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**A TALK WITH "WIRELESS WEEKLY."**  
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A couple of weeks ago we made a suggestion to the authorities, that the nightly weather reports, now sent out from Australian coast stations by wireless telegraphy, should also be broadcasted by radiophone for the convenience of people in the country districts.

Of course, it is hopeless to even think that the scheme has been considered as yet; it takes time for the average Australian politician to grasp anything in the nature of progress. But it must be done.

For months past now France has been giving out weather forecasts and reports by Radiophone, realising that every citizen, if he cares to use a simple receiving set, is entitled to the benefits of a national utility.

America, too, though her wireless affairs are not all that could be desired, is in the van of progress. Even from conservative England comes a report that wireless weather reports sent out in Morse code have been slowed down so that the amateur, who is not an expert telegraphist, can intercept them.

*Here in Australia, the continent of wide spaces, the agriculturalist and the pastoralist are deprived of the thrice blessed gifts of science.*

*Why?*

Because the authorities are not abreast of the times in these matters. It is all very well to say that the man on the land has no apparatus to receive the reports. If he knows that the reports are

to be broadcasted, he will soon get the comparatively inexpensive set to receive them.

It is likewise futile to say that the radiophone is not efficient, for an amateur only a few weeks back, succeeded in getting speech from his Sydney station to New Zealand, using under nine watts power.

There is no reason for the authorities to delay another week. Garden Island Radio, Sydney and the Melbourne Radio are equipped with the necessary apparatus.

*It is the intention of "Wireless Weekly" to have questions on this subject asked in the House of Representatives.*

The replies will be interesting. The Federal elections are fast approaching; the Government cannot afford to ignore or shelve such an important matter as this.

**SOMETHING TO DO**

Here is the method of roughly calculating the wave length of an aerial: W.L. in metres equals L multiplied by 4 point 5, over 3 point 25. "L" is the total length of the aerial in feet.

The approximate wave length of an aerial is 4 1/2 times its length, inclusive of the lead in and ground lead. This applies to the inverted "L" type. For the wave length of a tone "T" type, the length of the aerial is divided by two, after which the lead in and ground lead lengths are added.

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**A PECULIARITY.**

**BODY INDUCTANCE.**

Do you know the meaning of "body inductance?"

In radio reception the body has a characteristic of acting as an inductance of very great resistance or as a capacity of low value (says "Popular Science Sittings"). As an inductance you can obtain results by disconnecting the aerial from the apparatus and holding the aerial in one hand and touching the antenna terminal of your apparatus with the other hand. In the case of nearby broadcasting stations, where you are using the vacuum tube detector with two stages of amplification, fairly good loud reception can be obtained by placing the body in series with the antenna and the apparatus.

To do so, however, is merely an experiment, and it has no value, as it materially reduces the strength of the signals. The body will exert a capacity effect if the hands are placed across certain of the terminals in your set. For instance, if you place your finger on the grid and plate terminals of your vacuum tube the body will act as a condenser, giving a slight feed-back from the plate circuit to the oscillatory circuit, and a slight increase in strength will be observed on vacuum tube sets that are not regenerative in themselves.

This body capacity effect is sometimes the cause of a great deal of inconvenience, particularly in sets using vacuum tubes, where the set itself is not ground-shielded. The annoyance consists of the fact that after the operator of the set has completed the tuning arrangements and withdraws his hand, the whole set is thrown out of adjustment. This is caused by the removal of the small amount of capacity represented by the body out of the circuit when the operator withdraws his hand.

Don't try to solder your earth wire to a water pipe, its most difficult. The best plan is to hold the wire to the pipe by means of a clip.

**BEST SET.**

**WHOSE IS IT?**

**A COMPETITION.**

"Wireless Weekly" is conducting a competition.

We are looking for the best amateur crystal set, and the best amateur valve set.

Of course, it would be impracticable for us to examine the actual sets, so the judging will be on a photograph and written description.

There is no entrance fee.

All you have to do to enter a set is to get a good clear photograph of it, and send it, together with a description and details, not exceeding 200 words, and the filled out coupon on this page to the Editor, "Wireless Weekly," Pox 378, G.P.O., Sydney. Envelopes should be endorsed "Competition."

It makes no difference if you made the set yourself or not. Judging will be on design, neatness and originality, and in order that the judges may have full information to work on, competitors are asked to send good photographs, and clear manuscript, written on one side of the paper only.

The prizes will be an open order to the value of one guinea, on any establishment selling wireless apparatus, for the best crystal set and best valve set.

The competition will close on September 22, when all entries must be in the hands of the editor. All photographs and entries sent in become the property of the "Wireless Weekly."

Competitors must give their full names and addresses, but if it is expressly stated these will be held confidential.

In all cases, and on each and every point, the decision of the Editor shall be final.

**POLDHU.**

**FAMOUS STATION CLOSSES.**

Poldhu, probably the most famous wireless station in the world, has sent its last messages, says the London Daily Mail. M.B.D., its famous call sign for which ships' operators have listened eagerly for the last 19 years, is now replaced by M.F.T., the sign of CHfden, the Irish station of the Marconi Company.

Perched on the rock-bound coast of Cornwall, Poldhu, which has made history, was the first high-power wireless station to be built, and from here the first wireless message was sent across the Atlantic on a 2,000-metre wavelength on December 12th, 1901, to St. John's, Newfoundland.

The future of the station is not yet certain. It is probable it will be used for research work, but never again will messages from the far ends of the earth be received marked, 'via Poldhu.'

**COMPETITION COUPON.**

To the Editor,

Sir,—Herewith photograph and description of my set as an entry for your competition.

I agree to be bound by your decision, and observe the rules of the competition.

(Name) .....

(Address) .....

(If under 18 years of age) .....

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**HOW TO START  
AVOIDING PITFALLS**

**BY ONE WHO HAS  
SUFFERED.**

The average man hears a lot about "experimenters" and "amateurs," these days. He reads of their doings, puzzles over their technical jargon, and, perhaps wishes he too would take up this fascinating hobby.

Then the problem confronts him: "How do I start?"

If the prospective enthusiast has a friend already "in the game" his path will be easy, but if not it is the reverse. The writer caught the radio disease from a stray technical publication and went entirely the wrong way about getting a set.

Fortunately I saw a newspaper paragraph telling how and where to apply for a license, and having got a covering letter, and with permission to experiment I set about looking for apparatus. From the technical book I had gleaned a very misty idea of the parts required, and not wishing to show my ignorance, I copied out the bit and read it to the shopkeeper.

**TROUBLE STARTS.**

That was all right, but when I got the parts home my troubles commenced. I connected up, but could get no results, and after wasting a deal of time and exhausting all my patience, I reluctantly gave up. At that moment, radio was very near to losing me. However, I pocketed my pride, went back to the shop.

There was a gleam in the shopkeeper's eyes when he saw me; I think he understood. Frankly I told him all and he kindly gave me a lot of hints and changed the parts for a nice little crystal set. He also introduced me to some experimenters, who got me into their club. At the club meetings I learned more than anyone could from text books.

**WHAT TO DO.**

I have now reached the valve stage, and derive the maximum of

**WE PROMISED.**

(By LOO NATIK).

A man with a wild look in his eyes and straw in his hair bustled into the office of the "Wireless Weekly," the other day. While waiting for the attendant to arrive he scribbled the following lines and asked the Editor to publish them. The Editor (belonging to the clan that boasts of being too proud to fight, and incidentally being too fat to run) promised, so here you are:—

'Twas Christmas Day in the "Nut House"

The loonies were all there,  
Watching a fellow patient,  
Tearing his flowing hair.

I'll tell you who he was, sir,  
And why he worried so;  
His name was Grid Condenser,  
The cause was Radio.

I'll tell you the harrowing story,  
And how he got put in,  
He tried to make a sending set,  
With a matchbox and a pin.

There are thirty five more verses, but the Editor, now that his friend is in good hands once more, does not feel disposed to inflict them on our readers.

Keep your accumulators upright. Sulphuric acid has an undesirable effect on one's best carpet.

pleasure from my experimenting, but I shall never forget my inglorious entry into the game.

Now this is my advice to any person who wishes to start experimenting. Write to the Secretary of a club and ask him to get you elected. Don't be afraid to ask the members for advice; they were all beginners once. Write straight away for a license, and when you get it, choose your apparatus. Ask one of your clubmates what to get and let them help you instal it.

Thereafter your progress should be rapid and straightforward.

**FOR BELGIUM.**

**Monster Station.**

(See Front Page).

Our front page illustration shows the giant station the Belgian State has just started at Kuyssede, near Bruges. This plant is intended to communicate with the Belgian colony in Central Africa, as well as with North and South America. It will perhaps be the most powerful in the world.

The aerial is to be supported by eight towers of 275 metres height. The power plant will consist of one 1000-kilowatt generator, with two high-frequency generators of corresponding power. One of these will be an arc generator, weighing 8000 kilograms; the second will be a high frequency alternator of the Bethenod-Latour system.

The second of these will work at 2500 turns per minute, giving a peripheral speed of 170 metres per second for the rotor. It works in a partial vacuum to reduce the resistance. Rotor and stator are to be cooled by oil circulating under pressure. The length of waves in both instances will be from 20,000 to 25,000 metres; current on the aerial, 850 amperes. Automatic transmission at a speed of 100-120 words per minute will be employed.

The building of the plant has been entrusted to the same Belgian concern that is now engaged on the Belgian stations in Central Africa.

The drawing gives a view of the plant with its huge aerial as originally designed, although some modifications of this design are under way.

Hang the phones on a wall when you have done with them. This allows the moisture on the diaphragms to dry. Never tap the diaphragms with a pencil. Once they get bent they are useless.

See that your valve circuits are not causing radiation. By this is meant, don't experiment with strange circuits until you know what you are doing.

# MAKE YOUR OWN.

## A LOOSE COUPLER SET.

A simple and effective loose-coupler crystal set is shown here, and for the expenditure of a few shillings, and by following out the directions, a wireless set may be constructed, which will have a range of about 2,000 miles, with a good aerial, and a wave length of over 2,000 metres.

With a set of this kind, you should have no difficulty in hearing Awani, New Zealand, and most Australian stations, and you will be able to listen to the concerts, if favourably situated.

Get two cardboard tubes, about

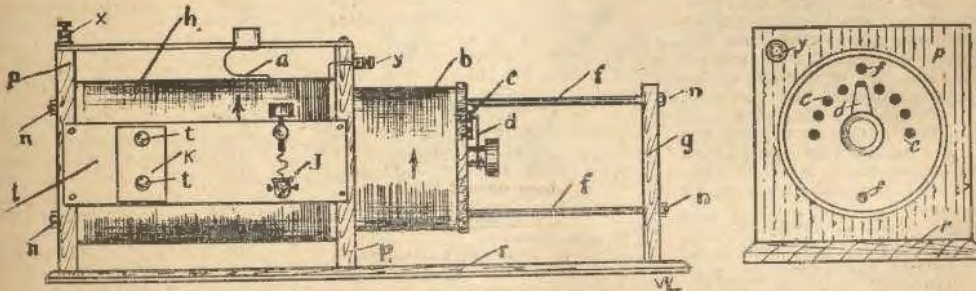
wire, so that as the slider is moved along the rod, contact is made with each wire separately.

A terminal is fixed on the slider rod at "x," and another terminal is placed in a convenient position, on the other wooden end at "y," and one end of the primary winding is connected to "y." The other end of the primary wire is secured to the cardboard tube, but is not connected to any terminal. It is a "dead-end."

The terminal "y" is the aerial terminal, and it is here that you join your aerial wire, while "x"

to get a concert wave of say 1,400 metres, you would need to slide "a" about  $\frac{1}{4}$  of the way along towards "x."

Now for the secondary winding, "b." First of all, make sure that you are winding "b" in the same direction as you wound the primary, as shown by the arrows. Use No. 30 gauge silk or cotton covered wire. Begin at the left hand end, and wind for about one inch, and then make a hole in the cardboard tube underneath, and putting your hand inside, draw the wire through inside the tube, in a



seven inches long, and 4 1/2 inches and 4 inches in diameter respectively, and give them a good coat of shellac, first making sure that they are thoroughly dry.

Wind the larger tube, the primary with 24 or 26 gauge enamelled wire, a single winding being all that is necessary, and mount the tube between two square pieces of wood, P and P', P' having a circular hole in it, to allow the secondary tube to slide inside the primary.

A brass rod and slider are mounted on top of the primary as shown, the slider "a" making contact with the primary wire along a track from which the enamel has been carefully scraped from the

is the earth terminal, and is to be joined to a water pipe or other suitable earth.

It will be readily understood that the current from the wireless waves comes from the aerial to "y," passes through the primary winding to the sliding contact "a," in whatever position "a" may be, then along the slider rod to "x," and so to earth. This is the complete primary circuit. By moving "a" nearer to "x" a longer length of the primary winding is brought into use, and these extra turns give you a longer wave-length.

Ordinarily, with "a" about one inch along the windings from "y," the commercial 600 metre wave length would be picked up, so that

long loop ready to connect to the first stud "c" on the left of the group of studs. Then wind along for about another inch, and repeat the looping of the wire, this time connecting to the second stud, and so on, until the end of the wire is fastened to the last stud. Any brass bolts and nuts may be used as studs, but be sure to leave a generous length of wire when making your loops for connection to these, and if possible, solder the connections. A knob and switch-arm "d" are used to make contact with the studs, and are fixed as shown.

The secondary is mounted on two brass rods "f," which pass  
(Continued on page 6).

through the primary and secondary ends, and are secured with nuts as shown at "n," one end being fastened to a small wooden upright "g."

The whole is fixed to a base-board "r," and screwed firmly in position.

The secondary is provided with two circular wooden ends, which should have been previously mentioned, the brass studs and switch-arm being mounted on one of these ends. "L" is a piece of ebonite fixed on the sides of the primary ends, and on it is mounted a simple phone condenser "K," the construction of which will be described in the next issue, and a crystal cup "j" with a catwhisker contact.

The telephones are connected to two terminals "t," on the phone condenser, and the secondary circuit is completed by taking one wire from the switch on the secondary to the terminal holding the catwhisker contact, and another wire from the beginning of the secondary end (which is otherwise a free end) to the top terminal of the telephone condenser, then connect with a short wire, or brass strip, from the crystal cup to the bottom terminal of the condenser. The wires from the secondary could be brought around through the back of the primary and then behind the ebonite panel. They are not shown on the diagram.

This set is more efficient, and gives finer tuning than that described in our last issue. The loose coupler has the advantage that when the amateur goes in for valve work he can still use it in connection with a valve panel.

**CHILD OF 5 MAKES A LOOSE COUPLER.**

*Little Rex Foy, aged five years, of Sydney, has just completed a loose coupler set, with a wave length up to 2,000 metres, and a very creditable job it is.*

*He built the set absolutely unaided except for advice, and when he and his father brought the set into the city the other day, it was connected to aeriads, and found to give excellent results.*

*Rex's chief sorrow is that he has to go to bed before Pennant Hills sends his weather reports every evening, but daddy has strict instructions not to meddle with "the set."*

**PLATE VOLTAGE.**

For detector purposes a "soft" valve is mostly used, and such valves are critical to plate voltages. In other words, one will work very well on say, twenty volts, while another will need only about eight volts. It is not a bad scheme to use a multi-point switch in order to get the correct amount of voltage in the plate circuit. It is not absolutely necessary, however, because modern valves are much more stable in their operation than they used to be.



**Western Electric**

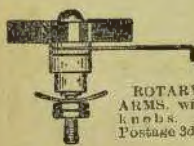
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August 25 h, 1922

WIRELESS WEEKLY

7

Our Radio Yarn.

# THE DREAM.

"Well, mother, anything else I can get you?"

Fred Champion, a sturdy youth of 15, smiled down at his mother, on whose pretty face sickness had put its mark.

"No, thank you, Fred. I'm quite comfortable now, so you run away to your beloved wireless, and I'll think out a nice welcome for father when he gets home to-morrow."

Fred strolled down to the little shed in the back garden, where his radio outfit was housed, and sat down before the receiving panel. He had got his love of radio from his father, who was chief wireless officer on a cargo steamer trading between Australia and America. After a couple of months' absence, the steamer bearing his father was nearing home and was due in port the following day.

Mr. Champion would be surprised to find his wife on a sick bed. She had been stricken down two weeks before, and for some days her life had been despaired of. She was well on the way to recovery now, however, and the doctor had said that she would soon be about again. "But she must have no worry and no excitement," was his warning.

"I'll see if I can pick up Dad," thought Fred, as he put on the 'phones and switched on the valve. He looked at his watch. It was eight o'clock, usually a fairly busy time, but to-night there was very little doing. A large passenger steamer, a long distance away, was talking with the coast station, some 15 miles from Fred's home, and static bubbled and crackled freely.

Suddenly, Fred started. Dots and dashes were coming in fast, and to his trained ears they formed themselves into the dreaded S.O.S., the appeal of those in peril at sea. Fred pencilled the message, and tears were streaming down his face when it ended, for the ship in trouble was his father's. The message that told the story was:—

"Struck a submerged object 20 miles due east of Black Point. Sinking by the head; cannot remain afloat many minutes."

Fred started to rise, but, realising his helplessness, sank back in his chair again. That the vessel was in a bad way there was no doubt. Her signals were very weak, and the young operator surmised that his father was sending on his emergency power.

He listened in again. The signals had ceased, and he waited for the coast station to reply. Then Fred got the second blow of that night.

The coast station had missed the S.O.S. message, and was asking for a repeat. Several times the request went forth, but there was no answer from the ship. She had either foundered or her emergency batteries had given out.

How would the rescuers know where to go? It was improbable that any other station had caught the message, for they would have relayed it on to the coast station ere this.

Fred stared at the message on the pad in front of him. Yes! He could telephone it to the station. Snatching off his headgear, he dashed off to the nearest public telephone and gave the message to

the officer in charge of the coast station, who happened to be a friend of his father. "Right sonny," the officer said; "we'll get to work. Give us a ring in half an hour, and we will tell you what's doing."

The half an hour went very slowly for Fred. He thought of his sick mother. The news would surely cause a relapse, if not worse.

The next news from the station was that a fast destroyer was on her way to the scene. "If you listen in," said the officer, "you will hear her reporting to us."

Some six hours later the white-faced youth heard the destroyer's message:—

"Searched the vicinity given thoroughly. Plenty of wreckage, including smashed life-boats. No trace of survivors."

Heavy of heart the lad went into the house and looked into his mother's room.

"Come here, Fred," whispered the sick woman, "I'm not feeling too well. I had such a dreadful dream, in which I saw Daddy's ship go down." Suddenly she started to sob violently.

The sobbing ceased as the youth reached the bedside, and he heard the faint whisper: "I'm going to join Daddy, Fred; good-bye. He died doing his duty."

The frail form on the bed was very still, and the orphan pillowed his face in his hands and wept because of his great grief.

Referring to the success of the recent amateur Trans-Atlantic tests an American Professor compared the picking up of the feeble signals in Scotland to the perception by eyesight of the rays of an ordinary electric bulb at a distance of 3,000 miles.

TELEPHONE: CITY NO. 802.

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### THE BUSY PEN.

Mr. Allen Burrows writes:—

A central organisation as is at present being formed, consisting of representatives from amateur and professional wireless bodies, would have important and far-reaching effects on the radio community of N.S.W. Never before has the need for such an association been more urgent. When the advantages derived from a similar organisation in America are so manifest, the pity is that it has not been done here before; if it had, conditions would probably be different to what they are now.

But to reach its true objective, the association must be absolutely representative; for it to be otherwise would be unjust to those whom it excluded. Dealing with the authorities as an organisation professing to be representative of the amateurs of N.S.W., it would really only represent those whom its conditions favoured. Exactly what those conditions may be is beside the point; at present, it ap-

pears they will consist of restrictions confining representation to amateurs or professionals, fortunate enough to have the opportunity of assembling in certain numbers. A smaller body of whole-hearted enthusiasts, whom circumstances prevent growing in number, are accordingly unrepresented through no fault of their own.

The contention that they can always join a larger club, thereby giving themselves representation, is as unfair as the restriction itself is. The small club has as much right to retain its individuality and to make its voice heard, as that which has the advantage of numbers; or, if not as much right, it has a certain right (proportional to its size) which should be respected.

After all, it is the wireless man himself that a central organisation is out to help, regardless of whether he lives in the city and is able to belong to several large clubs at once, or whether circum-

stances prevent him joining a body any larger than the numerous suburban clubs which are now in existence.

Dear Sir,

I am sure you will be interested to hear about a little experience of last week. I had occasion to visit an aged and somewhat infirm couple who live in an isolated cottage not far from the city, and found them reading the first issue of your little paper "The Wireless Weekly," and animatedly discussing it.

The old lady told me that wireless had always fascinated her, and only for the great expense she would have possessed an outfit long ago. I am making her a little set as a surprise, so that she may hear the concerts, and am sure it will be a hard task to convince her how small the expense really is, for one who lives so close to the city.

Wireless is indeed proving a great blessing and deserves all the publicity it can get.

"C.Q."

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Sydney.



**HETERODYNE.**

**WHAT IT MEANS.**

The literal translation of the word is "other power." In its application to radio, the heterodyne effect is used in continuous wave telegraphy—the modern form of signalling—by means of wireless. The theory of heterodyne can perhaps be best explained in the following manner: The transmitting station will be sending out electro-magnetic waves of a certain specific frequency, which for the purposes of illustration we may say is 50,000 cycles per second.

Now this frequency is far too high for the human ear to respond to, and it is also too high for the telephone receivers to record. The problem that had to be solved before continuous wave telegraphy became a success was how to reduce this frequency so that the telephones would record the signals and make them audible to the ears.

**MOST EFFICIENT.**

The heterodyne method has been found the most efficient, and it consists of pitting one set of high frequencies against another. In our supposititious case the incoming frequency is at the rate of 50,000 cycles per second. In order to obtain results in the telephones the operator causes his receiving set to oscillate, or, in other words, he turns it into a miniature transmitting set. He adjusts these oscillations until they are about 49,500 cycles per second in frequency.

The condition that now exists in his receiving apparatus is this: The two sets of frequencies clash with each other 500 times every second, or to put it into electrical phraseology, they are out of phase with each other 500 times each second.

**MUSICAL NOTE.**

Now, every time they clash the two sets of frequencies cause a click in the telephone receiver and clicks running at the rate of 500 a second produce a very musical note. It will be readily seen that the operator, being able to control the oscillations of his receiving set, can produce any musical note he pleases, because all he has to do is to vary his own set to make the number of clashes per second

**RADIOPHONE.**

**SIMPLE SENDING SET.**

In view of the fact that transmitting will soon be allowed in Australia, the following article by a writer in the "Wireless Age" should interest.

Many amateurs would like to construct small radiophones, but the numerous instruments that are used confuse them and they are afraid to build one for fear it will not work. I have built a set that is the last word in simplicity. It is very efficient and with 60 volts on the plate, will cover 5 miles very easily. I have been heard at a distance of 20 miles. A circuit diagram of the

set is given in figure 1.

The inductance consists of a cardboard tube 2 inches in diameter wound with 36 turns of number 16 D.C.C. wire. The wire should be wound from one end (A) and at the 19th turn a tap off (B). Seventeen more turns should be wound to make 36 turns in all. The variable condenser in shunt to the inductance has a capacity of .0005 mfd. The plate potential can be composed of three ordinary "B" batteries connected in series, but if a few more are used, so much the better. The tap (B) is connected to the

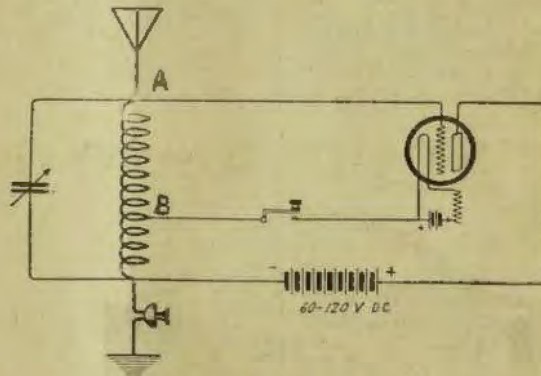


Fig. 1

anything he chooses. He can, for instance, make it 100 per second or 2,000 per second.

Another advantage of this system is that in the event of his being interfered with by ordinary spark signals he has a good opportunity to overcome this interference by simply making his own set produce higher frequencies than the incoming wave, and still get the same results. In other words, instead of producing oscillations at a frequency of 49,500 cycles a second, he can go to 50,500 cycles a second.—"Popular Science Siftings."

positive side of the filament lighting battery. A key can be connected in this lead as shown in the diagram for continuous wave telegraphy. When using the set as a radiophone, this key must be closed. A microphone of the common land telephone type, which can be purchased very cheaply, is connected in the ground lead. Altogether this set is very simple to construct and is reliable and stable in operation.

Keep an eye on your lead-in tube. Damp will cause bad insulation and poor signals.

**MUSIC IN THE AIR**

**SUNDAY NIGHT'S CONCERT.**

Mr. Maclurcan's concert, for next Sunday night, commencing at 7.30, includes the following Pathe records. If any fading of the higher notes in the vocal records is noticed, kindly report particulars to Mr. Maclurcan.

Fox Trot.—"Sweet Love."  
 Bed Time Story.—"Three Little Pigs." (The little ones can then go to bed.)  
 Hawaiian Guitar.—"La Paloma."  
 Soprano.—"Il Secreto di Suzanne," Claudia Muzio.  
 Piano Solo.—"Prelude in C Sharp Minor," Rachmaninoff.  
 Xylophone.—"The Little Rascal."  
 8 p.m. Code Practice, C.W. and Buzzer.  
 One Step.—"Svancee Rose."  
 Hawaiian Guitar.—"Hawaiian Paradise."  
 Banjo.—"Parsiflage."  
 Baritone.—"Kashmiri Song," from the "Indian Love Lyrics."  
 Baritone.—"The Whistling Yarn," G. H. Szazelle.  
 Recitation.—"The Cricket Club of Red Nose Flat."

**AN APPRECIATION.**

(By "Listener").

Sunday nights are eagerly looked forward to by radio enthusiasts, both amateur and professional, throughout the State of N.S.W., and we have to thank Mr. Chas. Maclurcan for it.

Through his kindly and generous nature he entertains hundreds of people with a very excellent musical programme, broadcasted from his station at Strathfield. At 7.30 p.m. every amateur has his set tuned to 1400 metres waiting for the preliminary V's to tune in on. And what a welcome sound it is after a week of dots and dashes!

Everyone breathes a sigh of relief if the old set is working O.K. A few preliminary remarks, and then the concert programme starts.

I think I am right in saying that Mr. Maclurcan is the pioneer of radio telephone concerts in this country, and the regularity of them makes his name a household word. We cannot express the enthusiasm and delight the hundreds

of amateurs feel over his splendid Sunday night concerts.

The "Wireless Weekly" also takes this opportunity to express appreciation on behalf of its readers, to Mr. Maclurcan for his generous attitude towards the amateur experimenters. We hope that he will long continue to give us these much appreciated Sunday evening radio concerts.

"Hush," said Dick to his small neighbour, Joe, who was permitted to watch Dick operate his wonderful crystal set, "I hear a ship!" "I suppose" said Joe, in an awe-stricken voice, "you can tell that it is a ship, by the waves"?

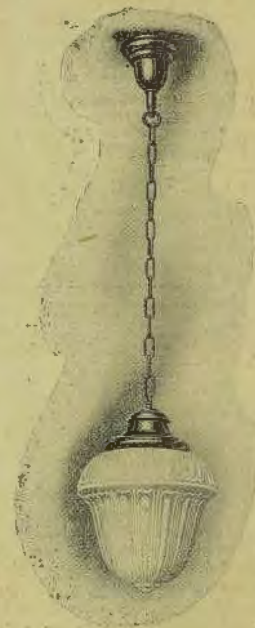
**FOR THE FARMER'S OUTFITS IN SCHOOLS.**

In the Legislative Assembly on Tuesday night, the Minister for Education told Mr. Arkins that he would consider a scheme of installing wireless outfits at country schools, and thus giving the children a training in wireless telegraphy and at the same time disseminating valuable weather information to the surrounding farmers.

**WIRELESS BOOKS.**

- Consolidated Radio Call Book, 10s.
  - Design Data for Radio-Transmitters and Receivers (by Sleeper), 4s 6d.
  - Wireless Marconi Military Pack Stations. Technical Description, 2s.
  - Handbook for Wireless Operators (Licensed H.M. Postmaster-General), 2s. 6d.
  - Wireless Telegraphy and Telephony. Fully illustrated, 2s.
  - The Maintenance of Wireless Telegraph Apparatus (Harris), 3s 9d.
- N.S.W. Bookstall Company, Ltd.,  
 476 George Street.

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August 25th, 1922

WIRELESS WEEKLY

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**THE WAVERLEY AMATEUR RADIO CLUB.**

In view of its intention to install a transmission set suitable for 1,000 metres, is remodelling its aerial. When completed, it will consist of three wires on 10 foot spreaders, with a length of about 30 feet. In addition, the aerial is being entirely re-insulated. The chief difficulty of the Club's set now lies in the valves, which have to be imported. Mr. MacLurcan has been consulted, with the object of obtaining his opinion on the different makes.

A separate night has now been allotted for code practice at the Club rooms. This inauguration, it is believed, will materially assist members who are engaged in learning Morse.

**ILLAWARRA RADIO CLUB.**

The Illawarra Radio Club had a busy evening at its last meeting on 17th inst.

A letter to the Club from the Controller of Wireless was read in reply to enquiries made as to speed tests and licenses. It was decided to make application for a permit to carry on speed tests, and Messrs. Hewett and Gorman were appointed to conduct the tests.

Mr. C. Borthwick then gave an interesting talk on fundamental principles of wireless. With the assistance of Mr. E. G. Bailey he gave a simple demonstration of the transmission of electric waves by means of a spark coil attached to a loop.

The Club's delegates (Messrs. Hewett and Atkinson) then reported the result of the recent meeting of Club delegates, whereupon some lively discussion ensued, particularly as to the capitation fee to the proposed Association. The desirability of such an Association was generally conceded, and the Club decided to throw in its lot with the Association, provided the fee was limited to 2/-

per member, and subject to other important matters being put on a satisfactory basis at the adjourned meeting.

The next Meeting of the Club will be held at the Carlton School of Arts on 31st August, at 8 p.m. Ruzzer practice, 7.30 to 8.

**METRO CLUB:**

There was a well-attended meeting of the Metropolitan Radio Club at the Kardomah Cafe, King St., last week, when the President, Mr. R. C. Marsden, occupied the chair. The social side, which is usually such a feature of this club's meetings, had to be deleted on this occasion, as the time was marked out for discussion of the matters arising out of the recent Inter-Club Conference.

Various views were expressed, the most vigorous discussion centreing round the capitation fee for the proposed wireless council for New South Wales. The delegates, Mr. Marsden and Mr. Best, were instructed not to consent to more than 1/- per head for each member.

The members of the club were unanimous in their praise of Mr. MacLurcan's kindness in sending

out the concerts, and a vote of appreciation was carried. Mr. Palmer gave a talk on batteries, which was much appreciated.

**Get it by Wireless:  
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SHIPS STATIONS. GREAT BRITAIN.

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Baltic, MBC; Baltriger, GDXC; Baluchistan, LXX; Balzac, GC-SZ; Bamora, MST; Bampton, LSQ; Bampton Castle, YBF; Banca, MFS; Banchory, ZQS; Bandon, GDVL; Bandra, MCH; Banffshire, GVM; Bangala, GAC; Bankdale, ENF; Bankura, GCH; Baradine, GPN; Barala, GCM; Barbadian, GBQM; Bardie, BEM; Barima, ZND; Barjora, GCT; Bariby, BTT; Barmoor, EZL; Baroda, GDL; Baron Ailsa, XES.

Baron Ardrossan MWW; Baron Borwick MSS; Baron Blantyre XLN; Baron Cathcart ZRI; Baron Cawdor GBTZ; Baron Douglas ODD; Baron Eleho ZPP; Baronesa ZQA; Baron Fairlie LUZ; Baron Garioch GBNC; Baron Inchcape BAU; Baron Jedburgh MGD; Baron Kelvin EOT; Baron Minto YEK; Baron Napier MJS; Baron Polwarth BRB; Baron Renfrew ZQQ; Baron Sempill ZFP; Barotse ZPR; Barpeta MPR; Bassa YYJ.

Barrabool GFBP; Barranca MLL; Bassan ZMJ; Barrymore GBDT; Bassano YQA; Baita GBST; Batsanga YEB; Bathurst GRMP; Batsford ZXL; Bavarian ZTU; Bayano GAK; Bayford BEL; Baychimo GDWK; Baycross ZVZ; Baygola ZXW; Baydouglas ETU; Baygowan ZVY; Baylula BAF; Bayhowel LUW; Baymano YHX; Baymanter BAD; Baymingo YHP; Bayramento YCW; Baysarula YNW; Baysarua EQQ; Baytigers ESP; Bayverduin ZXX; Beacon Grange GCQL; Belgic ZXC; Bearwood GFCD; Bearerton XTO; Beckenham EWU; Beechleaf EZG; Beechpark GCBR; Beechwood YAE.

Belgian GCNM; Belgravian OEK; Belize BEO; Bellerby ESY; Bellerophon GTD; Bellfield YDZ; Bellglade BKR; Belltown ZCD; Beltana MKR; Bembridge YKX; Bampton GDMB; Benalder

ENS; Benalla GBJ; Benarty YLT; Benavon EJD; Benclench ZZA; Bendigo GFBQ; Bendoran YEM; Bendu ZME; Benedict ZKY; Benefactor MQE; Bengloe YVA; Benguela ZMQ; Benin ZMR; Benlawers YJS; Benedi YLU.

Benlmond LTC; Benmohr BDO; Ben Nevis GYX; Benrinnes EKC; Benne ZMF; Benvenue EPQ; Benwood YCA; Ben Vollich GCFB; Berbice GIP; Bereby YDC; Berku GBTR; Bermuda GBDJ; Bernini XFE; Berriedale LUI; Berrima YWR; Berwickshire YZS; Berwindvale GCQX; Betwa BDZ; Bhama GWA; Bharata GAD; Biela YNC; Biafra YCF; Biarritz EZN; Bistey YCB; Didedford BOA; Bilbster BUC; Binfield GBMV; Bibina YJX; Bittern GBXQ; Blackheath EWW; Blackhill BCC; Black Prince YJB; Black Sea GDLW; Blackwell ZLC; Blairmore BOB; Bogota YAC; Bloemfontein GBN; Bodnant YCO; Bohemian MEL; Bokana YCQ; Bolingbroke BGE; Bolivian GCNE; Bolton Abbey GBRV; Bolton Castle MAQ; Boma GBSV; Bompa GFCV; Bonheur CCTS; Bonny XIN; Borda MFQ; Border GFM; Borderer GCL; Borderland MUM; Borealis GCWM; Borodino ODT; Borulus GFJN; Roseombe Chine XEG; Bosnian OEL.

Boston City GDSE; Boswell BMK; Bourkadra YGB; Boulama YMJ; Bourne GBSC; Bournemouth ZJD; Boutry YCZ; Boverie YNY; Bovie GDO; Boverton XHK; Boyne ZUY; Bremen GBJK; Braebandier EUM; Bradavon XLG; Braburn ETY; Bradclyde YRB; Bradford City GBCL; Brauntels BPG; Braemar Castle GCQZ; Braywood GDTK; Brambleleaf ZZQ; Brant County GBYT; Brandenberg GBSF; Bratton Castle YAN; Branksome Hall GBFQ; Brazillier OET; Breconian YEW; Erenden BEK.

Brescia ESS; Breslau GFCN; Erier GDVL; Bretonier EXP; Dretwalder GBJR; Breynton LSZ; Briarleaf EYA; Briarwood ZGD; Brighton BNF; Brighton MOV; Bristol City GDML; Britannia GCRB; Britannia GPNF; British Admiral ZYY; British Baron EYU; British Beacon BOU; British Birch EYD; British Coast GDTG; British Colonel GFDB; British Duke EYY; British Earl EYS; British Emperor ZLK; British Empress ZYZ.

SALE & EXCHANGE

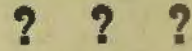
Three Lines (approximately 15 Words), may be inserted in this Column for 9d.

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WANTED—A Post Office Resistance Box, C. MacLurean, St. Atfield.



What do you want to know?

Every reasonable specific query in the field of general wireless addressed to the information Department will receive a prompt reply.

While lengthy replies cannot be given to complicated questions involving extensive research or computations, this department aims to be of maximum service in supplying 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 published if he so requests.

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

British Ensign ZYV; British Fern EZE; British Holly EZL; British Isles ZYW; British Knight EYN; British Lantern BON; British Light BOD; British Major BLN; British Maple EYB; British Marquis EYW; British Marshall YJJ; British Peer EYM; British Princess ZYT; British Rose EQC; British Sailor OFK; British Soldier YQR; British Sovereign ZYU; British Star BOI; British Tommy GFQL; British Transport ZDT; British Vine EPK; British Viscount GFDY; Briton MQJ; Broadmayne EXX; Brocktown GCXJ; Bronte GCPZ; Broadsworth ESE; Brookvale BRB.

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