The Hundred per cent. Australian Radio Journal.

THE WIRELESS WEEKLY

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

Registered at the General Post Office, Sydney: for transmission by post as a newspaper.

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A Prominent Sydney Experimenter—MISS F. V. WALLACE. (Photo Carlton Studios, Darlinghurst.)

A TALK WITH "WIRELESS WEEKLY."

To-day will be opened the first Public Radio Exhibition in Australasia.

Coming at a time when everybody is beginning to realise that wireless will very shortly play an important part in public life, the exhibition is all the more welcome, and the Metropolitan Radio Club, under whose auspices it is being conducted, is deserving of the thanks of all experimenters.

Too long has the amateur been looked upon by his family and his friends as something of a crank. The general opinion seems to be that wireless experimenting is a hobby to be indulged in only by those well blessed with the world's goods and that it is useless to look for, or expect, results unless most expensive apparatus is used.

Consequently, when the youthful experimenter winds his coils, and sets up his little crystal set, he is, in many cases, the subject of chaff and criticism.

If only the scoffers had troubled to look into the science, they would have discovered that the first receiving apparatus used by the great Marconi, in his early experiments, was not nearly as efficient as is the little crystal set of the youthful experimenter of to-day.

The amateur radio enthusiast, who has suffered, will come into his own to-day, for at the exhibition will be shown the apparatus of his colleagues and clubmates, for everybody to see and admire. This apparatus will be tested and judged by one who is a peer among them—Mr. Chas. Maclurcan, breaker of world's records in the science.

It is up to the general public to visit the exhibition and give it the support it deserves.

As sure as night follows day this country is on the verge of a radio boom, such as swept and became firmly established in America and England, and it should be the aim of everybody to make themselves acquainted with that which must become a public utility.

BE CAREFUL!

The Black Hand has entered the Radio field!

At several houses on the North side of Sydney Harbor, where aerials have been rigged, the following mysterious notice has been delivered:—

You don't know who I am, but

BE CAREFUL.

YOUR name is in the hands of the authorities on that list of

UNLICENSED RECEIVING SETS.

Be a sport! Don't continue injuring the amateur wireless cause!

GET A LICENSE.

Who sent them?

This Happens

AN EVERY-DAY INCIDENT.

"Dad!" said young Frank, "I wish I could have a wireless set! The chaps at school talk of nothing else and nearly every fellow is making one."

"Nonsense," said Frank's father," we do not want any more rubbish about this place, and it would be of no use anyhow."

"Let me try Dad," persisted Frank, "see, here is a diagram of a set that a chap in my form made, and he hears signals every night."

"Take it away" said the father irritably, and for a time there was silence in the room save for the clicking of his mother's knitting needles, and for the scratching of Frank's pen as he proceeded with his home lessons.

The mother wisely said nothing, but two or three days later, when discussing with her husband a suitable present for Frank's birthday, she suggested that they should purchase a pair of wireless phones and let Frank try his hand at making his set. It was eventually decided to do this, and Frank lost no time in getting a set together.

On the following Saturday evening, everything was complete and his father looked on with ill-concealed amusement as Frank buzzed away for some time trying to find a point on his crystal.

"There you are, mother," said Frank proudly handing his mother one of the ear pieces, "GET THAT!"

It was Pennant Hills sending out weather reports, but as they all listened in turn they realised that it meant more than a mere message being transmitted, it meant another great victory for man, in chaining one more almost unlimited power to do his bidding.

"X.E.S."

A most important use to which wireless is being put is in the detection of icebergs in the North Atlantic. Ice patrols are employed to look out for icebergs, and the position and size of them is broadcasted.

OUR LEADING EXPERIMENTER.

The latest photographic study of Mr. Chas. Maclurcan, of Strathfield, who must be recognized as Australia's foremost experimenter. This is the man to whom amateurs all over the eastern portion of Australia owe their thanks for the splendid concerts broadcasted each Sunday night. Mr. Maclurcan's radio feats are well-known to readers of this journal.

HONOLULU'S WAY.

PLENTY OF MUSIC.

RADIO'S FIRM HOLD.

(From a Special Correspondent of "Wireless Weekly.")

HONOLULU.

Arriving at Honolulu ten minutes after sunset, and consequently missing pratique, we were compelled to remain in the quarantine anchorage for the night.

The monotony of the evening however, was dispelled in a most unexpected way. Juggling the various wave lengths of the receiver, we found on 360 metres an excellent piano solo.

This came from "K.G.U.," which subsequent investigation revealed as the designation under which the "Honolulu Advertiser," the local morning paper, runs its radiophone broadcasting. This station broadcasts a musical programme on Sundays, Tuesdays and Thursdays, from 7.30 p.m. to 9 p.m., sometimes even later, and on the remaining four nights generally comes to light (or sound ?) with a few items on a player-piano. At a distance of three miles, this comes in loud enough to be heard all round the room, 10ft. by 10ft., on one bulb, using a Baldwin receiver and the ship's megaphone as a loud speaker.

The carrier wave can be entirely eliminated at this distance, as can the transmitter hum. Six to six and a half amps. is the usual radiation current of this station.

The local evening paper, the "Star Bulletin," also maintains a broadcasting station (call letters KDYX). This station works twice daily. At 12.15 p.m. it broadcasts news and weather, and 6.30 to 7.30 p.m. a musical programme. Five 50-watt radiation tubes are used, one as amplifier of microphone currents, two as modulators, and two as oscillators. The filaments are lighted off a storage battery; A.C. was tried, but proved unsuccessful. This set is sharper in the tuning than KGU, and has been heard at VMG, Apia, Samoa, 3100 miles distant.

The amateur is not in too good a position here, as on one side KHK, the commercial station, is only three miles away, and on the other NPM, Pearl Harbour, which has a 200 k.w. arc and a 10 k.w. spark, causes some interference. But using an ordinary loose coupler with both primary and secondary variable condensers, and the well-known "ultra-audion" circuit with variable grid condenser, interference from both these stations was easily eliminated on 360 metres.

A local amateur has built a five watt 'phone, and on 200 metres has a range of 50 miles. One evening KGU, 6SY (the five watt set), and the U.S. Naval transport Henderson carried on a three-cornered conversation by radiophone.

PEARL HARBOR CHANGES.

Pearl Harbour Station has increased its wave length from 11,200 metres to 12,100 metres arc. He sends time signals on this wave at 10 a.m. Eastern Australian standard time. He has also altered his weather and time wave lengths, on the spark set, from 600 to 2250 metres.

MAKE YOUR OWN.

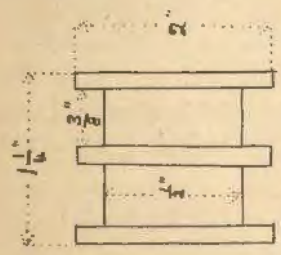
RADIO FREQUENCY TRANSFORMER

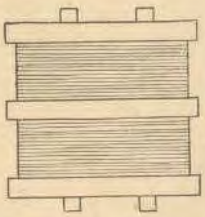
Up to the present the radio frequency transformer in this country has not been anywhere near as popular as the audio frequency transformer.

This is, we think, due to the inability to purchase the former

We propose, in this article, to show readers how to construct a simple radio frequency transformer.

The first material required is a bobin, cut as in the figure, to the dimensions given. A few ounces of D.S.C. wire, of No. 34 gauge, and 4 contact studs.





To wind the transformer, drill a hole through the core, and tap it to take a ¼ inch whit thread. In this hole, screw a piece of thread rod, leaving about 1 inch. This rod is for the purpose of holding the transformer in an ordinary hand drill for quickness of winding on the wire.

Of course, one can wind by hand, but it is a laborious business. Drill 4 holes of 1/16 inch, two in each end of the bobin, to allow the wires to go through to the four contact studs. Wind the coils in the same direction; either set can be the primary or secondary, and each segment is to have the same number of turns.

The turns for the various wave lengths are as follows, but remember you must shunt the primary winding, when connecting in your circuit, with a .0005 variable condenser. It is not necessary to turn the secondary side:—

Primary Turns	Secondary Turns	Range. Metres.
75	75	550 to 1,600
150	150	1,000 to 2,000
300	300	2,000 to 4,000
600	600	4,000 to 8,000
1200	1200	8,000 to 16,000
2000	2000	12,000 to 25,000

In the cases of the higher wavelengths, much finer wire is used, otherwise you get a bulky coil. When finished, immerse the coils in armature varnish, thoroughly dry and bake.

In using radio frequency, don't forget it is necessary to have a negative potential on the grid of valve to which the coil is used.

The method of mounting the coils is left to the amateur's taste, but a good idea is to mount them similar to the clip attachment as used with a V24 valve. The main thing is to have them easily detachable for changing according to the desired wave lengths.

LOOSE COUPLER.

R. R. writes:—

With reference to your article on "How to make a Loose Coupler," of the 25th August, perhaps my experience in following out your directions, may be of assistance to some other country enthusiast, who is having trouble with his set.

I carefully followed out your directions, and was delighted with the appearance of the set. The only thing wrong was that it would not work. After going over the whole of the work very carefully, I found that I had not scraped the enamel off the primary wire, where it was connected to the aerial terminal, and this very simple oversight was enough to prevent any results being obtained.

The next trouble was in the secondary. I had varnished the secondary end after fixing the studs, and the varnish had covered the studs, again preventing any current from passing round the circuit. The third and worst trouble was that I had bought an "untested" crystal. It was cheap, certainly, but I might as well have tried to get signals through a piece of blue-metal. After obtaining a good crystal, I was astounded one afternoon this week, when casually listening in, to hear strains of music, and very faintly, a voice. I am eleven miles from Sydney.

When the valve receiving set is not in use, see that you have your "B" Battery disconnected. Even though your filament is switched off, there is still a leak in the valve for the current from the "B" Battery.

NEW ZEALAND DECIDES.

The New Zealand Postal Department has been considering suggested proposals in connection with radio telephone broadcasting.

A scheme has been evolved which, it is believed, will result in avoiding the chaotic condition that has been brought about in America and elsewhere for want of proper regulation.

In determining the location of the broadcasting stations and the technical conditions under which they shall operate a careful study has been made of such features as distribution of population, topography of country, isolation of areas from other means of communication, etc.

The broadcasting programme will be limited to items of entertainment, lectures, and information generally, but will not include direct advertising.

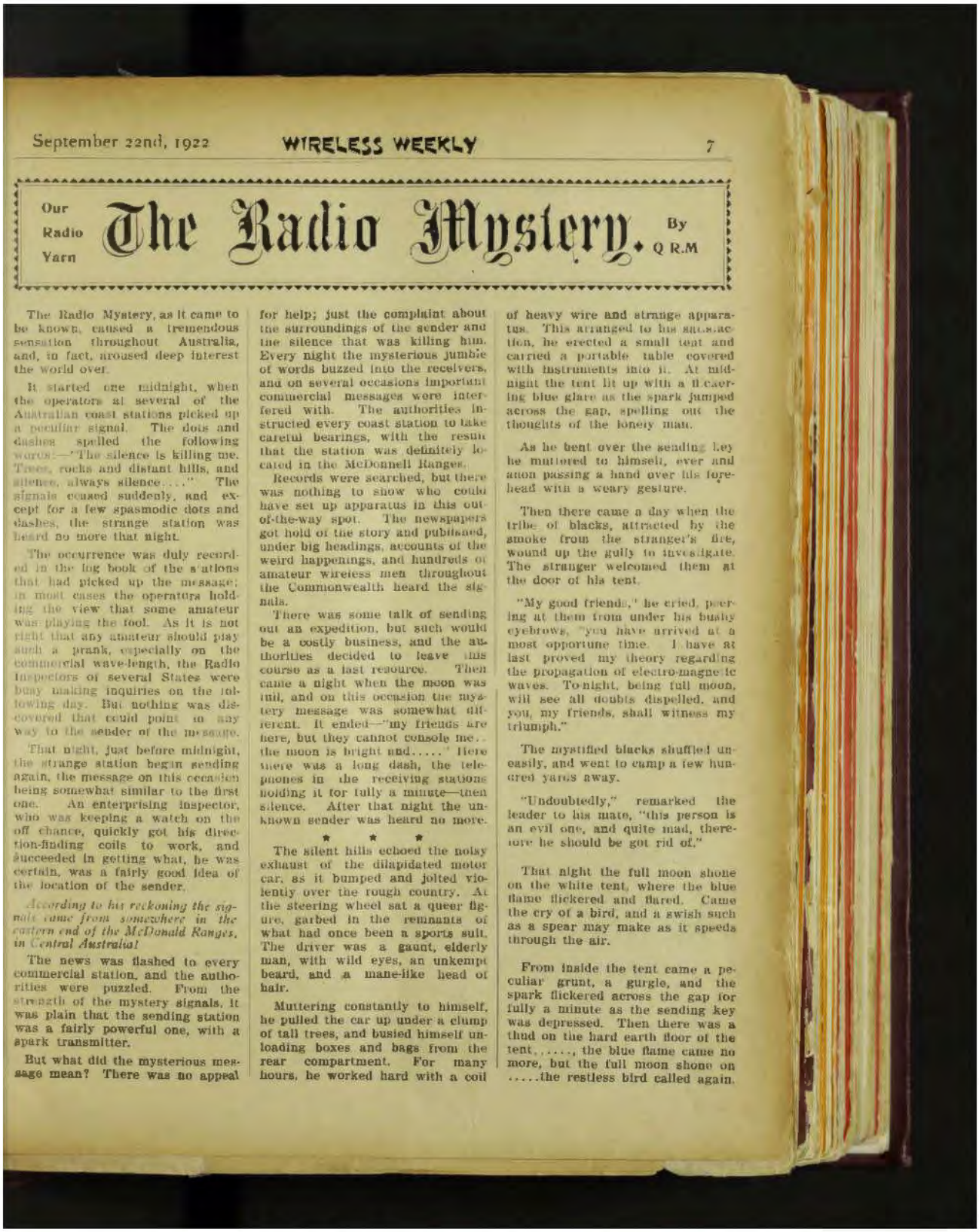
The following places have been chosen as ½ k.w. radio telephone broadcasting centres, the figures following the name of the place indicating the transmitting wave-length in metres:—Whangarei, 230; Auckland, 260; Hamilton, 360; New Plymouth, 385; Gisborne, 335; Napier, 380; Palmerston North, 340; Wellington, 275; Nelson, 335; Greymouth 265; Christchurch, 380; Timaru, 330; Dunedin, 370; Invercargill, 270.

At these centres time-tables will be arranged by the department, which will ensure that only one broadcasting station will be operating at any one centre at the same time, and where applications may be in excess of the number of permissible stations at any one centre, priority will be given to applicants best qualified to cater for the public interests.

At the following smaller centres, broadcasting will be permitted to approved stations with power up to ¼-k.w. on the wave-lengths indicated by the figure following the name of the centre:—Kaitai, 220; Dargaville, 190; Thames, 195; Tauranga, 225; Rotorua, 190; Whakatane, 250; Te Kuiti, 240; Taumarunui, 210; Hawera, 190; Hastings, 195; Wanganui, 220; Dannevirke, 250; Masterton, 195; Westport, 190; Kaikoura, 270; Oamaru, 225; Queenstown, 190; Roxburgh, 250; and Gore, 195.

By means of the above distribution of stations and allocations of power and wave-lengths, practically every part of New Zealand should be able, by the use of a simple type of receiver, to obtain clear reception of broadcasted matter from the local radio centre and be free from interference from other sources.

To cover the whole range of broadcasting wave-lengths receiving stations should be tunable from 180 to 400 metres, and to cover reception from amateur stations in addition the range of the receiving set should extend down to 120 metres. The compactness of the broadcasting wave-length band ensures that a comparatively simple and inexpensive receiver can be designed to efficiently cover the whole range.



Our Radio Yarn

The Radio Mystery.

By Q R.M

The Radio Mystery, as it came to be known, caused a tremendous sensation throughout Australia, and, in fact, aroused deep interest the world over.

It started one midnight, when the operators at several of the Australian coast stations picked up a peculiar signal. The dots and dashes spelled the following words:—"The silence is killing me. Trees, rocks and distant hills, and silence, always silence...." The signals ceased suddenly, and except for a few spasmodic dots and dashes, the strange station was heard no more that night.

The occurrence was duly recorded in the log book of the stations that had picked up the message; in most cases the operators holding the view that some amateur was playing the fool. As it is not right that any amateur should play such a prank, especially on the commercial wave-length, the Radio Inspectors of several States were busy making inquiries on the following day. But nothing was discovered that could point in any way to the sender of the message.

That night, just before midnight, the strange station began sending again, the message on this occasion being somewhat similar to the first one. An enterprising inspector, who was keeping a watch on the off chance, quickly got his direction-finding coils to work, and succeeded in getting what, he was certain, was a fairly good idea of the location of the sender.

According to his reckoning the signals came from somewhere in the eastern end of the McDonald Ranges, in Central Australia!

The news was flashed to every commercial station, and the authorities were puzzled. From the strength of the mystery signals, it was plain that the sending station was a fairly powerful one, with a spark transmitter.

But what did the mysterious message mean? There was no appeal for help; just the complaint about the surroundings of the sender and the silence that was killing him. Every night the mysterious jumble of words buzzed into the receivers, and on several occasions important commercial messages were interfered with. The authorities instructed every coast station to take careful bearings, with the result that the station was definitely located in the McDonnell Ranges.

Records were searched, but there was nothing to show who could have set up apparatus in this out-of-the-way spot. The newspapers got hold of the story and published, under big headings, accounts of the weird happenings, and hundreds of amateur wireless men throughout the Commonwealth heard the signals.

There was some talk of sending out an expedition, but such would be a costly business, and the authorities decided to leave this course as a last resource. Then came a night when the moon was full, and on this occasion the mystery message was somewhat different. It ended—"my friends are here, but they cannot console me.. the moon is bright and....." Here there was a long dash, the telephones in the receiving stations holding it for fully a minute—then silence. After that night the unknown sender was heard no more.

* * *

The silent hills echoed the noisy exhaust of the dilapidated motor car, as it bumped and jolted violently over the rough country. At the steering wheel sat a queer figure, garbed in the remnants of what had once been a sports suit. The driver was a gaunt, elderly man, with wild eyes, an unkempt beard, and a mane-like head of hair.

Muttering constantly to himself, he pulled the car up under a clump of tall trees, and busied himself unloading boxes and bags from the rear compartment. For many hours, he worked hard with a coil of heavy wire and strange apparatus. This arranged to his satisfaction, he erected a small tent and carried a portable table covered with instruments into it. At midnight the tent lit up with a flickering blue glare as the spark jumped across the gap, spelling out the thoughts of the lonely man.

As he bent over the sending key he muttered to himself, ever and anon passing a hand over his forehead with a weary gesture.

Then there came a day when the tribe of blacks, attracted by the smoke from the stranger's fire, wound up the gully to investigate. The stranger welcomed them at the door of his tent.

"My good friends," he cried, peering at them from under his bushy eyebrows, "you have arrived at a most opportune time. I have at last proved my theory regarding the propagation of electro-magnetic waves. To-night, being full moon, will see all doubts dispelled, and you, my friends, shall witness my triumph."

The mystified blacks shuffled uneasily, and went to camp a few hundred yards away.

"Undoubtedly," remarked the leader to his mate, "this person is an evil one, and quite mad, therefore he should be got rid of."

That night the full moon shone on the white tent, where the blue flame flickered and flared. Came the cry of a bird, and a swish such as a spear may make as it speeds through the air.

From inside the tent came a peculiar grunt, a gurgle, and the spark flickered across the gap for fully a minute as the sending key was depressed. Then there was a thud on the hard earth floor of the tent, ..., the blue flame came no more, but the full moon shone on .....the restless bird called again.

WAR ECHO.

RADIO TRIUMPH.

(By C.J.W.)

He was sitting in the wireless room on the big liner, alongside a Sydney wharf, when I happened along. A retiring, modest young Englishman in his early twenties, he bid me welcome, and we commenced to yarn.

"Like to hear Lyons sending Press," he asked, looking at the clock, "it's about his time." I said I would, and he adjusted the apparatus and handed me the phones.

One thing led to another and we got on to the subject of radio in war time. It transpired that during the latter part of the "dust up" with Germany he held a commission in the Royal Naval Reserve, being stationed at one of the three Direction Finding Stations on the east coast of Britian. The work of these stations was to take cross bearings of all German Naval signals, and then locate the position of the sending ship.

21 VALVES.

So skilful did the British listeners become, that they were able to actually name the German ships from the note of their wireless calls. But the Germans learned of them in time, and took to using low power buzzers for speaking to each other over short distances.

The Direction stations, in order to pick up these weak signals, installed sets employing 21 valves, and the operator assured me that they took some handling!

As an illustration of the value of the work that the stations did, he told me of an incident which happened during the latter part of the war.

Three German destroyers had formed a habit of sallying forth in the darkness and making a raid on the busy traffic lane between England and France. They did this on several occasions, and though they had caused no serious damage, they were a thorn in the side of the Navy.

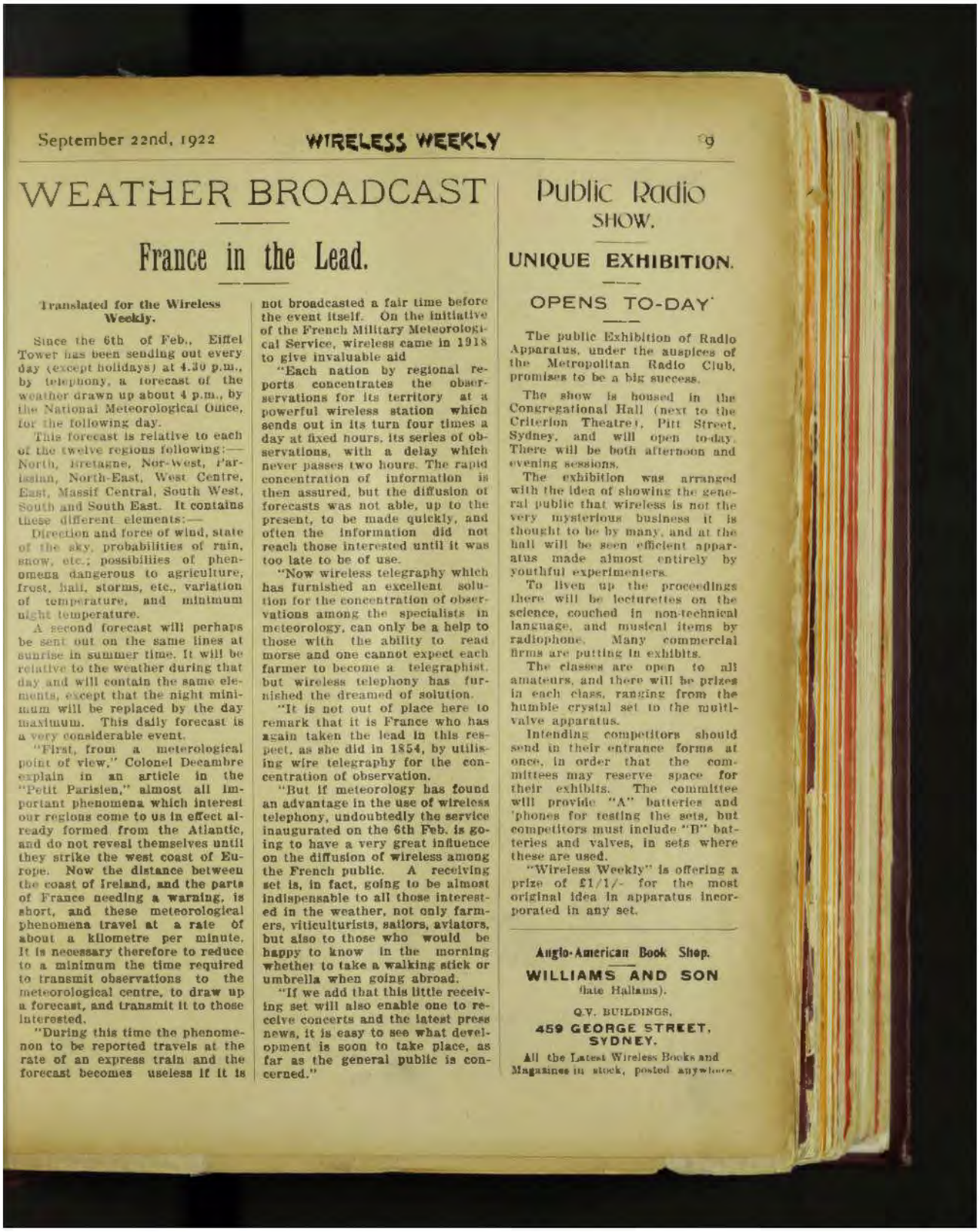
METHOD AND RESULT.

The Direction Stations got to work the next time they came out and took bearings, every few minutes or so, of their wireless calls. By this means it was easy to mark out the course they took on the chart. The destroyers duly returned from their "tip and run" cruise, and the navy got to work.

Now, as everybody knows, the German is absolutely methodical, and the British worked on the assumption that he would be in this case. He was, and it proved his downfall.

When next the three destroyers came out, they never returned, for they followed the same course as on previous occasions and steamed right into a minefield scientifically laid right in their track.

With valve reception a high aerial is unnecessary. Increasing the height increases static interference more than signal strength.



WEATHER BROADCAST

France in the Lead.

Translated for the Wireless Weekly.

Since the 6th of Feb., Eiffel Tower has been sending out every day (except holidays) at 4.30 p.m., by telephony, a forecast of the weather drawn up about 4 p.m., by the National Meteorological Office, for the following day.

This forecast is relative to each of the twelve regions following:— North, Bretagne, Nor-West, Parisian, North-East, West Centre, East, Massif Central, South West, South and South East. It contains these different elements:—

Direction and force of wind, state of the sky, probabilities of rain, snow, etc.; possibilities of phenomena dangerous to agriculture, frost, hail, storms, etc., variation of temperature, and minimum night temperature.

A second forecast will perhaps be sent out on the same lines at sunrise in summer time. It will be relative to the weather during that day and will contain the same elements, except that the night minimum will be replaced by the day maximum. This daily forecast is a very considerable event.

"First, from a meterological point of view," Colonel Decambre explain in an article in the "Petit Parisien," almost all important phenomena which interest our regions come to us in effect already formed from the Atlantic, and do not reveal themselves until they strike the west coast of Europe. Now the distance between the coast of Ireland, and the parts of France needing a warning, is short, and these meteorological phenomena travel at a rate of about a kilometre per minute. It is necessary therefore to reduce to a minimum the time required to transmit observations to the meteorological centre, to draw up a forecast, and transmit it to those interested.

"During this time the phenomenon to be reported travels at the rate of an express train and the forecast becomes useless if it is not broadcasted a fair time before the event itself. On the initiative of the French Military Meteorological Service, wireless came in 1918 to give invaluable aid

"Each nation by regional reports concentrates the observations for its territory at a powerful wireless station which sends out in its turn four times a day at fixed hours, its series of observations, with a delay which never passes two hours. The rapid concentration of information is then assured, but the diffusion of forecasts was not able, up to the present, to be made quickly, and often the information did not reach those interested until it was too late to be of use.

"Now wireless telegraphy which has furnished an excellent solution for the concentration of observations among the specialists in meteorology, can only be a help to those with the ability to read morse and one cannot expect each farmer to become a telegraphist, but wireless telephony has furnished the dreamed of solution.

"It is not out of place here to remark that it is France who has again taken the lead in this respect, as she did in 1854, by utilising wire telegraphy for the concentration of observation.

"But if meteorology has found an advantage in the use of wireless telephony, undoubtedly the service inaugurated on the 6th Feb. is going to have a very great influence on the diffusion of wireless among the French public. A receiving set is, in fact, going to be almost indispensable to all those interested in the weather, not only farmers, viticulturists, sailors, aviators, but also to those who would be happy to know in the morning whether to take a walking stick or umbrella when going abroad.

"If we add that this little receiving set will also enable one to receive concerts and the latest press news, it is easy to see what development is soon to take place, as far as the general public is concerned."

Public Radio SHOW.

UNIQUE EXHIBITION.

OPENS TO-DAY

The public Exhibition of Radio Apparatus, under the auspices of the Metropolitan Radio Club, promises to be a big success.

The show is housed in the Congregational Hall (next to the Criterion Theatre), Pitt Street, Sydney, and will open to-day. There will be both afternoon and evening sessions.

The exhibition was arranged with the idea of showing the general public that wireless is not the very mysterious business it is thought to be by many, and at the hall will be seen efficient apparatus made almost entirely by youthful experimenters.

To liven up the proceedings there will be lecturettes on the science, couched in non-technical language, and musical items by radiophone. Many commercial firms are putting in exhibits.

The classes are open to all amateurs, and there will be prizes in each class, ranging from the humble crystal set to the multi-valve apparatus.

Intending competitors should send in their entrance forms at once, in order that the committees may reserve space for their exhibits. The committee will provide "A" batteries and 'phones for testing the sets, but competitors must include "B" batteries and valves, in sets where these are used.

"Wireless Weekly" is offering a prize of £1/1/- for the most original idea in apparatus incorporated in any set.

MUSIC IN THE AIR

SUNDAY NIGHT'S CONCERT.

MR. MACLURCAN'S CONCERT.

For next Sunday, September 24th, the following Pathe records will be played for Mr. Maclurcan's concert, starting at 7.30 p.m.:—

Fox Trot.—"Rosie."

Hawaiian Guitar.—"Oahu."

Soprano.—"They Call Me Mimi" (Rosina Buckman).

'Cello. — "Nocturne No. 2" (Chopin).

Piano Solo. — "Lieberstraum" (Liszt).

Code.—C.W. and Buzzer.

Orchestra.—"Bal Masque."

Fox Trot.—"La Veeda."

Tenor. — "An Evening Song" (Cheetham).

Hawaiian Guitar. — "Dreamy Hawaii."

Recitation.—Selected.

MR. MACLURCAN'S POWER.

As there seems to have been some confusion of "plate input power" and "aerial input power," in connection with Mr. Maclurcan's transmission tests, it must be clearly understood that all reference to power used by Mr. Maclurcan refers to "plate input power." The power available in the aerial will, of course, be much less than the plate input power.

The ordinary motor engine apparently creates waves from near nought to approximately forty metres in length. Possibly, in the future, these engines will have to carry a licence for transmitting.

When used as a plain detector a valve is not much more efficient than a good crystal.

* * *

For radio work a good earthing system is as essential as a good aerial.

* * *

If you are very close to a transmitting station, don't tune in for loudest signals. It is not good for the phones.

* * *

When not in use an aerial should be connected direct to earth. If merely left disconnected it may receive a powerful static charge, possibly with unpleasant results. When earthed, it acts as a safeguard against lightning.

"Wireless Weekly" is the official organ of the following clubs:—Metropolitan Radio Club, Illawarra Radio Club, North Sydney Radio Club, Western Suburbs Amateur Wireless Association, Waverley Amateur Radio Club, Concord Radio Club.

ILLAWARRA RADIO CLUB.

At the last meeting of the Illawarra Radio Club, a further important letter to the Club from the Controller of Wireless was read, touching on many matters of direct interest to the members.

A lecture on "Constructional Details of Receiving Apparatus" was delivered by Mr. C. A. Gorman, who dealt very clearly with the design and construction of loading coils, loose couplers, vario-meters, condensers, transformers, potentiometers, rheostats, etc., and also touched on panel mounting. Much practical and useful information was dispensed, and the lecture was altogether most instructive and interesting.

The delegates also reported result of last inter-Club Meeting, and were instructed to go ahead with the formation of the proposed Association of Clubs on the lines laid down.

Satisfactory arrangements having been made with Mr. J. McNeill, who has kindly placed at the disposal of the Club a room at his residence, the next meeting will be held there on the 28th September, at 8 p.m. The address is No. 75, Montgomery Street, East Kogarah (next to McNeill and Towers, Bakers—near Moorefield Racecourse). This meeting will be a Members' Night—display of apparatus, discussion and questions, with Mr. Borthwick in charge. Members are asked to assist by bringing along apparatus.

WAVERLEY CLUB.

The Waverley Amateur Radio Club asks for the support of radio enthusiasts at their dance in the Athanaeum Hall, Coogee, to-night (Friday), at eight o'clock. Tickets are 2/-, and a thoroughly enjoyable evening is assured. Arrangements have been made with the Wireless Electric Co., of Randwick, to transmit a musical programme, and permission has been received from Melbourne to instal a receiving set in the Hall. In addition, a first-class orchestra will be in attendance.

CLUB FOR NEWCASTLE.

Mr. Lionel T. Swan, of 135 Beaumont Street, Hamilton, is impressed with the possibilities of a radio club at Newcastle. He would like any Newcastle amateurs interested in the formation of a club to communicate with him with a view to getting it going.

NEW COUNTRY CLUB.

Goulburn wireless enthusiasts have formed a branch of the Metropolitan Radio Club in that city. The membership fee has been fixed at 5/ a year. Following are the Dreacher; vice-presidents, Messrs. office-bearers:—President, Mr. W. Clayden (I.C.S.) and E. Burke; committee, Messrs. Macdonald, L. Nicholls, and L. Williams; secretary, Mr. G. Culham; treasurer, Mr. D. McLean.

QUEENSLAND GETS BUSY.

The Queensland Branch of the Wireless Institute of Australia has embarked on a campaign to secure a reduction of license fees, and to get transmitting licenses, etc.

A special committee meeting recently decided to write to the Director of Radio Telegraphy, and interview members of Parliament on the subject.

It was also resolved to hold a public meeting, with demonstrations, music by wireless, etc.

The Queenslanders are impressed with the progress made in New South Wales, especially with the Association of Amateur Radio bodies, and it is probable that a move will be made in this direction in the northern State at an early date.

STATION CALLS.

SHIPS STATIONS. GREAT BRITAIN

Dunolly BNW, Dunstan ZLE, Dunvegan Castle MPQ, Dunquesa ZQC, Durham GQC, Durham Castle MQN, Earlswood YDD, Eastcliffe YXB, Easterly GCKN, Eastern YUH, Eastern City YGZ, Eastern Prince GBDZ, Eastgate BFH, Eastminster Abbey GBFD, Eastney GFJB, Eastwood ZWN, Eaton Hall EZY, Ebani ZCG, Eboe ZTE, Ebro MTJ, Eburna ZMV, Edavana, GDPJ, Edenvale OFP, Eden Hall ZRF, Edinburgh Castle MQE, Edith Cavell YCM.

Edmonton XHG, Edmund Hugo Stinnes GBVR, Edward Woermann GBDR, Egba GRO, Eggesford YXJ, Egori YVH, Egra GCSF, Egremont Castle YZT, Egwanga YMM, Egyptian GDNY, Egyptian Transport ZDW, Ehrenfels GBJS, Eider ZSL, Eileen GAN, Eirene GBLM, Ekari GDMN, Ekrina GCSJ, Ekaterinoslav ZLJ, Elbing GBXL, Elder Branch YFT, Electra MEE, Electrician YHO, Elephanta GCSK, Ellaline BKB, Ellenga GCSL, Ellerdale YVL, Ellora GCSM, Elmina MZI, Elmleaf EZF, Elmpark GDMF, Elpenor ZKD, Elswick Grange GBF, Elswick Hall MYD, Elswick House ZHX, Elswick Park GDQV, Elswick Tower BEF, Elverie MBX, Elwick MYJ, Elysia MRH, Emden GCXT, Elysier BQQ, Emerald GBNK, Emil George V, Strauss GFPM, Emlynian GCNL, Empirestar GCTB, Empress GUI, Empress of Britain MPB, Enfield YKE, Empress of France GYH, Engadine GUK, Ennisbrook BKG, E. O. Saltmarsh EPA, Epsom ERH, Eric Calvert XEK, Ericus GVK, Erika GBYF, Erinier YYX, Erlesburgh GCRD, Ernemore OCY, Eros BTK, Erroll ERZ, Escalona GPZ, Eskasoni XHC, Eskbridge YKG, Esperanza de Larrinaga EMC, Essex GXE, Essequibo MTK, Estrellano GDPK, Esturia BRG, Ethelalda ZSI, Ethelaric LUM, Ethelfreda GVX, Ethelmead XED, Ethel Radcliffe GDVX, Ethelstan YIU, Ethelwolf LUL, Ethelwynne BOM, Euclid ZQG, Eumaeus GDYW, Euplectela EVV, Euripides MSE, Euryades YRG, Euralyus GCZ, Eurybates YRH, Eurydamas YQU, Eurylochus YRI, Eurymachus YQZ, Eurymedon YRA,

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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.

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

F.L.B. asks:—

How to make a telephone transformer? An article on the subject will appear shortly in "Wireless Weekly."

R. H. G. (Grenfell), asks:—

(1) Can I use Ferrotype sheets or Benzine Tin for making Condensor plates? (2) Price of receiving valve and battery required?

(1) Any non-magnetic metal will do. Anything containing iron is unsuitable. (2) From about 35/- to 50/-. A number of makes on the market, 4 or 6-volt accumulator.

"Ray Dio" (Melbourne), asks:—

(1) Can I get Mr. Maclurcan's concert, using one stop audio? What is the Melbourne time of transmission, and the wave-length used? (2) What is the wave-length of my aerial, dimensions of which are two wires, each 53 ft. long and 6 ft. apart, 22ft. above roof at one end, and 28ft. above ground at other. Length of lead in 27ft. and earth wire 30ft.?

Answer: (1) Mr. Maclurcan has been heard in New Zealand on 1 valve, in Melbourne strongly on 2 valves. Radio frequency amplification would probably be preferable. He transmits from 7.30 p.m. until 9 p.m. every Sunday night in a wave-length of 1,400 metres. (2) Wave-length of the aerial would be slightly over 100 metres.

A. K. L. (Waterslelgh), asks:—

(1) Why a gas-pipe earth should be avoided? (2) I have a loose coupler crystal set, wave-length 200-2,000 metres. How could this be converted to a single valve set, capable of receiving Strathfield concerts? Do you think it possible to receive the concerts without a valve? My aerials have a total length of about 200 ft., and average height of about 40ft., phones 4,000 whe, W.E. (3) How long will it be, do you think before Amalgamated Wireless commence broadcasting their concerts.

Answer: (1)—(a) Risk is the aerial if struck by lightning. (b) In a gas pipe the joins may not be electrically connected, due to corrosion. In a water pipe, the water acts as a conductor, and gives connection even with electrically bad joins in the pipe itself. (2)—(a) With a crystal receiver, Mr. Maclurcan has a range of only five miles. (b) A loose coupler is quite suitable for valve use. (3) We have not yet been notified.

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.—1 pair of Wireless 'phones, 1,000 ohms, £2/5/-. Apply by letter to C. J. Gray, 32 George St., Marrickville.

WONDER MUSIC

HOW TO GET IT.

Contrary to the general opinion of the uninitiated, the reception of radio telephony does not require apparatus different from that used for telegraphy, and this apparatus need be in no way complicated.

When the strength of signal is sufficiently great, very good results are obtained with an ordinary crystal detector, as this gives pure, undistorted tones, and freedom from local noises. The usual slide-tuner, or loose-coupler circuits are used, and tuning is the same as in the reception of spark signals, but is sharper, necessitating a finer adjustment.

With valve reception all adjustments must be carefully made, as with inexpert handling distorted tones are produced, and valve noises become objectionable. Any standard circuit may be employed, but when using regenerative circuits, care must be taken not to have the valve oscillating, as when this is so, distortion is so great as to render speech unintelligible.

A very fine control of oscillation is obtained if a small variable condenser is shunted across the plate inductance, or "tickler" coil.

The tuning, if the valve is set oscillating, the whistle of the carrier wave, which is invariably louder than the speech modulations, is fairly easily picked up. Tune to the silent point in the

A valve is designed to be operated in a certain definite position, usually vertically. If it is used in any other position the filament, when heated tends to sag and this alters the characteristics of the tube.

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