





 A TALK WITH "WIRELESS WEEKLY."



When you sit down and tune up your set, and curse the crackling, frying static that does its best to drown the wireless concert, do you ever think of trying to cut the 'pherics out?

If your set would not function, you would want to know the reason why. If Pennant Hills broke in on your concert you would have a shot at a circuit to tune him out.

Then why not have a go at the static, the bugbear of every person who dons a headset? In our opinion, too many experimenters are prone to take the static as a matter of course. This should not be the case. It should be the aim of every radio enthusiast to discover a way to eliminate this evil. The reward is great, and it is safe to prophesy that the one who makes the discovery will also make a fortune.

The problem is a formidable one, but the experimenter should bear in mind the fact that those tackled and overcome by Marconi and the other pioneers in the early days appeared equally as difficult to them.

With what portion of the receiving apparatus the static can be eliminated is a subject for experiment. Some experts aver that the telephones may hold the secret; others pin their faith to the circuit. It is well worth while to every experimenter devoting time to the problem.

This brings us to the question, "Do experimenters make sufficient efforts to get off the beaten track?"

"Wireless Weekly" is inclined to think not. It is all very well to get your set nicely tuned up to bring in radio music sent out

from a few miles away, but this gets you nowhere. It does not need much knowledge to do this, and any enthusiast who is content to have reached the point is not worthy of the name experimenter. He will become one of that ever-increasing band who just want to turn a few knobs and listen to the music.

In opening the recent Public Radio Exhibition, the State Governor stressed the fact that there was no knowing what important discovery the amateur may stumble across while playing with his gear. The remark is very true. Such things have happened in things other than radio, so why not in this science.

If you want to carry the name of "experimenter," for goodness sake experiment.

Get off the beaten track!

GOING SOME!

An idea of the eagerness with which the American public caught on to the new "radio game" may be gathered from the fact that in eight months the manufacturers of radio-receiving apparatus sold nearly 1,000,000 sets, and it was believed that amateur home-made sets made during that time numbered another 500,000.

The manufacturers' sets cost from £2 to £50, and the home-made sets anything from a pound or two upwards. Consequently, in eight months the money spent in America on the new hobby would range from £10,000,000 to £30,000,000. That is to say, an entirely new and extremely lucrative industry sprang suddenly into existence, and is as yet only at its beginnings.

ELECTRICITY HOUSE

387 GEORGE STREET (OP. STRAND). TEL. 2961 CITY

FOR ALL RADIO SUPPLIES.

We cater specially for the amateur. Expert advice given free. All and any Gear made to order. Large Stocks always on hand.

Complete Outfits from £5.

HONEYCOMB COILS, from 6s. 6d. CONDENSOR PLATES, from 1s. 6d. doz.

Knobs, Dials, Rheostats, Switch Arms, Ebonite and Bakelite Panels, Cabinets, etc.

Switch Points, 2½d each. Polished English Ebonite Dials, 3s 9d each.

All Crystals, 6d and 1s. Crystal Cups, 1s 3d each.

Our Rotary Switch Arms are a decent job at 4s 6d.

Sliders (for Tuning Coils), 1s 9d. Terminals, 6d each.

Get your name down for a Catalogue. Price 6d.

Absolute Satisfaction Guaranteed.

QUEENSLAND AMATEUR.

MR. PERCY SHAW'S STATION.

By NORMAN HEAD.

The recent Eclipse Expedition to Goondiwindi has brought into the limelight another of our important amateurs.

Percy Shaw has a motor garage business at Goondiwindi, Queensland, and as a hobby possesses one of the most up-to-date amateur stations in Australia. Professor Cooke, of the Sydney Observatory, said that one fact that was very instrumental in bringing his party to Goondiwindi to view the eclipse, was Mr. Shaw's presence there.

To make a long story short, he

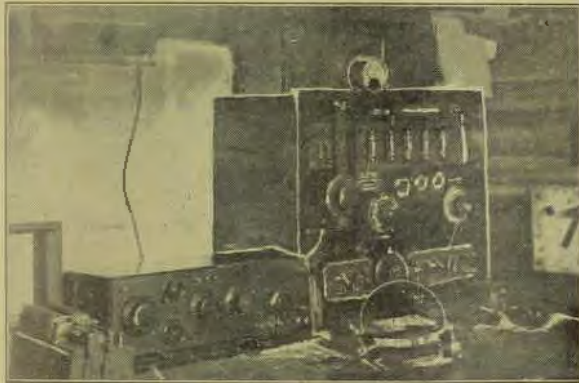
as follows: 2 Radio frequency, 1 Detector, 2 Audio frequency.

On the left of the photo may be seen a small set, which he made himself, and uses mainly to pick up small stations and coastal shipping.

His call signal is "Q 287," and he can get any wave length from 500 to 25,000 metres.

"What time signals do I like best, Well, the most accurate, of course, is Annapolis (U.S.A.), and for easy reading Honolulu, Balboa and Funnabashi. Lyons come in very nicely.

"I can hear all the high power



received the time signals sent out from Pennant Hills to the expeditions, and he also corrected them with New York and Annapolis, U.S.A. On the day of the eclipse, he assisted in operating the big photo-heliograph, which made 77 negatives during the eclipse, starting from first contact.

His set is a five valve one, originally purchased from Amalgamated Wireless, Ltd., but it is extremely doubtful if they would recognise it now. His many alterations and additions have made a remarkable difference to its efficiency. The valves are distributed

stations in the world here, and any European station is quite readable up till about 5 o'clock.

"My aerial length? I have a three-wire of 240 feet at a height of 50 feet, but I found, when getting the Eclipse expedition time signals that stattle was very bad, so I strung another up, 650 feet in length at a height of 20 feet, and it was, to a great extent, successful.

Mr. Shaw does not transmit: he doesn't want to. He gets all the fun he wants out of receiving.

Yes, he also thinks that the £2 license fee is 'over the odds. If it was £1 it would be O.K.," he says.

FOR A WIDE FREQUENCY RANGE

If you're a keen "listener" and want the clearest possible re-productions of both highest and lowest vibrations, you want this

Western Electric Wireless Head Set.

You'll find it the most comfortable piece you ever wore. Weight is reduced with full allowance for strength where it is needed. A perfect Head Set—but we rely on your own judgment. Call and see it or write for all particulars.

WESTERN ELECTRIC CO. (AUST.) LIMITED

192 Castlereagh Street, Sydney
Also at 262 Flinders Lane, Melbourne
Agents in all States & New Zealand.

The first Radio Telephony result of commercial importance was obtained by Poulsen with his arc transmitter, when speech communication was established by him in 1909, between Asbjerg and Lyngby, in Denmark, a distance of 170 miles. The aeriels were 200 feet high, the wave lengths 1200 metres, and the transmitter aerial energy was 300 watts.

AMPLIFICATION. Radio and Audio Frequency.

The essential difference between radio and audio frequency amplification is this: With radio frequency, the very slight current produced in the receiving antenna system by passing waves from a transmitting system are caught and passed through amplifying devices designed to permit this current to oscillate—that is, to flow back and forth at the same frequency it passes through the ether. With audio frequency the current from the detector tube is passed through successive amplifying stages, not at the natural frequency of the signal as it passes through the ether, but at a frequency very much lower, which is within range of audibility. In the case of radio frequency amplification, the incoming signals are amplified by means of a local source of energy before they reach the detector tube, while audio frequency amplification takes place after detection.

Detection requires a certain amount of energy for its proper functioning and it is obvious that several stages of audio frequency amplification would be valueless where the strength of the incoming signal was insufficient to produce detection. It is here that radio frequency is valuable for it builds up the infinitely weak signal to a point where proper detection may take place, and from this point on it is possible to increase the signal audibility by the audio frequency amplification method.

Radio frequency amplification alone will not operate a loud speaker over any material distance. In fact, the general rule may be laid down that loud speakers may only be employed where at least one or two stages of audio frequency amplification are employed. Radio frequency amplification has not been very popular in amateur circles until recently for the reason that different trans-

formers were required for the various wave length ranges and the range of any one transformer usually covered but a few hundred meters. This difficulty has been materially reduced by the introduction of a new radio frequency transformer designed to function satisfactorily over a particularly broad range of wave lengths. This broad range is made possible by taking advantage of the balancing effect found to exist when an iron core radio frequency transformer is employed. A transformer of this character having a wave length range of 200-5,000 meters may now be had and another transformer having a range of 5,000-25,000 may also be procured. For all practical purposes, the wave length ranges covered by these two transformers permit the operator to receive on practically all of the wave lengths now in use.

A very significant fact regarding radio frequency amplifiers is that the results obtained by a single stage of radio frequency amplification and a vacuum tube detector non-regenerative circuit are approximately the same as those obtained by a vacuum tube detector alone, employed in a regenerative circuit of proper design.

EXHIBITION PHOTO-GRAPHS.

Photographs of Metropolitan Radio Clubs Exhibition published in our last issue (29th September), were supplied by Mr. Beer, Carlton Studios, 204 William Street, Darlinghurst.

Mr. Beer is making a special study of Radio Photography, and we have already published a number of Club groups taken by him.

Beautiful Illumination with PARIAN WARE



HUMPHREYS' LIMITED,
465 George Street, Sydney.
Telephone: City 3864

AMATEURS!

Let us show you how to make your own set, and economise. We stock all Paris and will give you every assistance. We specialise in all Loose Coupler Parts. Country and Interstate amateurs, take advantage of our

Same Day Service.

Miss F. V. WALLACE,
Electrical Engineer,
18 Royal Arcade (opp.
Q.V. Buildings),
George Street, Sydney.

MAKE YOUR OWN.

VARIABLE CONDENSER.

The making of a variable condenser requires patience and accuracy. At present there are but few satisfactory condensers on the market, and the experimenter will be wise to build his own.

Before deciding to build a condenser, think for a moment the capacity that you will want to use.



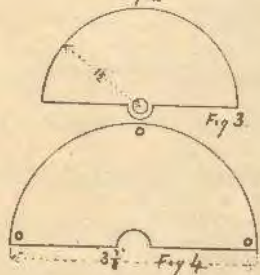
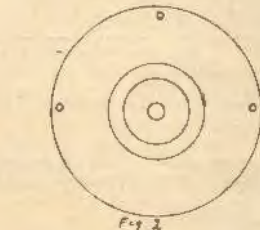
Is it to be .0005 m.f. or .001 m.f.? Having decided, the next step is to purchase the necessary material.

To contemplate cutting out one's own condenser plates from sheet metal is a waste of time, as they can be purchased very cheaply, and are all uniform. In the choice of condenser plates, one should show discretion in the size of plates, quality and material.

From past experience, the writer strongly advises the use of aluminum condenser plates in preference to either brass or zinc. To build, say, a .0005 m.f. capacity, 13 fixed plates and 12 movable plates are required, of the dimensions given in figures 3 and 4.

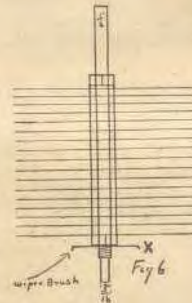
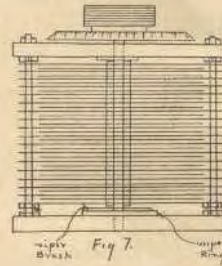
The three holes punched in the fixed plate in Fig. 4 are of $\frac{1}{8}$ inch diameter. The next material required is 2 ebonite discs, $4\frac{1}{2}$ inches in diameter by $\frac{3}{16}$ -inch thick, one brass washer as per Fig. 5, one spindle (Fig. 6), knob, dial, spacing washers, and three $\frac{3}{16}$ -inch threaded rods for the fixed plates,

each 4 inches long. To assemble the condenser, take a fixed plate (Fig. 4), place it on ebonite discs (Fig. 1), mark off the position of the 3 holes in the plate, clamp the two discs in a vice and drill



inch. The best method of fixing it is to drill and tap two holes in it and screw up from the bottom of the base. The object of this brass ring is to make contact from the movable plates from the wiper arm (X) on spindle (Fig. 6).

After fitting three $\frac{3}{16}$ -inch rods in condenser base, start building up the fixed plates, each plate be-



the three holes. In the middle of one disc, drill a $\frac{3}{16}$ -inch hole, and in the other a $\frac{1}{4}$ -inch hole, to fit top and bottom end of spindle (Fig. 6).

Now take the wiper ring (Fig. 5), and fix it to the ebonite base that has the centre hole of $\frac{3}{16}$

ing spaced by special spacing washers procurable at 9d. per doz.

Care should be taken to see that proper washers are used otherwise the movable plates will not function properly. Next put the movable plates on the spindle, together with the spacing wash-

ers. See that the two nuts on the spindle are screwed up tightly, and that all the plates are in their proper position. The assembling of the movable and fixed plates requires patience, but with a little manoeuvring, it will be soon accomplished.

As to where to put the contact terminals, I leave that to the readers' discretion.

For a panel condenser, leave the ends of the rods protruding through the base, also the screws that fasten the wiper ring, so as to be able, in each case, to connect into the required circuit.

Tom: "Whenever my girl sees me smoking, she blows off at me like a steam exhaust. What would you do about it?"

Pick, laconically: "Condenser."

SHORT WAVES. REFLECTOR SYSTEM.

The most striking point in a lecture by Senator Marconi before a joint meeting of the American Institute of Electrical Engineers and the Institute of Radio Engineers, held in New York City recently, was the suggestion that the shorter wavelengths have been practically abandoned by experimenters and commercial interests.

Due to recent advances in the radio art, especially the development of the vacuum tube, effective signalling on short waves is now possible. Mr. Marconi suggested that this will undoubtedly stimulate a great interest in American

amateur radio circles which should result in further radio success. In speaking of his parabolic reflector system, he mentioned wavelengths of 15 to 20 meters, which, it would seem, are hardly possible for the average amateur worker, for the erection of a reflector 15 meters high covering an area 15 or meters in diameter would involve a considerable expenditure.

For the most part, American amateurs will have to devote their efforts to short wave propagation without the use of the reflector, and it is interesting to note that, even prior to Mr. Marconi's lecture, American amateurs have made some very successful attempts to communicate by this method.

THE COLVILLE-MOORE

Wireless Supplies,

10 Rowe Street - - - Sydney,

Manufacturers and Importers of Wireless Apparatus and Parts.

Specialising in Radiophones and Valve Transmitters, Valve Receivers, etc., Crystal Receivers.

Every Description of Wireless Apparatus for the Experimenter.

Transmitting Receivers Coming. Radio Concerts Commencing soon.

Order your Apparatus, now.

Wireless Electric Company,

Beach Street, Coogee, N.S.W.

We Specialise in Complete Radio Receiving Sets and all Parts.

Write or Phone for Particulars.

PHONE 368 & 369 RANDWICK.

Our
Radio
Yarn

THE HUMAN ELEMENT

By
C.Q.

Dick Grey was seated on his high stool, with sleeves rolled up and a pile of big ledgers in front of him. He was idly drumming on the desk with his fingers, gazing dreamily meanwhile through the windows, over the dusty chimney pots and into the heavy haze, which overhung the city on this sultry afternoon.

Dick was a clever ledgerkeeper, and his books were marvels of neatness, but he had lost interest in his work lately, and could not concentrate at all. The books were hopelessly behind, and as the annual audit was to take place three weeks hence, he should have been hard at work, instead of dreaming—as he was—of the new wireless set he was building.

Wireless was more than a hobby with Dick; it was almost an obsession, and his work suffered in consequence.

"Now then, Grey, get some work done," said a harsh grating voice, and Dick flushed with anger as he turned to see his employer Arthur Benton standing in the doorway. There was no love lost between these two, for to Dick, his employer seemed nothing but a ruthless money-making machine without understanding of any human qualities.

"Give me that copy of the Seven Hills Mine prospectus which you were to prepare this morning," continued Benton.

"It is not ready yet, sir," said Dick, inwardly cursing himself for giving his employer good cause to complain of his negligence.

"Not ready," shouted Benton; "what the devil do you mean by it?" A torrent of abuse followed, and Dick, unable to control the bitter feelings which had for some time been growing against Benton, put on his coat and left the building, without a job and without a reference.

On reaching home, instead of a bright welcome and a tasty dinner awaiting, he found his wife in bed seriously ill, and that a neighbour had just called in a doctor, who advised her instant removal to a hospital. The illness proved a tedious one, and as the weeks dragged on, Dick, who had made every effort to obtain employment but without success, reached a state of despair. The night before his wife was expected home again, Dick made up his mind as a last resort to go to Benton and humbly ask for his job back again, at the same time determining that if Benton treated him roughly, he would do something desperate.

Slipping a revolver into his pocket, he walked up the hill to where Benton's house stood in the spacious grounds. To Dick's surprise, the house seemed to be in darkness, and he stepped softly along the verandah to investigate.

Idly putting his hand on the knob of a French door, he found that it was unlocked. With fast beating heart, he stepped inside, and found that he was in a luxuriously furnished bedroom.

A slight sound at the doorway made him wheel round, just as the electric light flashed on. There stood Benton with a sardonic grin on his face, and a business-like revolver pointing straight at Dick.

"Step back this way into my study, Grey," said Benton curtly, and Dick quietly entered a study lined with books, and with a complicated wireless set arranged on a desk under a shaded light. Benton stepped over to the set, to switch off the batteries, but just as he was going to do so, faint strains of music came from the loud speaker beside the set. He absent-mindedly put down his revolver on the desk, and began to feverishly turn knobs and handles in order to increase the sounds. There was no increase, however,

so Dick, who was nervously fingering his revolver, suddenly replaced it in his pocket, and leaning over the desk, adjusted several screws in the loud speaker. The result was a great volume of sound.

Benton's eyes were bright with excitement, and his whole face was transformed as he turned impulsively to Dick and grasped his hand.

"You have accomplished something that I have wasted weeks trying to do," he said, "and just in the nick of time. My daughter is having her Coming-out Ball tomorrow night, and I promised her wireless music for the dances. Failure was staring me in the face to-night, and she would have been horribly disappointed, but now you have saved the situation."

A good half hour was spent in the absorbing occupation of adjusting the apparatus, to obtain even better results, and then Benton shut down the set, and turning to Dick with a kindly expression on his face, said: "Tell me your trouble!"

Dick found himself pouring his heart out to a sympathetic listener, and before he left that night, he had been given his old job back again, and had promised to come along and operate the wireless set for the dance on the next evening.

That Book you want

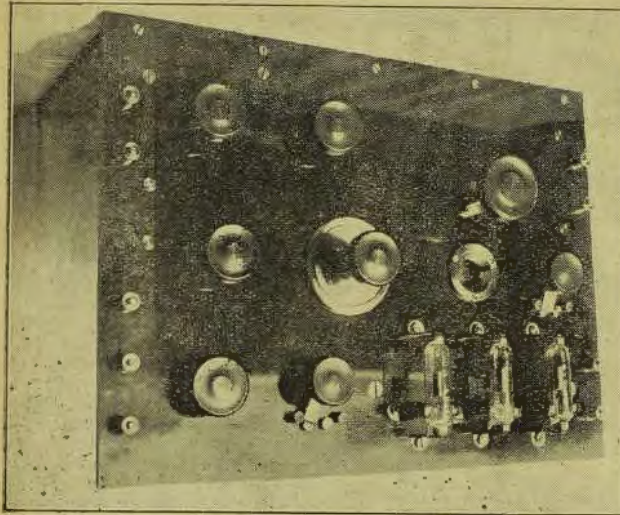
ON

Wireless

can be produced at

The N.S.W. Bookstall Company Limited

475 George Street, Sydney.



Front View of the Best Multi-Valve Set at the recent Exhibition. This Set also won the "Wireless Weekly" Prize for the most novel idea in a Radio-Frequency Transformer Selector.

Get it by Wireless!

THE RADIO MAGNAVOX.

Breaks the restraints and restrictions which confine the use and enjoyment of Radio to the technical expert and the man wearing the Head Set.

THE RADIO MAGNAVOX.

The Reproducer with the Movable Coil

gives volume without distortion. With THE RADIO MAGNAVOX, wireless entertainment in the home can be made a source of pleasure and the centre of attraction for any family or social gathering.

No Head Sets Are Necessary.

Inquiries invited on any Radio problem or special apparatus.

Call, write, or phone,

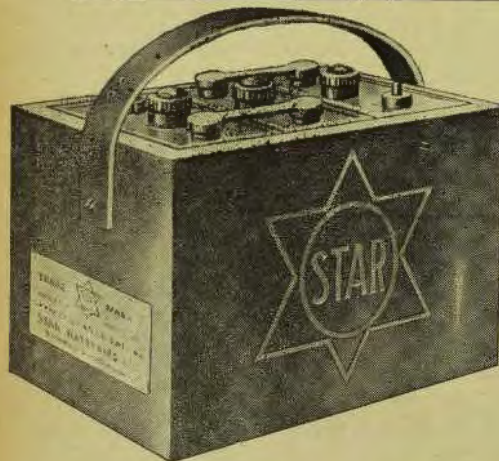
MAGNAVOX, AUSTRALIA,

17, THE BANKING HOUSE,

228 PITT STREET, SYDNEY.

Phone City 3710.

"STAR" RADIO BATTERIES



"Hitch your Radio to a STAR."

We manufacture Special Radio Batteries (both "A" and "B" type).

They are recognised to be better than any imported battery, and no set is complete and up-to-date without a "STAR"

Spare Plates or Parts Supplied to amateurs desirous of making up their own batteries.

Full particulars and prices on application.

Batteries repaired, re-charged and hired-out at lowest rates!

STAR BATTERIES LIMITED

Storage Battery Manufacturer

43-45 Wentworth Avenue,

(Next Australian General Electric Company),

Sydney.

ON MONKEYS AND WEIGHTS.

The great riddle has been solved, and Mr. MacIurcan is satisfied.

According to the number of amateurs who sent in solutions there must have been numerous wet towels and headaches in suburbia during the past few weeks.

However, Mr. J. W. Robinson, Macpherson Street, Ryde, is the winner, and the prize has been sent to him.

His solution, which hits the monkey right in the solar plexus, so to speak, was:—

"As long as the monkey weighed the same as the weight, any length of rope could be used, even if the monkey's great grandmother was twice as old as the monkey will be when the Federal Government sees its way clear to frame some sensible radio regulations."

This one nearly got the prize:—

"If the length of the rope equals in feet the minutes of time I spent in getting that monkey's age—then it's some length, I'll bet."

The vision of another competitor was rather startling. He said—

"One grey day at Callan Park I saw a demented creature with an aerial on his hat.



WIRE in his hair, and CAT WHISKERS where a razor should have been at work. I could DETECTOR "WIRELESS WEEKLY" peeping from his pocket. He had a stub of pencil in one hand and a bunch of figure-straw papers in the other. The keeper said he was a RADIOT. He kept muttering MONKEY-

MONKEY'S MOTHER, and something about a ROPE. He eagerly coded V24, and sought to INDUCT me in his COMPUTATIONS."

To cut a long story short, he did, and the competitor wades through a typewritten sheet of foolscap to the solution of "five feet!"

Another, who, by the way, had the mumps when he wrote it, says:—

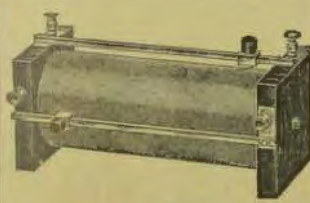
"About twice as long as it would take Harry Lauder to sweep out Anthony Horder's with a tooth brush."

A cynic, who had three shots, got in a neat one:—

"The rope is just long enough to hang the fool who tries to work the puzzle out."

So we could go on, as there

seemed to be thousands of alleged solutions. One competitor's answer took up nearly a whole writing pad, and he went to the 20,000th decimal place in his calculations. In his case, the judges decided that life was as short as the rope, and the entry was handed over to the monkey and the monkey's mother, to be divided equally between them.



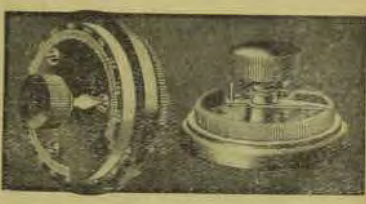
TUNING COILS.

For increasing the wave lengths of stations.
 Single slide coil. REDUCED PRICE, 2s.
 Double slide coil. REDUCED PRICE, 3s.

Experimenters!
 Look! - -

NEW FILAMENT RHEOSTAT

Can be mounted in several ways. The resistance element is fitted in groove in Rheostat base. The center bearing and phosphor bronze contact ensure smooth running, positive operation. 4 ohms resistance; carrying capacity, 14 amperes. Graduated dial and screws and nuts for mounting are provided with each Rheostat. COMPLETE, 10s. 6d.



Homecrafts
 P.H. M'ELROY
 211 SWANSTON STREET

Send 7s. in stamps for Homecraft's Catalogue, 80 pages, 220 illustrations.

MUSIC IN THE AIR

MR. MACLURCAN'S CONCERT.

SUNDAY NIGHT'S CONCERT

Will commence at 7.30 p.m. on Sunday, as usual.

Mr. Maclurcan has decided that for the present he will not publish his programme each week but no doubt those who listen-in at the appointed hour will hear the excellent music he dispenses.

DEFINITIONS.

ALTERNATOR.—A rotating machine which transforms mechanical energy into electrical energy, producing at its terminals an alternating electro-motive force.

AMMETER.—An instrument for measuring current. The usual type is electro-magnetic, the current being passed through a coil of wire, producing a magnetic field proportional to the current.

AMMETER (Hot Wire).—An ammeter which depends for its indications upon the change in length of a wire when heated by a current passing through it. The heat developed depends on the strength of the current. This type of ammeter is necessary to measure the high frequency currents used in radio-telegraphy.

AMMETER, THERMO.—An ammeter depending for its indications on the voltage generated at the terminals of a thermo junction, heated either directly or indirectly by the current to be measured.

AMPLIFIER.—An instrument which modifies the effect of a local source of energy in accordance with the variations of received energy, producing a larger indication than could be had from incoming energy alone.

AMPLIFICATION RATIO.—The ratio of the effect obtained by the employment of the amplifier to the effect obtained without the instrument.

AUDIBILITY AMPLIFICATION.—The ratio of the volume of sound produced by the use of an amplifier to the volume produced without the instrument.

ANGULAR VELOCITY is the angle measured in radians, through which a subject turns in a second. Of a periodic alternating current in radians per second, it equals 211 times the frequency in cycles per second.

ANION.—In electrolysis, is that part of the electrolyte which is liberated at the anode.

ANODE.—The conductor through which the current enters the apparatus.

Carlton Studio,
204 William Street,
Darlinghurst.

Official Photographer to
"Wireless Weekly."

Club Photographs a Specialty.

Write or call and make an appointment to have your Set photographed.

"IF" - -

You require CONDENSER PLATES (large or small), TURNED SPACING WASHES, CRYSTAL CUPS, or ARMATURE STAMPINGS, I can supply one or a million.

Trade inquiries solicited.

"IF" you need a Small Dynamo, I make them in three sizes—30, 60, 120 Watt. Oil-ring Bearings, Machined Sets or Finished.

Actual Manufacturer:
W. J. SMITH,

Gresnacre Road, Hurstville.
Letters Box 1747, G.P.O., Sydney.

RADIO SETS
and Parts to make them.

Send for Price Lists.

ELECTRICAL UTILITIES SUPPLY COY.

605 GEORGE STREET, SYDNEY.



Remler, Mullard, Stromberg-Carlson Radio Apparatus Supplies

Arriving Shortly.

Head Phones all Sold. Book your Order for next supply.

See our Complete Crystal Set, with Head Phones, Aerial, Insulators, etc., in Portable and Presentable Box: £7 10s.

Valve Sets Made-up. Trade Supplied.

BURGIN ELECTRIC COMPANY

352 KENT STREET, SYDNEY.

October 6th, 1922

WIRELESS WEEKLY

11



LEICHHARDT AND DISTRICT RADIO SOCIETY.

Amateurs of Leichhardt, Balmain and surrounding districts are invited to attend the forming meeting of the above society at No. 3, Annesly St., Leichhardt.

The promoters have been fortunate in obtaining a room to where lectures, buzzer practice, and assembling of sets can be carried out. All amateurs interested write to Hon. Sec. (Pro-tem).

W. J. ZECK,
145 Booth St.,
Annandale.

BOX HILL CLUB.

The third meeting of the Box Hill District Radio Club was held at the Club room, Box Hill, on Thursday, 21st September. One of the items gone into during the evening was the construction of a radiophone for the Club.

NEW QUEENSLAND CLUB.

Queensland amateurs are beginning to rally. The numerous enthusiasts of Warwick are making their presence felt, by the formation of the "Kookaburra Pals Club." The two main objects of the "Pals" are to help along any struggling workers, and also to let the residents of Warwick know just what the advantages of wireless are. They intend to catch the concerts which (it is rumoured) are being sent out from Brisbane, and invite the general public to come and listen to them.

The club has not been registered yet, so they have not been given a call No.; however, when they do get it, it will be announced in these columns. The Club has about 20 members, and the president is Mr. Ralph White, and the Secretary, Les Peel.

WAKE UP!

Sir,
As an interested reader of your paper, I am very pleased to see that an attempt is going to be made to bridge the Pacific by amateur wireless. I notice that the Victorian division of the Wireless Institute of Australia have this matter in hand, and are making arrangements for the reception of signals to be sent from America.

Last December the American Radio Relay League successfully bridged the Atlantic, consequently, if this test is successful, it will prove that the Americans have remarkably efficient low power transmitters, and only reflected glory to the English and Australian amateurs for their receivers.

We have in Australia at least one amateur who has been breaking records as easily as breaking the whole ten commandments, with respect to low power transmission. I refer to Mr. Charles MacLurean, of Strathfield, who has transmitted to Melbourne in broad daylight with only 3.8 watts. Surely it is time other amateurs

woke up and did something to show the rest of the world that Australia can hold her own and prove that Australia will be last is not our slogan. In this forthcoming test, surely the Commonwealth could be persuaded to cooperate with the amateurs and work under the same conditions as the American amateurs, and endeavour to establish communication in both directions. At the present time, our experimenters are not allowed to use 1 K.W. like their American cousins, and all their work has to be done in spite of the restrictions.

Australia has always held her own in the world of sport, so why be left high and dry in this sporting attempt to bridge the Pacific.

Anglo-American Book Shop.

WILLIAMS AND SON

(late Hallams).

Q.V. BUILDINGS,

459 GEORGE STREET,
SYDNEY.

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

Make Your Own Honey-comb Coils.

Mounting Plugs
3s. 6d. each.
Standard Size.

Sullivan's Electric Shop
296 Pitt St., Opp. W. & S. Board.

STATION CALLS.

SHIPS STATIONS. GREAT BRITAIN

Hagen, GBYW; Haintown, ZDA; Halm Mayya, GFYR; Haleric, YHA; Halesius, YGF; Hallartus, GBQJ; Halizones, GCKX; Hallside, GCMP; Halo, GCLX; Halocrates, BUK; Hambleton Range, YPJ; Hamm, ZXT; Hampstead, EZT; Hampstead Heath, EIE; Hannah, ZYA; Hannington Court, LUB; Hannover, GBYX; Hans Hemsoth, XKU; Hans Wilhelm Hemsoth, GBWV; Hantouta, GIL; Harald Casper, XXY; Hardanger, MOB; Haresfield, GBQR; Hardwicke Grange, GFQD; Harlem, BGS; Harlow, YAR; Harleyswood, BUH; Harmodius, GOBX; Harmonides, GCKW; Harperley, EXC; Hartfield, EVL; Hartington, MJX; Hartlepool, ZWS; Hartmore, YXL; Hartside, ZNJ; Harvesthude, GBQD; Hatarana, YUZ; Hatimura, XJB; Hatipara, BHH; Hatkholia, YUY; Haverford, MJH; Havildar, BMD; Havre, ZEW; Haworth, GBRN; Hazel Branch, ZGZ; Hazelmoor, YII; Hazelpark, GFMX; Hazelside, GCKT; Headcliffe, EUE; Heathmore, MXS; Heathpark, GFMY; Heathside, GCYW; Hebe, GBL; Hector, ZJS; Helcion, YBS; Hedwig Heidmann, GBXJ; Helenus, ZJT; Helenes, EOW; Hellopes, YPX; Helmsdals, YEG; Helmslock, ZXB; Helredale, YHC; Helnan, GBDN; Henri Deutsch de la Meurthe, GCJP; Henry Holmes, XJH; Henyada, GWD; Herefordshire, MYA; Herman Sauber, GBNY; Hermoine, END; Heroic, GCTX; Heronspool, BFI; Herschel, MUA; Hestone, GBCQ; Hersfield, GBSD; Hesleyside, ZXH; Hesperia, GDKW; Hesperides, GDLR; H. H. Asquith, GDQT; Hibernia, GCML; Highland Enterprise, MDA; Hibhlander, GBMX; Highland Glen, GIR; Highland Laddie, GIU; Highland Heather, MEK; Highland Laird, MEP; Highland Loch, GIY; Highland Piper, CNM; Highland Pride, GJA; Highland Rover, GJB; Highland Star, ZLH; Highland Warrior, GCWN; Highland Watch, MER; Highmead, ZTX; Hilarius, PCU; Hilda, GDBVQ; Hildebrand, MDM; Hide Hugo, Stinnes, GBXF; Hillhouse, LTF; Hima-

? ? ?

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 373, G.P.O., Sydney.

J.A.G. (Newtown).

- (1) When received on a crystal set like yours, Mr. Maclurean's range is about 5 miles.
- (2) New Zealand and most Australian Coast Stations.

G.R.T. (Salt Ash).

- (1) Probably from data given about 2,000 metres.
- (2) A small variable, say about 5 plates would be of use for fine tuning, shunted across the aerial and earth leads.
- (3) Yes.
- (4) About 18 gauge—immaterial.
- (5) Shellac varnish.
- (6) Do not have this larger than necessary.
- (7) Between the "A" and "B" batteries.

laya, MNY; Hindoo, YPZ; Hindu, VUH; Hindustan, ZNO; Historian, MHT; Hocking, XPA; Hogarth, GDQP; Hohenfels, GBWF; Holbein, MUB; Holbrook, BPU; Holby, BOW; Hollinside, ZXU; Hollypark, YDJ; Holywell, YED; Homecliffe, GDKN; Homefield, YAU; Homer City, GAB; Honorius, GJE; Hopelyn, YFJ; Horden, EYR; Hornbill, GFDT; Hornby Castle, ZVM; Hornchurch, GCDD; Hornsea, GBLZ; Horn Shell, XLC; Hororata, MRF; Horseferry, XFO; Hortensius, ETG; Hostilius, EOX; Hotham Newton, XHI.

Hound, GDTQ; Hounslow, YKI; Hubert, MYI; Huanchaco, GJF; Housatonic, GCDN; Hughli, GBRT; Hunie, BRM; Hunslet, BSK; Hunstanworth, GCDZ; Huntress, YVF; Huntscape, GXU; Huntscastle, ZQU; Huntsclyde, BEJ; Huntsend, YRZ; Huntsgreen, YRO; Huntshead, YEN; Huntspill, ZTQ; Huriness, BNL; Huronian, YZM; Hurunui, GFCZ; Hyacinthus, GJG; Hyantes, EJJ; Hydaspes, GJB; Hymettus, GCPL; Hypaia, GJI; Hyrcania, ZZS; Hyson, ZKI.

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.—Combination Valve and Crystal Set, £10. Apply R. Griffin, Centre Road, Eastwood.

J.W. (Como).

- (1) Sample of wire not found.
- (2) Your Secondary would have higher wave-length because of the greater number of turns.
- (3) Not at that distance with a crystal set.

(4) Apply Controller of Wireless, Premier's Dept., Melbourne.
W.D.P. (Drummoyle).

Your diagram is correct.

Barlow (Arnddale).

- (1) (a) Use a wave meter.
(b) The rating of a transmitter is the input into the plate circuit.
- (2) V.S.E. Princess Charlotte (on Canadian Lakes).
- (3) Yes, for low power.
- (4) Information not yet available.
- (5) Depends on the wave-length.

R.W.C. (Auburn).

Your formula omits inductance and capacity of aerial, therefore incorrect.

D.C. (Scone).

- (1) Not necessarily. It would merely increase the wave-length.
- (2) Not with a crystal receiver. A valve set would be necessary.
- (3) Yes, Mr. Maclurean transmits on 1,400 metres.
- (4) The loose coupler would be the more efficient set.
- (5) Rather vague.
- (6) Connect one terminal of the buzzer to the earth lead.

N.D.P. (Gladesville).

- (1) No. 24 wire for the primary and No. 28 either enamelled or silk covered for the secondary. About 1/8th. of each will be needed.
- (2) Yes.
- (3) Across the transformer.
- (4) You should receive Mr. Maclurean's telephony O.K. You should hear Awanui (V.L.A.), New Zealand, Auckland, V.L.D.) and most of the Australian Coast Stations in addition to shipping. The wave-length range would depend on the capacity of the condensers used, but would probably be up to about 2,000 metres.

E.G.C. (Gouburn).

Formula given in "Busher's Wireless Manual."

Published by W. J. Maclardy, "Truro," Powell Street, Neutral Bay, at the Offices of W. M. Maclardy, 249 Castlereagh Street, Sydney.