 25 have one delegate, over 25 to have two delegates.

Mr. Perry proposed that this schedule be considered, and the motion was carried unanimously.

Mr. Mingay suggested that each club contribute 2/6 per member per annum as capitulation fee. Mr. Best, as an amendment, proposed that the fee be 1/- per licensed member.

The amendment was lost. Mr. Mingay's motion was also lost by 6 votes to 5. Mr. Hewitt then proposed that 1/6 per member be the fee. Mr. Best seconded.

The question then arose as to whether the fee should be levied on licensed or unlicensed members. After some discussion, it was unanimously agreed that the fee should be levied on all members.

MEETING ADJOURNED.

Mr. Mingay then moved an amendment that the fee be 2/- and this was carried, with only the Metropolitan delegates dissenting.

It was moved by Mr. Mingay and seconded by Mr. Marsden that the meeting be adjourned until four weeks from date, and that existing delegates return to their clubs with the results arrived at this meeting, and request their club's permission to act authoritatively as may be directed by their clubs. Carried unanimously.

A motion of thanks expressed by Mr. Perry and seconded by Mr. Burrows, was tendered to the chairman for his able administration of the meeting. Mr. Mingay also moved a vote of thanks to the Wireless Institute for arranging the meeting. Mr. Burrows seconded the motion, and was supported by Mr. Atkinson.

TRY THIS.

To keep a crystal detector in adjustment first find its most sensitive spot by a buzzer test, and then when the point of the "cat's whisker" is well placed drop some hot beeswax or paraffin around it.

In practice this has kept the whisker in the right place for months and eliminates the necessity of seeking the elusive sensitive spot every time the set is to be used.

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August 11th, 1922

WIRELESS WEEKLY

9

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MOUNTAIN MUSIC.

Progressive Scheme

Those who visit a certain Blue Mountain resort and trip the "light fantastic" in conjunction with sightseeing, are going to get the benefit of radio at no distant date, it is said.

From all accounts the enterprising dance hall proprietor is going to put in a good receiving set and a loud speaker and tap jazz music from the air for the benefit of his patrons. It is not said where the music is to be sent from, but doubtless the originators of the scheme have something in view.

The use of a potentiometer across the "A" Battery, when using a soft gas filled valve, greatly increases the efficiency of your set. Try it!

WAVE LENGTHS.

U.S. PROPOSAL.

An important conference sitting at Washington recently decided to recommend that the following wave length bands be included in the new regulations governing the use of Radio in the United States:—

Below 150 metres, reserved for experiment; amateur, exclusive, up to 200; technical and training schools, up to 275; City and State public safety broadcasting, 275 to 285, exclusive; restricted special amateur radiotelegraphy, non-exclusive, up to 310; private and toll broadcasting, exclusive, 310 to 435; aircraft radiotelegraphy and telephony, exclusive, up to 500; mobile radiotelegraphy, up to 525, exclusive; mobile radiotelephony, up to 650, non-exclusive.

Government and public broadcasting within a radius of 700

miles inland, 700 to 750; Radio-compass, up to 850, exclusive; aircraft, radiotelegraphy and telephony, up to 950, exclusive; Radio beacons, up to 1,050, exclusive; Government and public broadcasting, general, up to 1,500, exclusive; aircraft, radiotelegraphy and telephony, up to 1,500, exclusive; fixed stations, up to 1,650, non-exclusive; Government broadcasting, 1,850 to 2,050, non-exclusive; mobile service, 2,500 to 2,650, non-exclusive; fixed service radiotelephony, 2,850 to 3,300, non-exclusive; trans-oceanic radiotelephone experiments, 5,000 to 6,000, non-exclusive.

The brackets or wave bands not assigned to be given out by the authorities at their discretion as the need arises.

Never switch off your filament battery till you have dulled same by putting in all your filament resistance. If you do, you considerably shorten the life of your valve.

MUSIC IN THE AIR

CONCERT PROGRAMME.

Mr. Macfarren's next Sunday's concert will commence at 7.30, and will include the following Pathe records.

- Fox Trot—"Say it With Music."
- Soprano—"La Forza del Destino," Claudia Muzic.
- Hawaiian Guitar—"Mahaina Malamalama."
- Nursery Rhymes.
- Waltzing—"Brid Raptures."
- Tenor—"Vainement me bien aimee," Mr. Vaquet.
- Piano Solo—"Maiden's Wish," Chopin-Liszt.
- Fox Trot—"I call you Sunshine."
- Baritone—From the "Little White House."
- "The Night Nursery") Edgar
- "The Smoking Room") Coyle
- Hawaiian Guitar—"Sweet Lei Lehu."
- Banjo—"L'Infanta."
- (By Request)—
- (Soldier's Chorus) "Faust."

Tiny tots sitting on daddy's knee gasped with wonder and delight last Sunday evening, when Mr. Macfarren was sending his concert.

He thoughtfully included a couple of items for children in his programme and many a little one clasped the phone tightly and enjoyed the wonder tales. The sending station was tuned perfectly and the music came in well at all stations.

The programme was:—"Coral Sea," Fox Trot; "Good Bye," (Tosti) Mlle Yvonne Gall; "My Isle of Golden Dreams," Hawaiian Guitar; Nursery Rhymes; "Wind Among the Trees," Flute Solo; "Avalon," Mr. Ernest Hare, baritone; "Spring Song," (Mendelssohn) Piano Solo; "Hawaiian Twilight," Hawaiian Guitar; "La Traviata," Claudia Muzic, Soprano; "Hop, Skip and Jump," Fox Trot; "Old Mother Goose," Bedtime Fairy Story.

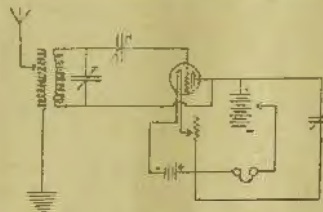
IT'S COMING.

Within a few years the wireless telephone will play an enormous part in the life of every man, woman and child in this country. Not only will it entirely revolutionise business life, but it will play a great part in the home.

INSTITUTE SECRETARY.

Phil. Renshaw Ill.

Experimenters, generally, will be grieved to hear that Mr. Phil Renshaw, the Hon. Secretary of the Wireless Institute (N.S.W. Division) is seriously ill in a private hospital. It came as a shock to many of us, as only last Friday night he was well and hearty, taking the chair at the first meeting of Wireless Club delegates at the Institute rooms, Dalley Street. We sincerely hope that he will have a quick recovery, and once again take up his duties.



America has realised already the wireless age. With us its coming has been delayed by force of circumstances; but that it is now on its way, and that we shall soon see the wireless telephone installed in a large number of homes is already certain. And when that time arrives the wireless telephone will be one of the greatest influences in our national life.

There is a large station at Denver, U.S.A. which sends out music that sets feet a-dancing in no less than four States.

AN AMATEUR COUNCIL.

The rapid growth of radio organisations in Sydney and suburbs shows that amateurs are keen on the idea of banding together, but they would be far more united if the whole of the bodies were linked together in some way.

In fact, there has been serious talk in some quarters of making a move in this direction.

The scheme mooted is to get each club to elect delegates to a body to be called "The Wireless Council of New South Wales." The number of delegates from each club would be according to the number of financial members on the register.

Once this Council is established it could circularise other States, and suggest similar action there. The councils of each State could then elect a delegate or two to form a Grand Council for Australia.

The Grand Council would sit each year and consider recommendations from the State Councils, and put anything necessary before the authorities.

When such a body can approach the authorities and say: "We represent the whole of the amateurs in Australia," the necessary weight and punch will be there.

The scheme is an ambitious one, but there is absolutely no reason why it should not be carried, why it should not be carried through.

Canadian Wireless says that an amateur they know of has converted an Ouija board into a panel for a receiving set and everybody is waiting with interest to see what will happen.

WIRELESS.

Complete Sets (Crystal and Valve)

Parts to make your own Set.

Send for Price List.

ELECTRICAL UTILITIES SUPPLY COY.

605 GEORGE STREET, SYDNEY.





Reports of club meetings and activities will be found under this heading. The Secretaries of the various bodies are invited to send along such reports for publication. Receipt will be appreciated. Manuscript should reach the Editor, Box 378, G.P.O., Sydney, not later than Tuesday in each week for insertion in the following Friday's issue.

WIRELESS INSTITUTE.

Mr. Phil Renshaw (Secretary, Wireless Institute), writes:—

It is felt that the inauguration of the "Wireless Weekly" marks another step in the progress of the Radio Science in Australia.

In the past there have been many steps, and the distance between them has been great, hence much time has elapsed since the Institute first commenced its activities. Being founded in 1910, it (immediately) started business by taking up the cudgels on behalf of its members and those genuinely experimenting in the Science. Although all activities were in recess for approximately five years of the war, the Institute has been directly responsible for a great many privileges at present enjoyed.

By careful government the Institute has survived many crises, and has recently achieved one of its ambitions by registering under the Company's Act in N.S.W. One of the Institute's planks has been the reduction of the license fees, and it is likely that it will shortly see its efforts in this regard have not been in vain.

The question of the issue of transmitting licences has long been a very vexed one, but the Institute has all along championed the cause of the experimenter and took matters so far that the Navy Authorities recently deputed its Commanding Officer to visit Sydney and interview the Council of the N.S.W. Division. However, the desired result has not been attained, although much is expected to transpire in the near future. When the Honorary Secretary was in Melbourne just before last Easter he had a long interview with Mr. Weston (in Mr. Malone's absence) in company with Mr. S. N. Newman of the Victorian Division, and the whole matter was again brought under review.

CONCORD CLUB.

The Concord Radio Club is delving into the transmitting side of the science, and some practical work is being carried out. At present the club is sending telephony and C.W. telegraphy on 200 metres each Saturday at 8 p.m. Members would like to know how far their signals carry and would be pleased if any amateur would report hearing them. Such reports should be sent to the Secretary, "Quondans," La Mascot Avenue, Concord.

WESTERN SUBURBS

The "Wireless Weekly" has been asked to act as the official organ of the Western Suburbs Amateur Wireless Association.

We have replied stating that we shall be pleased to do so, as it is the policy of this journal to assist the amateur in every way.

THE LOOSE COUPLER.

In building a loose coupler, do not forget that though it is going to be used in a crystal set at first, there will come the time when you will employ it as the tuning element in a valve set. In designing the coupler, make sure that you allow the secondary to slide out at least four inches from the primary, as this looseness in coupling for valve work is essential.

SALE & EXCHANGE

Three Lines (approximately 15 Words), may be inserted in this Column for 9d.

Extra Lines or part thereof, at 6d per line.

FOR SALE.—Valve Panel Set, 4-rod concerta deinst. gen. buyer, very cheap. Ring Y1333.

FOR SALE.—Leaking Coils (slag type): 600 to 500 metres. Seadiff, Macpherson Street, Waverley.

FOR SALE.—Crystal Set, 2500 m. Apply, particulars, 40 Hopetoun Street, Newtown.

FOR SALE.—Aerial 7-50, 200 ft., 10 ft. mast insulators etc., at 46 Rangers Road, Neutral Bay.

14-MILE WAVE LENGTH.

One of the world's most powerful radio stations is near Bordeaux, France, and is capable of sending waves 23,000 metres, approximately fourteen miles, in length. While wave lengths are not an infallible index to the power of radio stations, they indicate comparative strength, at least roughly. The Lafayette station, the one referred to, was built by the United States Navy and later sold to France. This station sends messages 4,000 miles to Washington, and it has been heard in French Indo-China, 6,000 miles distant.

Until recently this was recognised as the strongest station in the world, but its claim to this distinction has been challenged recently by a commercial station in Long Island, U.S.A. This station has a wave length of 19,000 metres, nearly twelve miles, and will, when additional units are added, be the most powerful in the world.—"Popular Science Signings."

An amateur man of renown
 Spread this beautiful tale round town:
 "That the tom eats one night
 All started to strike
 At the cutting of cat whiskers down."

STATION CALLS.

AUSTRALIAN SHIP STATIONS.

Leon, VKF; Adelaide (w), VAPC; Aldinga, VKD; Anzac (w), GABD; Alabama, VJM; Araluen, VJV; Aramac, VJJ; Arrawatta, VKV; Aroona, VKE; Austral-
brook, CGN; Ashbridge, VXF; Australcrag, VZQ; Australford, VCE; Australglen, CGD; Australia (w), GABF; Australmead, ZW; Australmount, VZY; Australpeak, VZS; Australplain, CGB; Australpool, VZP; Australport, ZT; Australrange, CGA.
Baldion, VEZ; Bakara, VJS; Bamba, VXB; Barwon, VKM; Barambah, VJR; Barunga, VKA; Beelsa, CGR; Bingera, VJD; Bunyong, VIQ; Dombala, VHF; Erzwah, VKZ; Boonah, VJQ; Eboral, CGH; Boorara, VJT; Brisbane (w), GABH; Bulla, VJP; Camira, VZA; Calulu, VZV; Carina, VZM; Cerberus (w), VKO; Changsha, GVBS; Ceduna, VKW; Charon, GFZM; Canberre, VHO; Cantara, VZC; Century, VKK; Cooco, CGM; Cockburn Sound Base (w), VKR; Chronos, VNJ; Coolana, VEZP; Cooma, VDE; Corio, VXO.
Deiungra, VXT; Durga, VXE; Dukera, VZD; Dimboola, VHL; Enoga, VXU; Dongarra, VJW; Dodge No. 3, CGK; Dromana, VXP; Dumosa, VXV; Dundula, VVW.
Echuca, VZBG; Emita, VHG; Encounter (w), GABK; Enogana, VXC; Era, VZBM; Eudunda, CGG; Eromanga, VHH; Eurobin, CGF; Erriba, VHJ.
Fantame (w), GABL; Fiona, VJQ; Flora, VHR; Flinders Island Base (w), VKP; Garden Island Base (w), VKQ; Geranium (w), GABM; Gilgai, VJK; Gorgon, VJBR; Gabo, VZBK; Governor's Grave, VZG; Goulburn, VKX.
Huon (w), GABN; Hexham, VZBJ; Hobson's Bay, BZBW; Hoolet, VHA.
Kangaroo, VHM; Kanowna, VID; Karoola, VHE; Karuah, VZH; Kadina, VZI; Katoomba, VHN; Komura, VZBC; Koolonga, VZBT; Kowarra, CGS; Koonda, VZD; Koorlinga, VXJ; Kurumba, CGQ; Kooyong, VXH.
Iron Baron, VHI; Iron Monarch, VXI; Iron Prince, VXX.
June, VEZ.
Lady Loch, VHS; Levuka, VIB; Largs Bay, VZBS; Lameroo, VZJ; Loongana, VJH.
Macedon, CGX; Mackarra, VXX;

Masumba, VXY; Malndy Lodge, VZBU; Makambo, VZB; Manu-
rowa, CGO; Mallina, VKI; Mal-
low (w), GABP; Marguerite (w),
GABQ; Marsina, VKY; Mataram,
VHU; Melbourne, VZBF; Mel-
bourne (w), GABR; Melusia,
CGT; Merriwa, VKB; Minderoo,
GFZP; Milluna, VKC; Mindini,
VJY; Monaro, VKL; Montoro,
GBJC; Moreton Bay, VZBR;
Moira, VXL; Marawah, VZZ; Mo-
rinda, VJF; Moorabool, VXR.
Navy Office (w), VKN; Nairana,
VHP; Nardoo, VZL.
Ooma, VXX; Oonah, VXA;
Omana, VZBN.
Paraitah, VKU; Period, VXC;
Paramatia (w), GABS; Platy-
pus (w), GABT; Poolta, VZBL;
Protector (w), GABV; Port Ste-
phens Base (w), VKS.
Rivierina, VJA; Rona, VXQ.
Sares, VKH; Shandon, VXL;
Stalward (w), GABW; St. George,
CGC; Submarine J1 (w), GABX;
Submarine J2 (w), GABY; Sub-
marine J3 (w), GADZ; Submarine
J4 (w), GACB; Submarine J5
(w), GACD; Submarine J7 (w),
GACF; Success (w), GACH;
Suva, VJI; Sumatra, CGP; Swan
(w), GACJ; Swordsman (w),
GACK; Sydney (w), GACL.
Talyuan, G V D F; Tarcoola,
VZN; Talawa, VKD; Tasmania
(w), GACM; Taitoa (w), GACN;
Time, VIK; Toromeo, CGL; Tor-
rens (w), GACP.
Una (w), GACQ; Urilla VZU.
Victoria, GVBD.
Wandilla, VHI; Wear, VKG;
Warspray, VZBG; Warrego (w),
GACR; Westralia, VJB; Worri-
bee, VJL; Wodonga, VHK; Wy-
andra, VHW; Wonganella, VZBY;
Woolgar, VKM; Wyola, CGV;
Wyreema, VJG.
Yankalilla, VHV; Yarra, VXS;
Yarra (w), GACS; Zealandia,
ZJC.

LAND STATIONS UNDER COMMONWEALTH.

Adelaide Radio, VIA; Bris-
bane, VIB; Broome, VIO; Cook-
town, VIC; Darwin, VID; Esper-
ance, VIE; Flinders Island, VIL;
Hobart, VIH; Geraldton, VIN;
King Island, VZE; Melbourne,
VIM; Perth, VIP; Rockhampton,
VIR; Sydney, VIS; Thursday Is-
land, VII; Townsville, VIT;
Wyndham, VIW; Willis Island,
CGI; Nauru, VKT; Rabaul, VJZ;
Kaeleing, VZR; Eitape, VZX;
Misima, VIX; Madang, VIV; Mo-

robe, VZK; Port Moresby, VIG;
Samarai, VIJ; Woodlark Island,
VIF; Kieta, VIU; Tulagi, VQJ;
Maree, VHR.

NEW ZEALAND SHIP STATIONS

Arahura, VMA; Kaipoi,
VLI; Kaitangata, VLI; Kaituna,
VLT; Kanna, VLQ; Karori, VMB;
Katao, VMN; Kauri, VMC; Koro-
miko, VMD; Mapourika, VLS;
Mararoa, VMZ; Monowai, VMM;
Palooa, VLY; Rakanoa, VME;
Rewa, VMI; Rotomahana, VMX;
Tarawera, VMP; Terawhiti, VMH;
Tatoneka, VLX; Waipori, VMO;
Wanaka, VMP; Whangape, VML.
LAND STATIONS UNDER N.Z.
Auckland, VLD; Awanui, VLA;
Awarua, VLB; Chatham Islands,
VLC; Rarotonga, VMR; Welling-
ton, VLW; Apia (Samoa), VMG.



What do you want to know?

Every reasonable specific query in the field of general wireless ad-
dressed to the Information Depart-
ment will receive a prompt reply.

While lengthy replies cannot be
given to complicated questions in-
volving extensive research or com-
putations, this department aims to
be of maximum service in supply-
ing information as to what books
or other sources may contain
answers to these questions.

A stamped addressed envelope
must accompany each question, but
the writer's name will not be pub-
lished if he so requests.

Address the Information Editor,
"Wireless Weekly," Box 378, G.P.O.,
Sydney.

W.G. (Neutral Bay) asks: Can I use
dry cells to light the filament of my
valve?

Answer: Yes, but this method is
going to be an expensive way of do-
ing it, and we do not advise you to
attempt same; a small 6-volt accumu-
lator is very satisfactory.

"Aerial" (Bathurst) asks: Is it nec-
essary for me to put insulators on my
aerial wires to use with a crystal set?

Answer: Yes, most certainly, you
cannot be too particular in paying
close attention to insulation through-
out the whole set.

H.D. (North Sydney): Your inquiry
needs too long an answer for this
column; we are writing you.

R.H.E. (Sydney): Writing you.
C.W.L.: Wait for next week's issue.
T.H.C.: Same as C.W.L.

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Street, Sydney.