

The Hundred per cent. Australian Radio Journal.

THE WIRELESS WEEKLY

A Journal Devoted to the Interests of Wireless Enthusiasts both Amateur and Professional

Vol. 1—No. 5 SYDNEY, SEPTEMBER 1st, 1922. Price—Three



NORTH SHORE AMATEUR RADIO CLUB.

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A TALK WITH "WIRELESS WEEKLY."

The proposal to form an association of radio clubs and associations for New South Wales is one that should be carried out in no half-hearted manner.

The time was never more opportune than at present, and it behoves the club delegates, when they again meet, to thrash the matter out thoroughly, and get the association in working order as quickly as possible. It will be well for them to give weighty consideration to the most important question of officers. There are many excellent men in the amateur ranks who could serve on the association with benefit to all. It should be seen that they are not overlooked.

Much has been heard of the capitation fee to be levied on the radio

bodies, to provide funds for the proposed association. It is presumed that the delegates will finally clear up this point when they next meet. This is another matter which should be carefully gone into.

At present it is hard to see why the association will need a lot of money to carry on.

It will require no offices, no elaborate equipment, and no paid servants. Practically the only expense will be that incurred for stationery and postage. This might well be considered when the question of the fee is under discussion.

When the central body gets to work it must not lose sight of the fact that there are experimenters spread over the wide country districts of the State as well as those in the city. The country people

are not organised into clubs and associations as are the city experimenters, and they should be under the special care of the association.

Above all things the association must not neglect any person interested in any way in the science. It must give the same earnest attention to the youngster with a crystal set as to the seasoned veteran who operates multi-valve apparatus. If this is not done there will be early trouble.

This is how the whole thing seems to "Wireless Weekly," and from every indication if the hints here set out are given due consideration the scheme should work well to the ultimate benefit of every person who puts on a pair of 'phones, and the betterment of the science.

HELPS THE FISHER.

A number of North Sea trawlers and steam drifters are fitted with wireless telegraphy. Although their transmitting radius is small, the receiving capabilities are good.

The purpose of the installations is said to be receiving, and most of the messages handled by them are in relation to the state of the fish market. When the market is glutted and the price of fish is low they are instructed to stay out and continue their fishing for another day or two. Similarly, when conditions force dealers to sell fish as manure, the fishing hauls can be diverted to other parts more fortunately situated.

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AMERICAN AMATEURS.

WERE THEY HEARD IN SYDNEY?

What appears to be a remarkably fine feat of reception has come under the notice of "Wireless Weekly."

Mr. C. A. Gorman, of Arncliffe, seems to have heard American amateurs at his Sydney station. He describes the circumstances as follows:—

"In your issue of August 11th appeared an article entitled "The Trans-Pacific Tests." In view of this the following will no doubt be of interest: On the 12th of December last I copied portions of a C.W. message on a wave length of about 250 metres, as follows: "Test being conducted by American Radio Amateurs (missed portion) Station of (missed), situated San Francisco."

The signals were very weak, and hard to get, which accounts for the portions marked being missed. At the time I did not think it was possible that the message was of American origin, but I kept the copy by me for reference, and also spoke to several members of the

Wireless Institute at the meeting next night (December 13th).

"I found out nothing more about the matter till "The Wireless World" this year published an account of tests conducted between America and England between the dates of December 7th and 16th.

"The first heard in Australia about these tests was months after the signals were received by me, so it appears that they were of American origin. The most unfortunate part was that the name of the station was missed.

"As many of the American experimenters use power of 100 watts and more, this distance is not such a great one to bridge, as we in Sydney have Mr. MacLurcan, who has been heard 2100 miles on nine watts.

"In conclusion, I may state that these signals were received on a single valve, and with the same set I copied the Tahiti and the Mariana, both over 5000 miles; also Japanese coast stations and N.P.M. on 690."

DO THEY MEAN US?

Commenting on amateur wireless work, the "Scientific American" says:—

"Of course, there is such a thing as too much Government regulation. In certain countries the radio amateur is required to secure a license for a receiving set as well as a transmitter, and the laws are so severe that amateur radio has made little, if any, progress. But our American laws and Government regulation pertaining to radio have been fair in the extreme, and under them amateur radio has thrived to the wonderment of the entire world, and radiophone broadcasting has attained a vogue that is a revelation to everyone."

It seems that the cap fits us here in Australia!

FOR LIGHTSHIPS.

According to George R. Putnam, American Commissioner of Light-houses, the radio telephone is shortly to make the life of the light-house keeper less lonesome and certainly more cheerful (says the "Scientific American").

The keepers of the Alaska light-houses at the entrance to Behring Sea, for instance, remain at their posts for three years at a stretch, and some of them remain without mail for ten months at a stretch. With the co-operation of the Navy radio telephone equipment has recently been installed in several of the remote lighthouse in Alaska. Some of the lightships are also equipped as radio fog signal stations. The radio installations are certain to maintain communication between the lightships and the outside world, and make life that much more endurable.

ROUGH RHYME OF A RADIO RAT.

Have you seen the Radio Man?
The real experimental "fan,"
Who listens long and has no fears
Of growing dielectric ears.

When you see him mark him well,
His hair is like an aerial.
And this is true—you ask the boys
His "ziff" acts as a counterpoise.

His watch-spring (this is dinkum oil)

He uses for a tuning coil,
With terminals upon his braces,
He earths himself with his boot-laces.

His nose it glows upon his phiz,
His vacuum tube it really is;
He's surely very up to date
With teeth electons on the plate.

Pick him out, now, if you can,
This most peculiar Radio Man,
And if you feel a trifle rash,
Buy him a drink—he's got no cash.

—MAD MAC.

Induction from high-voltage power lines may be minimised by running a small aerial near to and parallel to the lines, and inductively coupling it to the set. The current induced in the circuit will oppose those from the main aerial. If correctly done, the loss in signal strength is negligible.

AMATEURS!

Let us show you how to make your own set, and economise.

We stock all Parts and will give you every assistance.

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MR. MACLURCAN'S
PUZZLE.

WHO CAN SOLVE IT?
PRIZE OF ONE V24 VALVE FOR
BEST ANSWER.

Mr. Charles Maclurcan has offered a prize of one V24 valve for the best answer to the following conundrum given out during the course of last Sunday night's concert :-

PUZZLE.

A rope is passed over a pulley. It has a weight at one end and a monkey at the other. There is the same length of rope on either side and equilibrium is maintained. The rope weighs four ounces per foot. The age of the monkey and the age of the monkey's mother together total four years. The weight of the monkey is as many pounds as the monkey's mother is years old. The monkey's mother was twice as old as the monkey was when the monkey's mother was half as old as the monkey will be when the monkey is three times as old as the monkey's mother was when the monkey's mother was three times as old as the monkey. The weight of the rope and the weight at the end was half as much again as the difference in weight between the weight of the weight and the weight of the monkey. Now, what was the length of the rope?

Write your solution clearly in ink on one side of the paper only, and attach to "Wireless Weekly" competition coupon. "Wireless Weekly" holds the right to publish all or any of the answers, but will not publish names if specially requested. Judging will be by Mr. Maclurcan and Editor of "Wireless Weekly," and their decision shall be final on every point.

Send your answer to "Puzzle," "Wireless Weekly," Box 378, G.P.O. The competition will close on September 20th.

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," Box 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.

AT SEA.

Operation by Radio.

An operation directed by wireless was the novel experience of a New York doctor recently. A plea for medical advice to handle a case of infection sent out by the captain of a steamer unable to make port because of a heavy storm, was picked up by the night radio operator at South Brooklyn.

From the description of the infected finger given him, the doctor judged there was danger of the patient's entire hand and arm becoming infected. He told the captain to take an ordinary paring knife, and, after proper sterilization, make an incision straight through the meat of the finger and put in a drain. Then to free the muscles from the bone and raise them.

A message from the captain said that he had performed the operation according to instructions. It is assumed that the operation was successful, as no other reports of the case were made.

COMPETITION COUPON.

To the Editor.

Sir herewith:-

*Photograph and description of my set as an entry for your competition.

or

*Answer to Mr. Maclurcan's puzzle. I agree to be bound by your decision, and observe the rules of the competition.

(Name)

(Address)

(If under 18 years of age)

*Strike out paragraph not required.

A separate coupon must be sent with each competition.

MAKE YOUR OWN.

HONEYCOMBE COILS.

Here is a method whereby amateurs may wind inductances of the honeycomb type now so popular.

No dimensions have been given, the size of wire, number of turns and diameter of coil being left to the amateur, as well as the number of layers.

The wire is wound on a wooden cylinder about $\frac{1}{2}$ inch thick and 2 to 2 $\frac{1}{2}$ inches in diameter. On a circle concentric with the face of the cylinder and out $\frac{1}{4}$ inch from its edge, 12 holes are drilled. These holes are spaced equally around the circle. Figure 1 shows

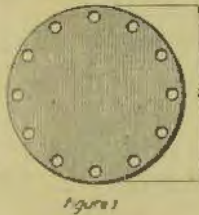


Figure 1



Figure 3

this cylinder with holes drilled. Twenty-four lengths of number 12 or 14 wire 2 inches long are bent into a "U" shape.

Care must be taken to have the sides of the "U" straight and parallel. These "U" shaped pieces of wire are clamped by machine screws on to the disc, one being placed under the head of the screw and one being held in place by the nut which threads on to the screw on the opposite side of the disc. Figure 2 shows the form with the wires assembled. The wooden

cylinder and the "U" shaped wires now present the appearance of a hub with a double row of spokes and the form is ready to receive the wire.

Let the prongs on the face of the disc be designated by the numbers 1, 2, 3, etc., as in figure 2 and the corresponding prongs in the rear of the disc be numbered 1', 2', 3', etc. The wire is started by being hooked over prong 1 and then is wound half a turn on the cylinder and passed outside of prong 13' and 13' only. The wire is passed around prongs 2 and

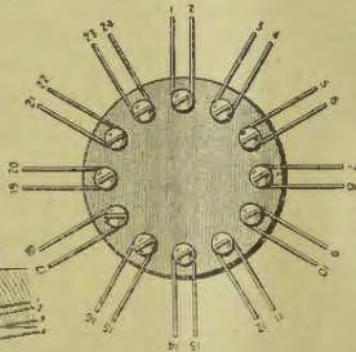


Figure 2

14', 2 and 15', 4 and 16', etc., in succession. Figure 3 shows the scheme of winding, the turns being numbered.

It will be seen that when the wire is passed around all the prongs the wooden form will have been covered to a uniform thickness of two layers. When the first revolution has been completed the procedure is the same as in the beginning.

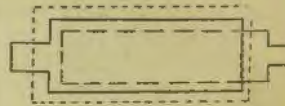
Any number of layers may be wound on. To determine the number of turns wound on the form, one has only to multiply the num-

PHONE CONDENSER.

The making of a 'phone condenser is a very simple matter, and doesn't require any skill.

The material required is a sheet of tinfoil, a sheet of waxed paper, a roll of insulation tape, and two screens.

Cut out seven strips of tinfoil 2 inches long by $\frac{1}{4}$ inches wide, leaving a lug of tinfoil on one end,



as per diagram. Next cut out eight pieces of waxed paper 2 $\frac{1}{2}$ inches long by $\frac{1}{4}$ inches wide. First place a piece of the waxed paper, then a piece of tinfoil, another piece of paper, and so on. Have each alternate piece of tinfoil with the lug running at opposite ends, as in the diagram. When finished, bind same tightly around with insulating tape, and connect the two ends of the condenser lugs across the 'phones.

C.W. in continuous waves telegraphy interrupted at audio-frequency by some device on the transmitter.

ber of double layers by the turns per double layer, in this case, 21.

The prongs are drawn out when the winding is completed and one has remaining a self-supporting inductance of the honeycomb type on a wooden disc. If it is desired to remove the disc, a cardboard former should be put on to the disc before the winding of the wire is started.

On completion the coil should be given a coat of good shellac.

A mounting suitable for this coil was described in the first issue of the "Wireless Weekly."

WORKING WITH ENGLAND.

The report of the Parliamentary Committee appointed to inquire into the agreement with Amalgamated Wireless (Australia) Ltd., for the direct communication by wireless with Great Britain, has just been printed.

It is an interesting document, and contains many absorbing points for those with a knowledge of the science.

The section giving notes of the proceedings before the committee shows that it soon became evident that the technical capability of any system of wireless communication over long distances was a subject that did not admit of an easy or quick decision, and it was decided to call evidence as would enable this important question to be satisfactorily considered.

The Committee had before it the report of the Imperial Wireless Telegraphy Commission of 1920, which clearly defined a commercial wireless service as one that guaranteed rapid, reliable, and continuous, working for 24 hours every day, and which also very positively stated that such a service was not practical beyond a distance of 2,000 to 3,000 miles.

THE WITNESSES.

The witnesses heard were Mr. E. T. Fisk, Managing Director of the Amalgamated Wireless Ltd.; Mr. L. C. Stewart, of the Radio Communication Company; Lieut.-

Commander Creswell, of the Navy Department; Mr. A. S. McDonald and Mr. H. F. Coffey, of the Commonwealth Radio Service; Mr. J. G. Balsillie, who was in charge of the radio service from 1912 to 1916; and Mr. Malone, officer in charge of the Radio Dept. of the Post Office. Mr. Malone also advised the Committee on technical points.

In evidence, it was stated that the longest wireless circuit at the time handling regular commercial traffic was between Honolulu and Cavite, in the Philippine Islands, a distance of about 4,500 miles. The evidence of the Post Office radio officers, supported by the logs of signals intercepted by them, denoted that this circuit was operating on a traffic efficiency basis far below that designated by the Imperial Commission as a commercial standard. The causes for such inefficiency were investigated by the committee, and the evidence indicated the following conditions as seriously affecting the reception of signals:—

NO UNANIMITY.

- (1) Interference produced by atmospherics.
- (2) Insufficient transmitting power to overcome the distortion and diminution of signal strength caused by the interference of other

unexplained phenomena occasioning a fading of the signals during certain portions of the day.

These causes and effects were inquired into, but, as there was no unanimity of opinion among the witnesses or the authorities quoted by them, the position was not advanced.

Mr. Fisk stated that the Marconi Company has developed devices which would effectively prevent atmospherics interfering with received signals, and that the efficiency of any system depended on the provision of such contrivances. He was unable, however, to adequately reply to the opinions expressed by certain noted physicists and wireless technicians, that some really effective and anti-atmospheric eliminating invention was still urgently required to remove this most serious limitation to long-distance radio telegraphy.

He quoted from letters forwarded by the Marconi Company, of London, wherein it was stated that devices such as the Franklin aerial and the Marconi earth screen were really reliably effective at stations operating in Europe. It is, however, to be noted that the stations to which he referred are not receiving signals on the long wave lengths suggested as necessary for successfully communicating from Australia, and those stations were not free from interference.

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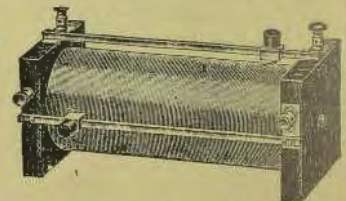
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TUNING COILS

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Inter's. 1s 8d.

September 1st, 1922

WIRELESS WEEKLY

7

OUR
RADIO
YARN.

FATE'S CHOICE.

BY
Q.R.M.

"No, Harry, I'm afraid it's no good. You know what Mother and Dad are. They have even gone so far as to forbid me to see you."

Fretty Peggy Delane dropped her glance to the ground, and a sparkling teardrop hovered under the long lashes of each eye.

Harry Ainslee, the well set up, keen-eyed young man, who was the girl's companion, made an impatient gesture.

"I suppose, Peg., that it's because I have no money that I'm out of favor. I know the pay of a wireless officer is not exactly a fortune, but it's enough for us to live comfortably on, so why the determined opposition?"

"As a matter of fact, Harry," replied the girl, with sobs in her voice, "they are constantly worrying me to accept James Greenland. He is well off, you know, and a firm friend of Father's."

"But he is twice your age," cried Harry, "and his reputation is not too good in the city."

"I know, and I hate him, and shall never consent to marry him or anyone else while you live, Harry."

With vows to be true to each other, the lovers left the unpleasant subject, for they had farewells to make. Harry's ship sailed on the morrow for America.

The following day Harry, a manly figure in his chief operator's uniform, paced the deck of the steamer Manton as she crept down the Harbor, with the purser.

"See we have a distinguished passenger this trip, James Greenland, the Stock Exchange man."

Harry stopped in his tracks. "Not the Greenland?" he asked.

"The same," answered the purser, "but what's the matter, do you know him?"

"No," said Harry, shortly, and resumed his walk.

But he was to know Greenland, for when he was on watch in the wireless cabin that evening the passenger came to the door.

"You are the Marconi man, eh? Good. My name's Greenland, and I want to tell you that there will be Stock Exchange reports coming by wireless for me each day while we're in touch with Sydney, and I want you to send them to me promptly at Stateroom 7, and mind you don't make any mistake in taking down the figures."

Without waiting for a reply, Greenland strode off, and Harry watched the heavy figure till it was out of sight.

"Fancy poor little Peggy being married to that," muttered Harry in disgust.

He saw nothing of Greenland for many days, though the Stock Exchange reports came in regularly and were promptly sent to his stateroom. It was after receiving one of these that Greenland made his next appearance at the door of the wireless cabin, where Harry was on watch.

The passenger was plainly agitated, and he wasted no time in making the subject of his excitement known.

"Look here, how long will it take you to get in touch with Sydney?"

"A couple of minutes, with luck," replied Harry curiously.

"Then for God's sake get to work and send this message for me. It must reach my broker within the next couple of hours, or I am absolutely ruined. If you get the message through O.K. you are on a hundred pounds." He slammed a slip of paper, bearing a short message in code, on the table, and waited for the answer.

"I don't want your money," said Harry, "but I'll do my best with the message. Come back in an hour."

As Greenland, with bowed head and a troubled face, walked along the deck the operator turned to his instrument.

So his rival's money was at stake, he thought, and it was the money that stood between him and the girl of his heart. The thought

flashed upon Harry:

What if the message did not go, or he could not get it through.

A silent, fierce battle raged in the young man's brain. His better self clamored for the instant sending of the message, and the selfish part of him demanded the base neglect of his duty. It was over in an instant. The better self won.

The deft fingers made the sending key dance rapidly, and the shore operator took in the message.

Harry sat back in his chair and stared at the sunlit sea through the cabin door. His conflicting thoughts were interrupted by the sound of his ship's call letters in the telephone. He replied and took down the message from the shore station on his pad.

It was addressed to Greenland, and signed by the person to whom the momentous message had been sent. It consisted of two words:—

"TOO LATE."

A few days later a Sydney newspaper contained a paragraph reading: "Mr. James Greenland, well-known on the Sydney Stock Exchange, has disappeared from the steamer Manton, on which vessel he was a passenger for San Francisco. It is almost certain that he has fallen overboard."

In the little wireless cabin the young man thought hard—while a pretty girl, in the seclusion of her bedroom overlooking Sydney Harbor, sobbed and rejoiced.

Anglo-American Book Shop.

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459 GEORGE STREET,
SYDNEY.

All the Latest Wireless Books and
Magazines in stock, posted anywhere.

THE BUSY PEN.

FOR THE COUNTRY.

Sir,—I was delighted to read in your issue of August 11th the article on the use to which wireless telephony could and should be put to help our good folks in the country parts. The same idea struck me a few weeks ago after reading in a French wireless review, that the Eiffel Tower station had already inaugurated such a service. I hope you will go all out and insist upon this idea until it is realised.

P. P. McDONELL.
Goulburn.

THE CONFERENCE.

Sir,—It is to be regretted that the North Sydney Radio Club was not represented at the meeting of delegates on August 4th last. The Wireless Institute, contrary to Mr.

Rich's statement, is in no way responsible for their non-attendance, as notices were posted to all clubs advising them of the meeting. On August 2nd, however, the notice posted to the North Sydney Radio Club was returned to me unclaimed, and I have the letter here for further reference.

It was the intention of the Institute to have every club represented and took the necessary steps to do so. The Illawarra Club not being formed at the time the notices were forwarded, took their invitation from notices in the "Magic Spark" column in the "Evening News."

R. D. CHARLESWORTH,
Assistant Hon. Secretary, Wireless Institute.

Special valves are used for transmitting. These have a very high vacua to withstand high plate voltages, and electrodes large enough to deal with the resulting energy flow.

ON CRYSTAL.

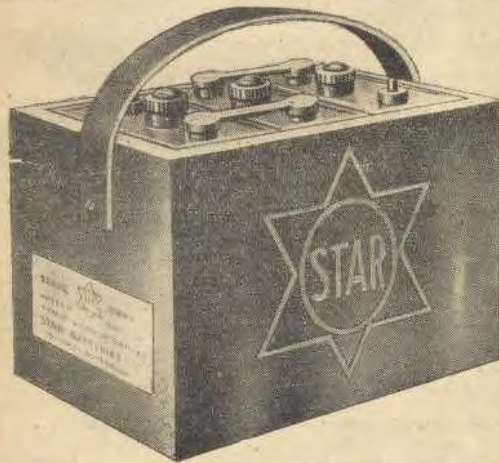
3000 MILES COVERED.

During the war, a writer in "Popular Wireless," London, using a Marconi type 16 crystal receiver on board a Naval transport, found one position, guarded against the crystal.

For two months it remained in one position, guarded against the designs of careless cabin-boys and other evil spirits.

Using a 200-foot twin wire aerial, barely sixty-feet high, signals were received clearly from Paris while anchored in Montreal Harbour, at Ashar, on the Tigris and in the Suez Canal. The radio station at Rinella Bay, Malta—BYZ, nee SD—could be clearly heard at a distance of 3,000 miles. This with a crystal detector, mark you!

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Sydney.

'PHERICS.

WHAT THEY ARE.

(By An Expert).

Strays, X's, Clicks, or Grinders.
These may be divided into two classes as regards their origin:—

- (a) Those produced by convective conditions in the atmosphere within, say 100 miles radius of the station, which may be termed "Local Storms."
- (b) Those originating at a distance.

Their origin is due to the fact that the atmosphere is not at a uniform zero of potential; on the contrary, large patches accumulate excessive positive and negative charges. These charges are continuously accumulating and uniting, frequently with such violence as to produce the convection current known as "A Flash of Lightning." Primarily the charges owe their origin to the sun which ionises or charges the atmosphere.

This will be observed by the effect of latitude and seasons on the reception of X's, i.e. they are more prevalent in tropical zones, and during the summer months in temperate zones.

HEAVY DAMPING

Strays have a variable but generally long wave length, their damping is heavy, and their shocking effect is severe. When they encounter an antenna they set it oscillating at its own natural frequency, and are consequently very difficult to eliminate.

The following generally conclusions may be deduced from tabulated results.—

- (a) Atmospheric heard in dark hours are more numerous and louder than those heard in daylight. The changes from daylight to night conditions are much more abrupt on or near the mainland, and less so at sea.
- (b) Heavy atmospheric storms occur at irregular intervals, generally accompanying periods of low barometer, high wind velocity, rapid change of temperature and

great rainfall. They are specially prevalent during rapid barometer fluctuations.

- (c) The worst atmospheric occur when there is a thunderstorm in the neighbourhood.
- (d) Certain seasons of the year are worse in various parts of the world.

Strays may be avoided in the following ways:—

LESSENING THE EFFECTS.

Use an aerial of low mean heights, and amplify the signal strength (an insulated wire on the ground for preference, though this is not possible in most cases owing to the necessity of avoiding screening effects of trees, buildings, etc.)

Use a series of coupled circuits, i.e. a selective circuit.

Use a limiting or balancing device, so that atmospheric strength may be limited thus allowing over-reading; or balanced out.

Statics are caused through the accumulation of charges in an aerial. It is not advisable to leave an aerial, when not in use, insulated from earth by a receiving condenser, as these charges are liable to puncture the di-electric, also a nasty shock can be obtained from the aerial especially during a heavy atmospheric storm.

The ticking of a clock is transmitted by wireless from France to New Zealand, enabling the New Zealand clocks to keep Greenwich time.

French "R" valves will pass 10 to 15 milliamps in the plate circuit and require a "B" battery of about 75 volts.

IN NEW ZEALAND.

A RADIO DANCE.

A complete novelty in New Zealand was provided for the dance of the District Telegraph Engineers' Social and Sports Club in Wellington recently when some of the dance music was provided by wireless telephony.

The transmitter was in the radio laboratory of Mr. McClay, in Gordon Place, close to the Newtown Post Office, and the dance was held in the New Century Hall, Kent Terrace. The transmission was conducted by Mr. McClay, and the instruments used were constructed by Messrs. McClay, Apperley, and Simpson.

The music was provided by gramophone. At the receiving end, where Messrs. Apperley, Haggett, and Boere were in charge, was a three-stage amplifier from the same local workshop. The received waves, amplified by this set, were passed to a three-stage bower magnavox, from which they were emitted into the dance hall with great power.

As the hall is right on a tram-line, and as a tramcar is annoyingly efficient as a generator of etheric disturbances at short distances, there was a good deal of disturbance, and the wireless programme was found less satisfactory than was hoped. The large gathering was none the less pleased and impressed, and it thoroughly enjoyed the terrific uproar which was caused at 9 p.m. when "VLW," the Tinakori Hill radio station, burst in with its nightly weather report with so much amplification that the noise was almost deafening.

TELEPHONE: CITY NO. 802.

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IONIC MEDICATION OUTFITS. HOT AIR MACHINES. MEDICAL BATTERIES. ACCUMULATORS. X-RAY APPARATUS SPARK COILS. ELECTRIC STERILIZERS. MAGNETOS

MUSIC IN THE AIR

SUNDAY NIGHT'S CONCERT.

MR. MAELURCAN'S CONCERT.

For next Sunday, September 3rd, the following Pathe records will be played for Mr. Maclurcan's concert, starting at 7.30 p.m.:

- Fox-Trot: "The Side Walk."
Hawaiian Guitar: "Leila."
Soprano: "Old Folks at Home," Yvonne Gull.
Piano: "Polish Dance," Scharwenka.
Code Practice: CW and Buzzer.
Baritone: "When I Looked in Your Wonderful Eyes," Earnest Howe.
Hawaiian Guitar: "Shadows."
Fox-Trot: "Molly on a Trolley."
Cello: "Nocturne No. 2," Chopin.
Recitation: "German at the Telephone."
One Step: "Oh, By Jingo."

THE RADIO MAGNAVOX.

It is a recognised fact that the Radio Magnavox is a most efficient instrument for reproducing music and signals, but many amateurs do not know how this instrument functions, and why it is so efficient. This efficiency is attained by having a moving coil operating in the field of powerful electromagnet. If a metal diaphragm is used in a reproducing instrument, and extreme amplification is to be attained, the normal distance between the diaphragm and the polepiece must be great or otherwise, as the diaphragm is vibrated to a great amplitude it will touch the polepieces and tend to stick. Since the attraction between the diaphragm and the polepieces varies inversely as the square of the distance, the disadvantage of removing the diaphragm far enough to prevent sticking will be very apparent. In the Magnavox reproducer the varying currents are put through a coil which is set low enough to encircle the polepieces. No matter what position the coil is in, the field surrounding it is always uniform, and any part of the vibration the attraction between the coil and the electromagnet is the same.

BROADCASTING.

How England Does It.

The broadcasting problem seems to have been tackled in an efficient manner in England.

The British Postmaster-General said recently that he hoped they would have a reasonable service, without causing interference either with commercial or Government wireless, or with the facilities open to each other.

He would allow a limited number of radio-telephone broadcasting stations. The country would be divided roughly into areas centring upon London, Cardiff, Plymouth, Birmingham, Manchester, Newcastle, Glasgow or Edinburgh, (but not both), and Aberdeen.

One or more broadcasting stations would be allowed in each of those areas. Permission for those stations would only be granted to British firms who were bona-fide manufacturers of wireless apparatus. It was impossible for him to grant all the applications for the right of transmission, but he would ask the various firms who had applied, to co-operate so that an efficient service might be rendered, and there might be no danger of monopoly.

The stations would be limited to a power of 1 1/2 k.w., and furnished with wave lengths which should not interfere with other services. The normal hours for broadcasting would be from 5 p.m. to 11 p.m., except on Sundays, when there would be no limit.

There would be certain regulations in regard to the character and class of news which these agencies could transmit.

Do not materially increase filament brightness for a small increase in signal strength, as this greatly shortens the life of the valve.

Beautiful Illumination with PARIAN WARE



HUMPHREYS' LIMITED, 465 George Street, Sydney. Telephone: City 3849.

RADIO SETS and Parts to make them.

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605 GEORGE STREET, SYDNEY.



September 1st, 1922

WIRELESS WEEKLY

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WESTERN SUBURBS

The last meeting of the above club was held on Wednesday, August 16th, at the Club Room, Auburn, for the purpose of receiving the report of the delegates to the Wireless Conference and also to elect officers for the coming half-year.

The delegate's report was received with satisfaction, and they will be present to give the club's view at the adjourned conference.

The election of officers then took place, resulting as follows:—

President : Mr. B. S. Burman.
Vice-President : Mr. A. A. B. Slight.

Secretary : Mr. E. T. Wood.

The next general meeting will be held on Wednesday, September 6th. The following interesting syllabus of lectures will be delivered, commencing next meeting. This series of lectures has been arranged for the benefit of new members, and those about to begin wireless experimenting, and should be the means of placing such members on the road to success.

SYLLABUS OF LECTURES.

WESTERN SUBURBS AMATEUR WIRELESS ASSOCIATION.

- 6th September—
(1) Nature and source of Electricity, Prim. and Sec. Cells, Voltaic and Dynamic Electricity. G. R. Challenger
(2) Conductors, Insulators, Resistances and Conductivity. R. S. Burman
- 13th September—
(3) Effect of Current. G. R. Challenger
(4) Magnetism and Magnetic Induction. A. B. Slight
- 27th September—
(5) Condensers. A. Pickering
(6) Elementary Principles of Crystal Reception. R. S. Burman
- 4th October—
(7) Aerials and Earths. E. T. Wood
(8) Valve Reception. A. B. Slight
- 18th October—
(9) Valve as an Oscillator. A. D. Slight

- (10) Heterodyne. G. R. Challenger
25th October—
(11) Valve Amplification. A. B. Slight
(12) Calculation. G. R. Challenger

WAVERLEY CLUB.

The Waverley Radio Club is holding a dance at the Athanaeum Hall, Coogee, on the 22nd September. Its purpose is to augment the club's funds. Tickets are 2/- each, and may be had from any of the club members, or from Miss Wallace.

The club hopes to have a three-valve set (V24's) transmitting before long. It should give a range which will enable most suburban clubs to pick it up.

Joe: "I sent a message over 600 miles last night."

Jim: "You must have some fine apparatus."

Joe: "Well, I used a twopenny stamp."

Wireless enthusiasts who wish to economise are advised to carry their pliers in their belts instead of in the pockets, for strategic reasons.

SPECIAL OFFER

RADIO CLUBS

(for Two Weeks only).

A SPECIAL CUT ON

Magnavox Tonearms & Speaking Transmitters

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Will be given to Radio Clubs.

Only a Limited Number Available

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Use your wireless set as a barometer, and when the crackling and hissing of static is very pronounced, you may expect bad weather. This may be observed on small crystal sets, as well as the valve sets.

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A LIMITED SUPPLY AVAILABLE
5s. EACH.
These will give a Perfect Note for Tuning with.
GET IN WHILE THEY LAST.

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296 Pitt St., Opp. W. & S. Board.

STATION CALLS.

SHIPS STATIONS. GREAT BRITAIN.

Broughing BCBL; Bruges BDWY; Bruyere GCBM; Brymead BVH; Bryntawe BSR; Brynmor BYV; Buccinum BCQP; Buchaness ZIO; Buckleigh BDY; Bumba XGG; Buranda LSY; Burtale XFM; Burgondier OEZ; Burgundy BDM; Burma GVT; Burmese Prince GRP; Bury QDK; Burnholme BLV; Byron GDH; Burnhope GXQ; Burutu YVC; Butentown BDH; Buteshire GVH; Canadter BCP; Canaro CAF; Cano GDFC; Candidate EYK; Canonesa BKML; Canopic MPC; Capac GXI; Capella ZLF; Cape Breton EQE; Cape Colony EYV; Cape Corso EWD; Cape Natal XJW; Cape of Good Hope XMP; Cape Ortelgal ZTY; Cape Premier XXO; Cape Transport ZDS; Cap Finisterre FBZL; Cap Polonio GBMD; Capella OFH; Capoa LUE; Cap Verde BTTC; Caraquei MQD; Cardiff EXW; Cardiff Hall ZUZ; Cardigan BCQ.
Cardiganshire MAU; Carisbrook EKF; Cardium MZB; Carisbrook Castle MOW; Carlo GBVM; Carlo Victoria ZTZ; Carlow Castle YDB; Carmania MAA; Carmarthenshire MUS; Carmia GFDO; Carnarvonshire MZR; Carolus GBEL; Caronia MKA; Carpentaria MHG; Carperby BTE; Carrigan Head ZKT; Carron LSP; Carston GXY; Casale MPO; Carventum GLX; Casandra MED; Castalia MWZ; Castellano XEZ; Castellan GBVX; Castlomead VIE; Castolina ZHL; Caterino ZPL; Cauca GYZ; Cavallo GDNS; Cavour YOR.
Cawder Castle GCRF; Cedar Branch YMP; Cedarmore GDSY; Cedric MDC; Celtic MLC; Celtic Prince XIX; Celticstar ZXQ; Cento GVL; Centurion EYL; Ceramic MCP; Cervantes GBXC; Chaklara MUO; Chaklara MZY; Chakla MWQ; Chakrata GPE; Chaleur GMN; Chalister ESF; Chama ZLZ; Chancellor ZLA; Chanda GPT; Chanquinola MPM; Chantala GDN; Chatham ZSH; Chaudiere GDK; Chemnitz GBCJ; Chenab GWK; Cheniston OCH; Chepstow Castle ZAN; Cherry Branch YYZ; Cherryleaf ZZN; Chertsey YDM; Cheyenne GCRK; China MMU; Chicago City BQX; Chiswick BSV; Chiswick GORL; Chiswick BFC; Chiswick GONJ; Chiswick GAR; Chiswick GYG; Chinese Prince YJD; Chiswick GOG; Chiswick

SALE & EXCHANGE

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

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

All kinds of second hand wireless materials for sale, cheap. John Hare, 88 Fitzroy St., Moore Park. Pad. 168.

A new cabinet crystal set, for sale; cheap, in perfect order. "E.H.," Annandale P.O.

If you have a valve set and it suddenly ceases to function, don't jump to the conclusion that it is a "dud." Probably your filament accumulator wants charging.

koa MKO, Chipana ZJE, Chirripo GDCT, Chiswick BNX, Chow Tai GDXY, Chupra GPU, Chyebassa MYF, Cilondia GBXK, Cilarnum GCZM, Cimbrius EON, Circassia MWY, Circe Shell ZDC.

Ciscar GCKB, City BCD, City of Adelaide GDFX, City of Agra MNZ, City of Algiers MDU, City of Alexandria GBDQ, City of Auckland GBDK, City of Baroda EOE, City of Batavia GDRP, City of Belfast BBU, City of Benares GCPJ, City of Birmingham BDS, City of Bombay GUJ, City of Bradford GCZT, City of Brisbane GDNX, City of Bristol GCPF, City of Calcutta GCPK, City of Cairo YVY, City of Cambridge GFCL, City of Canton YSM, City of Chester MAG, City of Colombo GYG.

City of Christiania GFMV, City of Delhi GIC, City of Dunkirk GDD, City of Durham GCPW, City of Exeter MSW, City of Genoa GBFT, City of Hankow MUG, City of Karachi GBW, City of Leeds GCZS, City of London GBLY, City of Madras MCY, City of Madrid MTM, City of Marseilles GCFY, City of Melbourne GBPR, City of Newcastle YVU, City of Corinth XEX, City of Dunedin GBTN, City of Durban GDSN, City of Edinburgh GNC, City of Florence YYQ, City of Glasgow GDRS, City of Harvard GBFK, City of Lahore GPCS, City of Lincoln GDP, City of London GCPX, City of Manchester ZGG, City of Manila ZADP, City of Milan GBND, City of Naples GCPT, City of Norfolk GVA.

? ? ?

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.

K.R.J. (Potts Point) asks:—"Would you publish instructions and specifications as to how to make a small radio-telephone set?"

ANSWER.—See issue of August 25th, "Wireless Weekly."

Several inquirers ask: Where do I apply for a receiving license, and what is the fee?

ANSWER.—Apply to the Director of Radio Telegraphy, Prime Minister's Department, Melbourne. The annual fee is now £2, but is to be reduced shortly.

A.H. (Yanco) asks:—"I would want a set powerful enough to receive messages in Narrandera, where my home is. The nearest radio station, I think, is Sydney, a distance of nearly 400 miles, so will you see what I want. Also state what books or book dealing with making a set suitable and fairly simple?"

ANSWER.—Loose coupler and crystal detector sufficient to receive code signals—single valve set to receive concerts from Sydney and Melbourne. Books: "Wireless Experimenters' Manual."

F.R.P. (Orange) asks:—" (1) Will you please tell me the minimum instruments I should require to receive wireless telephone broadcasting from Melbourne. (2) Also would it be possible to connect an amplifier of sufficient power to make such broadcasting audible over a large room and the approximate cost of same."

ANSWERS.—(1) A single valve set will bring in Melbourne concerts very well. (2) To get the necessary amplification it would require two stages of amplification and could then be hooked on to a loud speaker. Single valve set costs £20, two stage amplifier about £35, a megavox £15.

Interested asks how do I start.

Write to Melbourne for a license.

Make a loose coupler crystal set (see "Make your Own," W.W. 25/8/22). Join a Radio Club. Get Banchers "Wireless Manual."

H.E.S. (Coogee)—See answers to other correspondents in this column.

Published by W. J. Macnamara, 170, Pitt Street, Neutral Bay, at the office of W. M. Macnamara, 170, Campbell Street, Sydney.