

The Queensland Radio News

"Your Own Wireless Journal"

6^D



Vol. III.

Friday, 1st APRIL, 1927

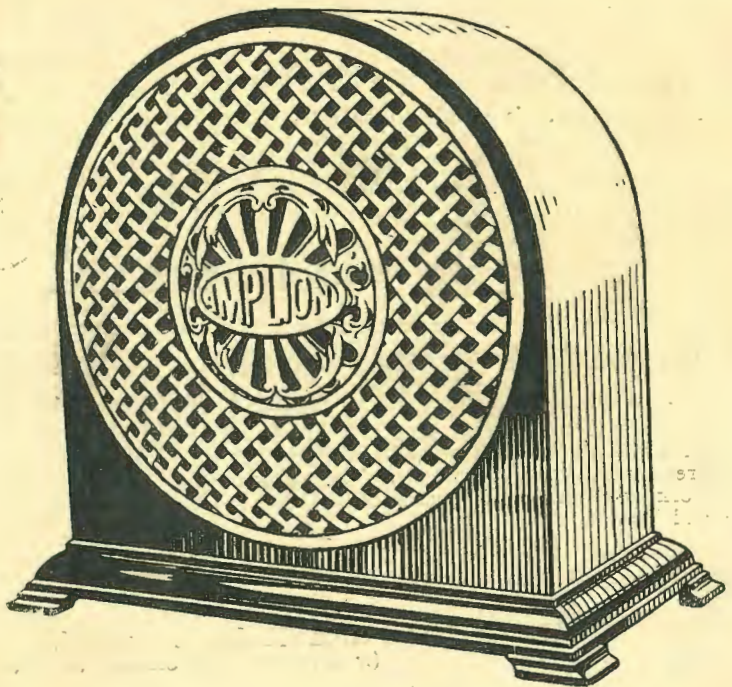
No. 3

Registered at the General Post Office, Brisbane, for transmission by Post as a Newspaper.

Radiolux AMPLION

THE "Natural Tone"
Wireless Loud
Speaker. Louder, clearer,
more sensitive and more
realistic in tone than any
contemporary instrument,
it is a revelation in Loud
Speaker quality.

Radiolux AMPLION is
available in two sizes and
in five distinctive finishes,
and is obtainable from all
Radio Manufacturers and
Dealers throughout
Australasia.

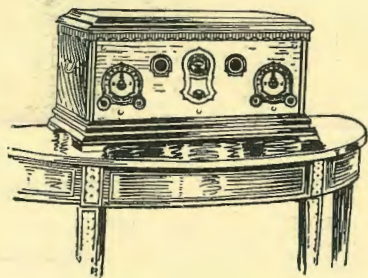


Advertisement of
AMPLION (Australasia) LTD.
Sydney and Melbourne

Better Radio Reproduction

Follow the Duke of York Throughout his Tour by RADIO!

Be ready to listen in at the opening of the Commonwealth Parliament at Canberra, the Duke of York's Reception in Brisbane, and the many other occasions of this nationally important event. Instal your set at once, and get its fullest advantage in use and price.



STROMBERG-CARLSON 6-Valve Neutrodyne

With this splendid 6-Valve Oval Control Stromberg Carlson Receiver, musical items, speeches, etc., will come through to you as clear as a bell in your own home. The result of conscientious workmanship and an experience of more than thirty years of manufacturing voice-transmission and voice-reception apparatus—this fine instrument gives a new pleasure to those who love superior results. Come and hear it without obligation now.

£110 Complete

SPLITDORF 5-Valve Set

The "Splitdorf" is simple to operate, economical in upkeep and will give surprising results. Its remarkably high selectivity, full volume, and purity of tone are accounted for by a special Splitdorf Patented Circuit. A fine set, strongly built and beautifully finished.



£47-10-0 Complete

CROSLEY 3-Valve Set

Here is the greatest Radio Set Value to be obtained at the present time! It brings in all Southern Stations as well as 4QG with great volume and pure tone. The efficient working of this set is guaranteed. Come in and hear it.

£13-10-0 Complete

CROSLEY 2-Valve Set

Though the price of the Crosley 2-Valve Set has been set at such a remarkably low figure, we can guarantee its splendid tone. Within the reach of every one, the Crosley 2-Valve is Brisbane's leading suburban set, unexcelled for ease of operation and economy in first cost and maintenance.

£10-15-0 Complete

On Sale by all Home Radio Service Ltd. Authorised Dealers
(with the Red Sign on their windows)

Queensland Distributors

Home Radio Service Limited

First Floor, Courier Building, Queen Street, Brisbane

Phone 6143

Telegrams—"Homrad"



Price Reduction!

A.W.A. and Radiotron Valves

Amalgamated Wireless [A'sia] Ltd.
Announce

that from MARCH 1, 1927

The following Prices will obtain for the undermentioned Valves~

A.W.A. 101X	11/-
A.W.A. 55	11/-
A.W.A. 99X	13/-
A.W.A. 99	13/-

GENUINE RADIOTRONS

UV & UX.199	13/-
UX. 201A	11/-
UX. 120	15/-
UX. 112	1/15/-
UX. 200A	1/10/-
UX. 210	2/10/-

AT ALL DEALERS.



97 Clarence Street Sydney.

167/9 Queen Street, Melbourne.

King and King Chambers, Queen Street, Brisbane.

Powerful !

Magnetic !

A PERFECT RECEIVER



“The MAGNAVOX”

One Dial Control

Just Arrived—A Shipment of these
Wonderful Sets

A Five-Valve Receiver of perfect construction, giving full speaker strength on the world's broadcasting stations at all times without interference. Expert opinion the best yet heard. We wish you to hear this set demonstration free—in your home if desired.

RADIO

MICK SIMMONS LTD.

QUEEN ST., BRISBANE
(opposite Town Hall)

Also Our Wonderful

SIMOLIAN SPEAKER 21/-

A Splendid Speaker for All Work

Have a chat with our expert, Mr. Finch. He will be pleased to advise you in all your requirements.

Fascinating !

Thrilling !

Review of

4QG's Programmes for April

April 1st.—Commencement of the Workers' Educational Association tutorial classes in music. These will be held this season at 4QG, and will be conducted by Mr. George Sampson, F.R.C.O., and will be illustrated by stringed trios and quartettes composed of Brisbane's leading instrumentalists.

April 4th.—Pianoforte recital by Mr. Erich John.

April 5th.—A programme in three parts: Part 1, a recital by Mr. A Sharman; Part 2, choral numbers by the Brisbane Apollo Club; Part 3, a short studio concert.

April 6th.—Arrival of the Duke and Duchess of York.

April 7th.—Vice-regal ball.

April 8th.—Grand State reception to the Duke and Duchess.

April 11th.—Mayoral reception to the Duke and Duchess.

April 12th.—Stainers "Crucifixion" relayed from St. Andrew's Church of England.

April 13th.—Special Easter choral recital from the City Tabernacle.

April 15th.—Good Friday services.

April 18th.—Eisteddfod relayed from Gympie.

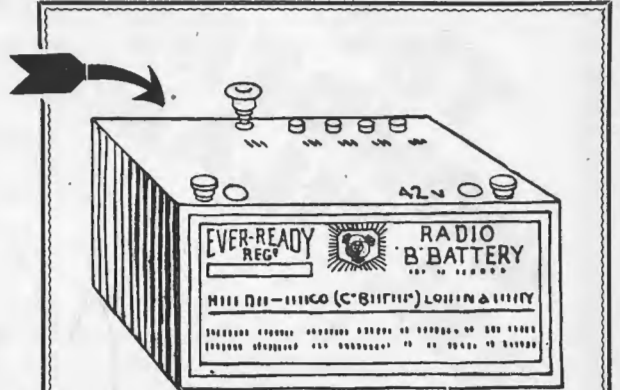
April 19th.—Full concert by a party under the leadership of Mr. Erich John.

April 22nd.—The second W.E.A. tutorial music class.

April 25th.—The Citizens' Commemorative Anzac night meeting relayed from the Exhibition Hall.

April 27th.—Full choral recital.

April 29th.—The third W.E.A. tutorial music class.



THIS is the Battery

That gives long, unstinted service for very little cost. EVERY-READY'S popularity is due to its two big features:—

- (1) Long Service due to fresh stocks constantly arriving from the Sydney factory.
- (2) Low Price due to large output and the saving of tariff charges.

“Ever-Ready” Radio Batteries

Are renowned all over the world for their excellent qualities. You may pay more, but won't buy better.

Let your next battery be an EVER-READY, and save the difference.

PRICES:

W.P., 40-Volt	12/6
W.P., 60-Volt	18/9
X.P., 40-Volt	23/-
Super, 40-Volt	30/-

SOLD BY ALL DEALERS

Wholesale from

Edison Swan Electric Company Limited
156 Creek St. Brisbane

SUBSCRIPTION FORM

“QUEENSLAND RADIO NEWS.”

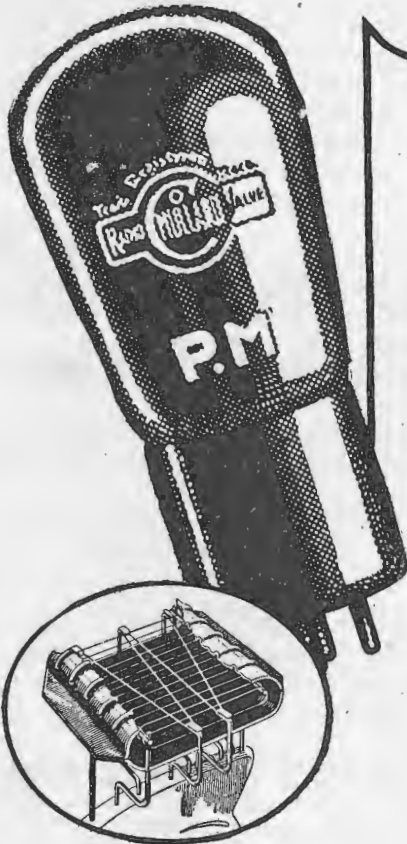
Box 1095N, G.P.O., Brisbane.

Please send me the “Queensland Radio News” for 12 months. I enclose cheque or P.N. for 6/6.

Name

Address

The Wonderful P.M. Filament



Gives the right answer every time!

to the question which every valve user should ask if he desires the best and most economical radio reception.

Is it unbreakable? Yes! except with the very roughest handling. Has it a low operating temperature? Yes! it does not even glow, thereby having a vastly increased life.

Is the emission surface of the filament generous? Yes! up to $5\frac{1}{2}$ times that of an ordinary filament.

Is the current consumption low? Yes! the P.M. Filament consumes only one-tenth ampere, giving a longer life to each accumulator charge.

Does this valve use the same H.T. current as ordinary valves and give greater volume? Yes!

Has the P.M. Filament proved itself? Yes! it is the only filament which has a published National Physical Laboratory 1000 hours life test.

Ask your dealer for Mullard P.M. Valves, with the wonderful Mullard P.M. Filament, the only filament which can satisfy your demands.

Mullard

THE MASTER VALVE

All Mullard Valves are manufactured at Mullard Works, London, England.

OBTAINABLE FROM EVERY RADIO DEALER IN AUSTRALIA.

Advertisement of the MULLARD WIRELESS SERVICE CO. LTD., "MULLARD HOUSE," Denmark Street, London S.W. 2 England.

When replying to Advertisers, kindly mention this Paper.



Should Fruit Market Reports Be Broadcast ?

FOR some months the Committee of Direction of Fruit Marketing has been endeavouring to have the Fruit Market Reports introduced into 4QG's Market Report Sessions. Their request, however, has been refused by the management of the Station on the grounds of there being insufficient Fruit Growers operating receivers to warrant the inclusion of the Fruit Market Reports into the midday and evening sessions of the station.

A promise to include these reports has been given the C.O.D. by 4QG upon the condition that the chairman can furnish the station with a list of 500 fruit growers operating wireless receivers, by the last day of this year. If less than this number have sets by that date, the service can only be included upon the payment of an annual subsidy by the committee.

One can see 4QG's reason for adopting this attitude. The station is naturally desirous to give the greatest service to the greater majority of listeners, and is not anxious to introduce a new session unless conditions warrant it.

No Australian station caters so liberally for the man on the land as does 4QG. In addition to the Farm and Produce Market Reports, the splendid series of Lecturettes, dealing on practically every phase of produce farming, poultry farming, pig-raising, etc., have won ready appreciation among farmers all over Australia.

But we must also view the question from the standpoint of the Fruit Grower. Queensland is largely a fruit-growing State, and there are hundreds of growers sending their consignments to Brisbane daily. The produce farmer, the poultry farmer, the pig-raiser, the station owner, all enjoy the privilege of learning what price their consignments brought them a few hours after they are auctioned. Why should not the Fruit Grower be similarly treated ?

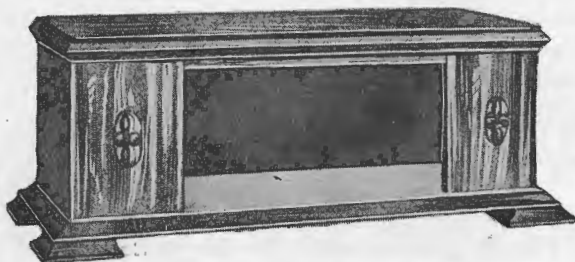
What matters if there are but 300 growers holding licenses to-day? Were the Fruit Market Reports broadcast the number would quickly double, and even treble itself. When 4QG first introduced the Farmers' Session, how many farmers operated radio receivers and what is that number to-day ?

Such are the arguments put forward by the Fruit Growers, and we are inclined to admit they hold a great deal of logic. Brief fruit market reports appended to 4QG's Farmers' Session would occupy but five minutes, and would be greatly appreciated among the fruit growers all over the State.

As an investment the scheme should appeal to 4QG, for it would attract licenses from the growers quicker than by holding out a promise with a condition pinned to the end of it.

When Building your own Set
 put it in an
EXHIBITION
WIRELESS CABINET

Made from thoroughly seasoned Rosewood and Silky Oak by expert workmen their Handsome Appearance appeals to everyone, while their efficiency satisfies the most exacting.



R.W. 100 3-Valve Cabinet

Illustration R.W. 100 is for a Three-Valve Set, the measurements being 15 inch x 7½ inch x ½ inch (Bakelite Panel Size.)
 PRICE 45/.



R.W. 101 4-Valve Cabinet

This is a Four-Valve Model. Panel Size 18 inch x 9 inch x ½ inch.
 PRICE 50/.

Low Prices

STANDARDISED methods of production result in lower prices.

Period or Special Designs

We also supply special designs in Cabinet in any size or style, designing them where necessary to harmonise with any furnishing scheme.

Estimates and Sketches Free on Application.

Complete Sets Supplied Where Desired.

Those living out of town may order with every confidence. Goods are carefully packed and place free on rail Brisbane. Immediate delivery guaranteed.

HENRY ROBERTS
BRUNSWICK
HOME FURNISHERS
 BRUNSWICK ST. - OPP. JACKSON'S BOND
 STORES - NEAR EXHIBITION - VALLEY - BRISBANE



This crystal-valve receiver should appeal to many on account of its simplicity of operation, good volume and last, but not least, good tone.

It is capable of working a loud speaker with good volume at distances up to five or six miles from the local station, while Southern stations may be tuned in on the earphones, provided conditions are favourable.

In passing, we would like to point out to our readers that this is not by any means a freak circuit, for its design is based upon the fundamental law of electricity which governs energy flowing in an electrical circuit.

Briefly this law is as follows:—

When a circuit is supplying power it must, for obvious reasons, be unavoidably wasting some of this power; now, maximum results will be obtained when the wasted energy equals that passed on.

So it is apparent that to get the best results from our crystal circuit the components used, or rather their values, should be suited to one another.

By carefully arranging the circuit in this manner it is possible to actually increase the output 20 to 25 per cent. over that usually obtained from commercial type crystal receivers. Furthermore, by establishing this balance the quality is greatly improved.

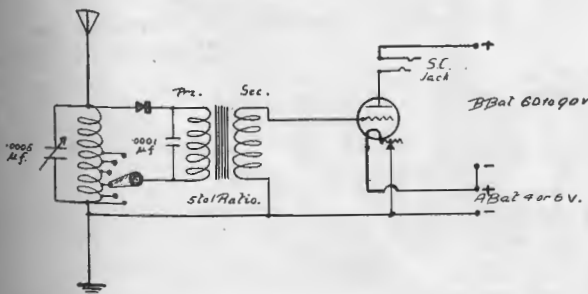


Fig. 1.—The Circuit.

GENERAL LAYOUT.

The panel should be marked out according to the dimensions given in Fig. 4, carefully drilled, and then rubbed over with a soft cloth, in order to remove grease or other marks from its polished surface.

Next refer to the semi-pictorial diagram, Fig. 2. This gives a very good idea as to what is required as regards the baseboard layout. Notice how the rheostat, valve socket, and transformer are all mounted in line. This not only simplifies the wiring, but also makes the amplifying unit compact.

A transformer of 5 to 1 ratio is used to transfer the energy from the crystal circuit to the valve amplifier.

This high ratio has a distinct advantage in this case for it not only gives a good voltage step-up, but tends to balance the circuit by virtue of its low primary resistance.

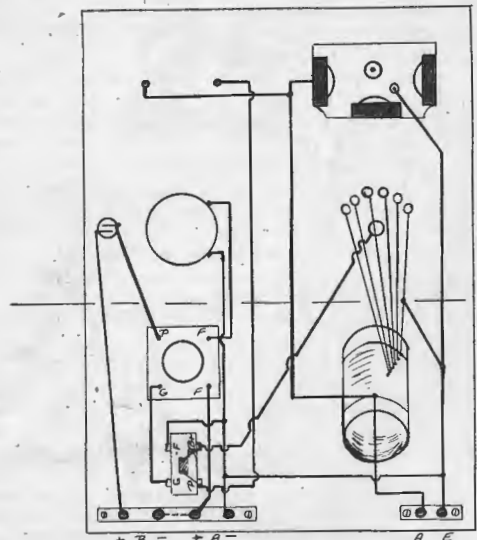


Fig. 2.—Semi-Pictorial Diagram.

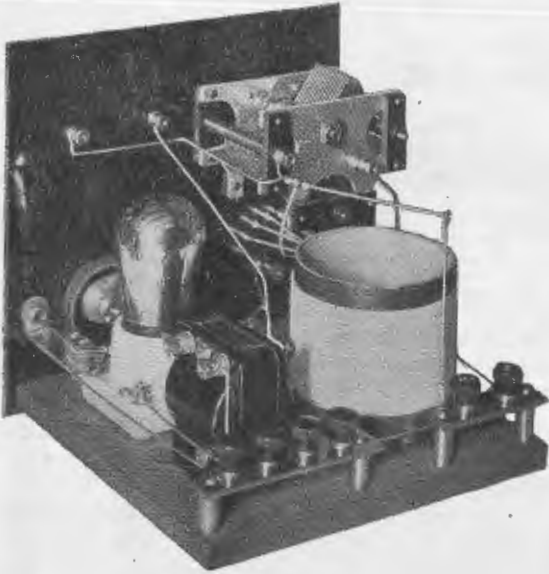


Fig. 3.—Note the compact and neat arrangement of the parts.

The loud speaker is connected to the set by means of a plug and S.C. jack, this being by far the most satisfactory method for this particular type of receiver, as it allows one to change from speaker to earphone or vice-versa without delay.

CONSTRUCTION.

The aerial tuning inductance is of the Solenoid type, and is made by winding 40 turns of 20 gauge D.C.C. wire on a cardboard former 3 inches in diameter. It is advisable, however, to give the former a coat of shellac before winding on the wire, as this prevents further shrinkage of the tube, and makes it, more or less, impervious to moisture.

In order to increase the selectivity, and over all efficiency, of the circuit, the inductance is tapped at six points, these tapplings being taken at every fifth turn, starting from the bottom end of the coil.

The best method of making tapping on a cylindrical coil is to lift each turn to be tapped by means of a screw driver which has had its sharp edges removed. Now, as each turn is lifted, a narrow strip of insulating material such as leatheroid is passed underneath, as is clearly shown in Fig. 5.

This method has the advantage that it is possible to solder the connecting leads securely to the coil windings without fear of damaging or short-circuiting adjacent turns.

Care should be exercised when connecting the opposite ends of these coil leads to the contact studs, each stud should first be cleaned and tinned before attempting to solder on the wires, for if sound elec-

trical joints are not made, heavy losses are bound to occur.

The leads from the coil to the studs may be either bare or D.C.C. wire, the latter being preferable for those who have not had much experience in set building.

WIRING.

It should not be necessary to go into detail as regards the wiring of this receiver, for the illustration and diagrams are self-explanatory.

However, one or two hints on soldering would no doubt be acceptable to many, as this seems to be the point where most experimenters experience trouble.

The first and most important law in soldering is to make sure that the parts to be soldered are free from dirt or grease.

Next, that the parts to be soldered have their surfaces covered with a thin coating of solder (known as tinning). This also applies to the soldering iron.

The iron should not be made too hot, as extreme heat destroys the coating of solder, which means that the iron is made practically useless.

When soldering joints (or other surfaces) always remember that it is the joints themselves that have to be heated—not the solder.

Having heated the joint as already explained, apply the resin-cored solder stick to the joint itself, not the iron; the solder will now run into the joint, making a perfect electrical contact.

OPERATION.

Operating the receiver is simplicity itself, for once the crystal detector and switch have been set, it is only necessary to turn on the rheostat and tune in the stations by means of the condenser dial.

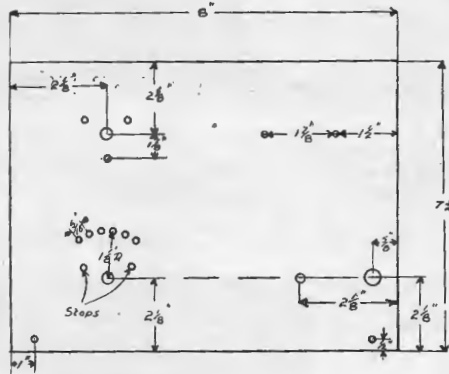


Fig. 4.—Front Panel Layout.

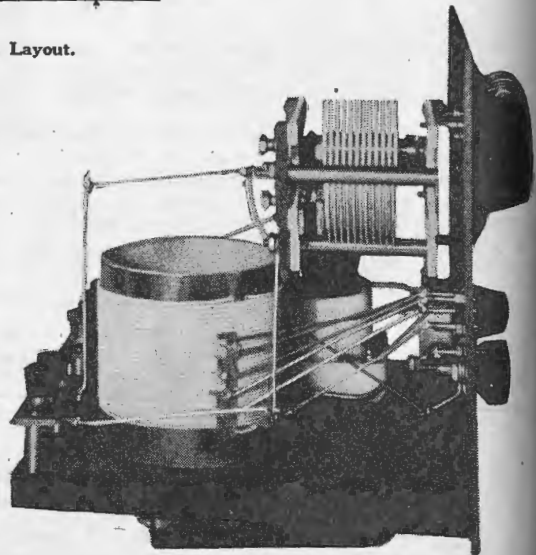


Fig. 5.—View showing method of tapping the aerial inductance.

RESULTS OF TEST.

Laboratory tests have revealed that this receiver is capable of excellent results, the local station being reproduced at good volume on either cone or horn type loud speaker.

Southern stations were tuned in on the earphones at quite good strength, four nights in one week, this of course being done after the local station had closed down.

The crystal is of the synthetic type such as "Synthite," "Super Neutron," "Mighty Atom," or any other reliable make, while the catwhisker should be made of 36 gauge tinned copper wire. This is rather fine, but gives excellent results.

The valve should be of the .1 semi-power type such as Philips B.406, Mullard P.M.4 or Osram D.E.4, a B battery of at least 60 volts being necessary for this particular type of valve.

It will be found that the switch arm sharpens the tunings and greatly improves the quality; the best position will, of course, be found by experiment.

LIST OF PARTS.

- 1 Bakelite panel $7\frac{1}{2} \times 8 \times \frac{1}{8}$ in.
- 1 Baseboard $7 \times 7\frac{1}{2} \times \frac{1}{8}$ in.
- 1 H. & H. .0005 variable plain condenser
- 1 3in. Dial.
- 1 H. & H. 30 ohm rheostat
- 1 Ebro vernier crystal detector
- 1 Switch arm
- 6 Contact Studs
- 2 Stops
- 1 B.M.S. S.C. jack.
- 1 H. & H. standard porcelain socket.
- 1 Signal 5-1 ratio transformer
- 1 3in. Diameter cardboard former
- 1 Card engraved terminal
- 1 Bakelite strip $3\frac{1}{2} \times \frac{1}{4} \times \frac{1}{8}$ in.
- 1 Bakelite strip $2\frac{1}{2} \times \frac{1}{4} \times \frac{1}{8}$ in.
- 4 Terminal strip supports
- 1 .0001 Sangamo fixed condenser
- $\frac{1}{2}$ lb. 20 gauge D.C.C. wire.
- 6 Lengths of bus-bar wire

SCREWS REQUIRED

- 2 $\frac{3}{8} \times 6$ N.P. raised heads
- 2 $\frac{3}{8} \times 6$ R.H. brass
- 2 $\frac{3}{8} \times 6$ R.H. brass
- 4 $1\frac{1}{2} \times 8$ R.H. brass

DRILLS REQUIRED.

- 1 $\frac{3}{32}$ in. Twist drill
- 1 $\frac{5}{32}$ in. Twist drill
- 1 $\frac{1}{8}$ in. Twist drill
- 1 $\frac{1}{16}$ in. Twist drill
- 1 $\frac{7}{16}$ in. Twist drill

Use the **New Crystal** with **Valve Power!**

With the "SUPER" Neutron in your set you will no longer have the difficulty of getting strong, clear results. You will be delighted with its extreme sensitiveness. Every Crystal is concert tested. **ON SALE EVERYWHERE.**

Look for the Red Wrapper!

Makers - NEUTRON LTD., London, England

2/3

**SPECIALLY
SELECTED
AND PACKED
IN RED -
DAMP PROOF
CONTAINER
FOR
AUSTRALIAN
CONDITIONS**

**SUPER
NEUTRON**

The World Famed Crystal

**EVERY
CRYSTAL IS
GUARANTEED
PROVIDING
THE RED
WRAPPER
REMAINS
UNBROKEN**

THE TRUTH

ABOUT L.F. TRANSFORMER IMPEDANCE

- (a) Amplification with any valve and transformer depends greatly on the transformer impedance; the higher the transformer impedance the better the reproduction, particularly of the lower notes.

HENCE IT IS UNNECESSARY TO VARY THE IMPEDANCE OF THE TRANSFORMER TO MATCH THAT OF THE VALVE USED; ON THE CONTRARY, THE HIGHEST POSSIBLE TRANSFORMER IMPEDANCE SHOULD BE USED AT EVERY STAGE.

- (b) IMPEDANCE DEPENDS ON FREQUENCY, AND TO STATE TRANSFORMER IMPEDANCE WITHOUT STATING THE FREQUENCY AT WHICH IT IS MEASURED CONVEYS NOTHING.

A good transformer has a high impedance even at low frequencies to reproduce low notes satisfactorily. A transformer may have a high impedance at a comparatively high frequency, say 500, and yet be a bad transformer because the whole range of male and female speaking voices, as well as most of the fundamental musical notes, are at frequencies below 500.



RATIO 3.5 to 1
FOR USE IN BOTH
FIRST AND SECOND
STAGES

42/6

FERRANTI

INTERVALVE TRANSFORMERS

TYPE AF3 42/6

IMPEDANCE:—

At 100 Periods 50,000 Ohms.

At 500 Periods 410,000 Ohms.

No better Transformer is Available at any Price.

TYPE AF4 32/-

At 100 Periods, 17,500 Ohms.

At 500 Periods, 90,000 Ohms.

The Best Transformer at the Price.

OBTAINABLE AT ALL RADIO DEALERS IN AUSTRALIA

Dealers please communicate with:—

A. BEAL PRITCHETT, (Aust.) LIMITED, Sydney and Melbourne.

WEDMA LIMITED, Adelaide. . . . EDGAR V. HUDSON, Brisbane.

First Impressions

(By W. S. HOGG.)

"Well, what was the radio like?"

"Gotten—er—that is to say, wonderful!"

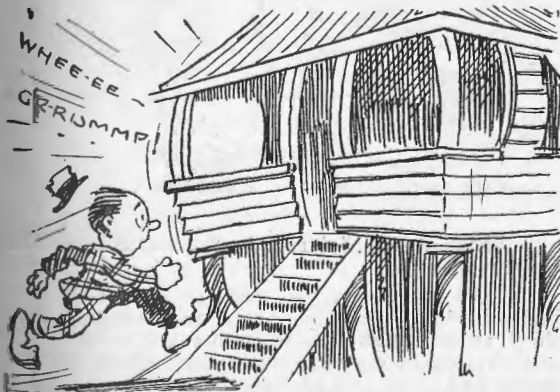
"Why?" in a slightly disappointed tone of voice. "Don't you like it?"

My wife had ulterior motives for wishing me to take an interest in wireless. In my boyhood days, long before the era of broadcasting, I had mastered the elementary principles of electricity and, much to the detriment of the kitchen table and my mother's temper, I had spent my winter evenings in constructing simple electrical models. Now, returning from the country to the city, I found men committing similar blunders, with the family even encouraging them, because "father is making a wireless set."

I had gone, on this particular evening, to see "father's first set," also to hear broadcasting for the first time. I had returned with a gloomy presentiment that never again would my hearing render me efficient service.

I walked along the peaceful street, meditating upon the wonders of modern science, which can radiate music through space to be gathered in, as it were, by machines such as my gifted friend had himself made; to bring melody and culture into homes where before nobody was not, and also what a great idea it would be to have one in my own home. Whilst pursuing this elevating train of thought a slightly confused noise smote my ears, increasing in volume as I proceeded until, as I turned into my friend's gate, I could distinguish a voice which seemed to emanate from some person in a violent state, interspersed with howls, wails and other most alarming sounds. Not knowing anything of my friend's home-life, I thought it polite to wait awhile, until the storm abated. If a domestic shindy was in progress it was no business of mine—I am not one to interfere.

The turmoil ceased suddenly—there was silence for a second or two—then, a loud and agonising wail. That settled it—I can stand so much, but not too much. I dashed up the steps, determined to do something, I knew not what, but something, anyway.



Before I reached the door, however, it was opened, and my friend's wife—quite unperturbed—was saying: "I heard you coming up the steps—Jack is in there, just 'tuning in'—I don't think 4QG is working very well to-night."

Certainly the sounds which were issuing from the machine could not be described as tuneful, although, undoubtedly, they were powerful—very powerful.

My friend evidently had not heard me come in—he was busily engaged in winding up the machine—the winding mechanism appeared to work on the "ratchet principle," as I noticed he gave the winding knobs a sharp backward and forward motion. However, as he noticed me he declutched and switched off.

Everything seemed strangely quiet. "Hello, old man! There she is, what do you think of her? Neat cabinet, Eh!—made of benzine-case wood, beautiful grain when stained and varnished. We will give 4QG a rest, while you have a look behind the panel; I know you like to see the works of everything. They may have their station working better after they have warmed up a bit—some of their transmission is pretty 'crook,' and Southern stations are not much better. They do things differently over in America; they know what efficiency means." My friend had once spent a few months in that country. "Yes, siree, I'll tell the world. Now, over here they spend money like water, building a station that you cannot get anything out of half the time—I'll say if the Yanks had these 'Gold-darn' stations we would heave something, believe me!"

Behind the panel seemed to be the most complicated arrangement I had ever beheld—wires running all ways, silvery looking bulbs here and there, mixed up with coils and other gadgets—all a meaningless jumble to me.

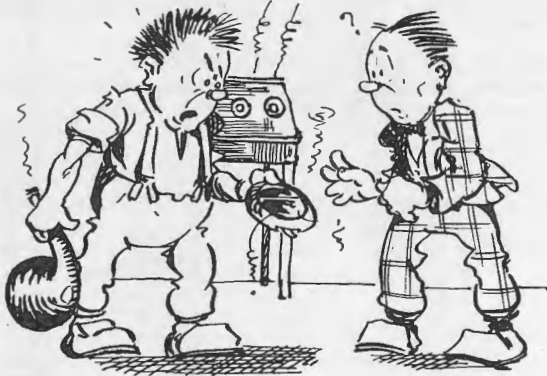
He explained the whole thing, as he said 'in simple language,' not that it sounded simple to me—the terms he used were all foreign to my ears. As he progressed my admiration grew. Here was a man who was capable of discussing scientific problems with Thomas A. Edison or Sir Oliver Lodge wasting wasting his breath on an ignoramus such as I. However, after considerable mental strain, I grasped one point. By some particularly artful arrangement he made one valve do the work of two, but whether this cunning stunt was his own discovery or that of some contemporary scientist I was not quite clear. I had often tried to make two blades of grass grow where only one grew before, so could fully appreciate his point.

Explanations over, he prepared to get the machine under way again. Like a butterfly flitting from flower to flower, his hand flitted from knob to knob—turning one a little this way and another a little that way; finally he turned one right round—lights popped up in the silvery bulbs and a deafening roar issued from the loud speaker.

I gasped with amazement at the suddenness of it all—this was decidedly uncanny—should mortals med-

dle with things like this? A wave of superstition swept over me; these voices coming out of the night were surely demons of the "nether regions" howling with delight at the torments of their victims, while the main body of the sound was, without a doubt, the groans and wails of lost souls. The scientist busy at the knobs was quite calm, however, even in the most crescendo parts. These scientific men, apparently, have no nerves, they go on and on, caring naught for danger, meddling with almost supernatural things, investigating, experimenting, and often dying a martyr to science. My friend calmly sitting there turning knob after knob, was the very personification of a scientist determined and unafraid. Suddenly the loud speaker spoke in a different voice for a moment and was then silent.

"Hello, what's up? They must have cut off—they are about the limit—I suppose something has gone 'crook' with their oscillator; I thought once or twice there was something the matter with it—they have had the station on the air long enough now to give us a little decent transmission. My word, if I were running that station I'd make them come across with the goods. Hold on! I'll try the earphones—they may still be running, but have reduced their E.M.F. or something—you never can tell what those blokes are up to. Oh, yes, they are still on the air." I could hear that myself, although he had the earphones clamped over his ears. "Now, that's funny; let's put the speaker on again." After the change had been made there was dead silence as before. "Well that's funny." He twiddles a little nut underneath the speaker. Still silence. "Well, doesn't that beat everything." Connects up the earphones again. "Yes, still there." Disconnects the phones and connects the speaker—again silence. "Well, what do you know about that?—hold on!" (starts taking the speaker to pieces).



His eyes seemed to project; he breathed sharply, and then announced with some violence: "Burnt out! By jove, I ought to have known. When a man works a station like this he ought to take every precaution—I ought to have put a fuse in that circuit or a—or a—See what they were doing, putting it through for all they were worth—it's up and down; you can never depend on them for two solitary minutes together. They have done for that speaker—absolutely done for it—anyway, I'm glad it was not an expensive one; we will have to carry on with the earphones, I'm afraid."

We did, and the way the earphones carried on with us was both cruel and brutal. After much suffering I hit upon a way of shifting the phones off my ears

away from a vital spot, as it were, and obtained some relief that way. We traversed space apparently between the Region of the Lost Souls, 4QG and the Morse station, sometimes we found all three together which was really wonderful when you come to this of it. I voiced my appreciation—I like to give praise where praise is due.

However, he probably did not hear me, as he did not answer—his whole attention seemed to be taken up with the consideration of which knob should be juggled about next.

"By George! I believe those batteries are 'crook'—I had them charged yesterday. When you let a battery out of your hands you never know what they are going to do with it—half of them don't know how a battery should be charged—they just 'bung' it on the line and forget it's there. I think we'd better shut down for a few minutes until I test it—there's nothing like testing a battery after you get it home—a man who never tests his battery doesn't deserve to have one. I may as well test the 'B' battery, too, while I'm about it—nothing like knowing where you stand!"

While getting his instruments out and disconnecting his batteries, he explained that one was dry and the other wet. To prove it was wet he dipped in a glass affair and drew some of the liquid out. After applying the voltmeter to both batteries he declared everything O.K.

"Do you have to test them every day?" I asked.

"No; not every day, but you have to know how your batteries are—you have to know what you are doing with a set like this. Now, some fellows—" He busied himself connecting up the batteries again, telling me the while what some fellows do or, rather, neglect to do.

"Now, we're right again." He turned a knob—light leaped up in the silvery bulbs and died away again as quickly. My friend's face went from red to white as he uttered in a choking voice the one word "Busted!"



"What's wrong?" I asked. "Won't she go? Has she conked?"

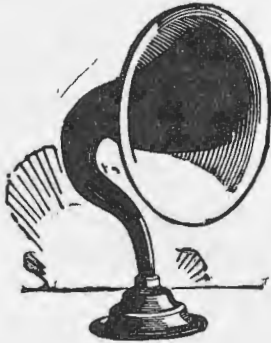
He did not answer, but made a dash for the terminals—twiddled the knob again and muttered something about "High tension across low tension." It was evident to me that something serious had happened, and as he still seemed to neither see nor hear me, I stole quietly out into the night.

**Now
22/6**

**Too well known
to need any
Description !**



Brandes *Matched Tone*
HEADSETS



**BRANDES
Table Talker**

The goose-neck horn of the loud speaker means clearer and more rounded tones, and the patent material of which it is constructed eliminates all harshness and metallic resonance.

45/-

**BRANDES
Table Cone**

The pleasing and natural tone produced by Brandes Table Cone, with plenty of power, wonderful depth and quality are hard to realise until actually heard. It is a distinctively designed and beautifully finished instrument.

£4-0-0

Brandes "Ellipticone"

The large vibrating area of the cone, together with a driving unit of special design, produces a depth and tone quality that is exceptional. The magnets in the cone unit are very large. The Ellipticone has a small armature which faithfully produces extremely low and high tones. **£8**

GET TONS OF VOLUME WITH PERFECT CLARITY BY USING DE FOREST VALVES

DV.3 (UV. Base), each **13'** DV.5 (UV. Base), each **11'**
DL.3 (UX. Base), each **13'** DL.5 (UX. Base), each **11'**

RADION PANELS MAKE GOOD SETS—WORK BETTER—USE THEM!

On Sale at all HOME RADIO SERVICE LTD. Authorised Dealers
(With the Red Sign on their Windows).

Queensland Distributors

HOME RADIO SERVICE LIMITED

Phone 6143

First Floor, Courier Building, Queen Street, Brisbane

Telegrams—'Homrad'

There are many synthetic crystals on the market, such as carborundum (SiC), calcium silicide (Ca_2Si), to say nothing of the many forms of lead sulphide (PbS), and zinc oxide (ZnO), and although the writer has tried them all and made them all, he has yet to discover a crystal which is better than Iridium, a very rare metal. Fountain pen nibs are tipped with a minute quantity of Iridium, and by collecting a considerable quantity and treating them, the Iridium can be obtained in a fairly pure state.

From the foregoing list of minerals it will be seen that the best crystals are nearly all sulphides and oxides of the metals, and that their crystals take the form of cubes or hexagonals. Why should the sulphides and oxides be the best rectifiers? And why are minerals which crystallise in cubes and hexagonals better than any other? To put the matter a little plainer, take lead sulphide (PbS), which consists of lead and sulphur chemically combined and crystallising in cubes. Why should it be useless if we take away the sulphur and leave metallic lead behind? What has sulphur to do with its power of rectification? Again, take zinc oxide (ZnO)—metallic zinc is a very poor crystal, yet if oxygen, a gas, is made to chemically combine with it a highly sensitive crystal is the result. The zinc atoms have certainly combined with the same number of oxygen atoms, and the product is different from either of the original elements taken. Still, this does not explain why oxygen converts zinc into a good rectifier of received oscillations. The writer has been puzzling over these problems for some considerable time, and believes he has partially solved them, but the chemical terms involved and the space the description would occupy does not warrant their inclusion here.

Most people with crystal sets have experienced at one time or another a noisy crystal, that is, one on which the catswhisker keeps moving to the accompaniment of grating noises for no apparent reason. This is due to minute discharges at the point of contact between the crystal and catswhisker, which causes the catswhisker to recoil, and while it is recoiling its extreme tip slides over the crystal faces and causes the strange noise heard. This can be distinctly seen under the microscope, although many attempts will have to be made to bring the point of the catswhisker on the fragment of crystal employed in focus. Here we are faced with another problem, for why should one crystal be noisy and one normal? I have here two crystals, one noisy and the other normal, yet although every test has been used—physical, optical and chemical—there is no proof that one is different from the other. One is almost inclined to believe that one crystal generates some unknown power or else as seems likely, it is over sensitive. Some authorities hold to the uni-lateral conductivity principle, while others believe in the thermo-electric theory. Both are not quite satisfactory, and the writer has his own opinions on the matter and ventures to give them here.

Remembering that impurities have to be mixed in with crystals, it is little wonder that research has been carried out to see what effect they have on the crystal in general. The writer believes that they set up a molecular strain, and that the strain can be relieved with some contact such as the catswhisker or another. A crystal, the two at point of contact forming an electro couple, thereby rectifying the received oscillations.

Some substances do not function at all, and are practically useless, as far as crystals are concerned. This is probably due to the molecular strain being relieved in some way, or perhaps an unsuitable contact.

The electrical resistance and the general structure of the crystal has considerable influence on its rectifying properties; or perhaps the molecular strain may not be evenly distributed. There is still a tremendous amount to learn about crystals, and the writer is convinced that there is yet to be made a synthetic crystal which will eclipse anything now known. The difficulty lies in getting a crystal with low resistance (comparatively speaking), and high molecular strain.

Another problem to which a considerable amount of the time has been given is the effect of grease on crystals. Every crystal-user knows that if a crystal is handled its powers of rectification are impaired. This is because a thin film of grease from the fingers is smeared on the crystal face. Apparently it sets up a somewhat high resistance and affects the molecular strain. The problem again faces us: Why is this so? If we dip any of the connecting wires of the set in fat and connect them up again, there is no increase in the resistance; why, then, should a minute quantity of grease affect the crystal? Obviously it must do something else besides increasing the resistance. A very complicated chemical action may take place, due to the sodium chloride and organic compounds contained in the grease entering into chemical combination with the mineral used. It may not be amiss here to give a simple piece of advice. To wash a crystal use methylated chloroform; never on any account use petrol or soap and water.

Many people seem to be under the impression that the more a crystal sparkles the better it is. This is absolutely incorrect. The sparkling effect is caused by the crystal faces reflecting light, and has nothing to do with its powers as a rectifier, or whether it is sensitive or not. People, when buying a crystal, should bear this in mind, and remember that only an actual test on reception of speech or music can determine the qualities of a crystal.

There is some inter-relation between the resistance of the circuit, including the phones and certain crystals. The writer knows two people using crystal sets under the same conditions with the same make of crystal, yet one does not seem to get the same results as the other. This points to the fact that crystals are better suited to low resistance circuits and phones. Excellent reception is obtained from a balanced circuit and a pair of phones whose resistance is no more than 140 ohms.

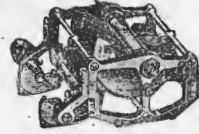
In conclusion I would say: Remember that the crystal is the most important part of your set. Keep it enclosed in a glass dust-proof barrel. Don't pick at it with the catswhisker. The lighter the contact the louder the volume. If it is too big for your "cup" don't whack it hard and expect it to break neatly in half; use a pair of snips with as little pressure as necessary. If a storm is about to break, don't sit listening to the lightning—you are damaging your crystal. Lastly, don't blow tobacco smoke on your crystal; it will send it dull quicker than anything else I know.

Are you building your Sets to excel others, and obtain superlative results?

NOT unless you are using the following:—

BREMER-TULLY.

- 23 plate SLF Condensers £1 19 6
- 17 plate SLF Condensers 1 19 6
- 13 plate SLF Condensers 1 17 6
- L.D. 13 plate double Condensers 3 0 0
- L.D. 17 plate double Condensers 3 3 0
- L. 13 plate Condensers. 1 11 6
- L. 17 plate Condensers. 1 12 6
- L. 23 plate Condensers. 1 14 6



For every type of resistance control in receiving sets United Distributors Ltd. recommend as better than any that have ever been brought on the market that of the Centralab, manufactured by the Central Radio Laboratories. Their full line consist of:—



- | | |
|--|------|
| No. 2 M. Radiohms | £ s. |
| No. 50 M. Radiohms | 0 14 |
| No. 100 M. Radiohms | 0 14 |
| No. 200 M. Radiohms | 0 14 |
| No. 500 Modulators | 0 14 |
| No. 106 Variable Grid Leaks, without condensers | 0 9 |
| No. 107 Variable Grid Leaks, with No. 2035 condenser | 0 10 |
| No. 206, 6 ohm Rheostat | 0 9 |
| No. 230 ohm Rheostat | 0 9 |
| No. 110, 200 ohm Potentiometer | 0 12 |
| No. 111, 400 ohm Potentiometer | 0 14 |
| Centralab Push-Pull Battery Switch | 0 3 |
| Centralab Modulator Plug | 0 18 |

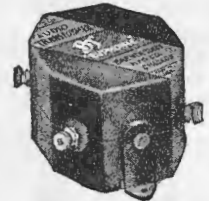


Short Wave Outfit. £3 3 0

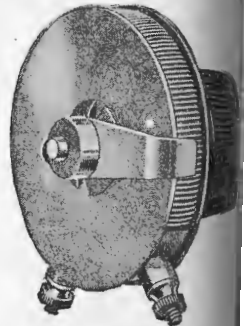
Bremer-Tully Tuning Control Dial £0 16 6



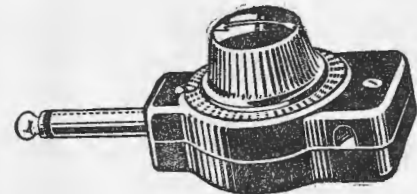
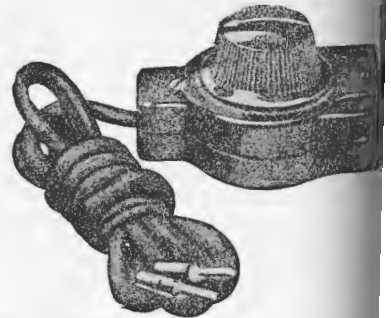
The Centralab Rheostat the best obtainable—the standard in Udisco Sets



- Bremer-Tully Euphonic 2.2 to 1 Transformer, No. 210 £1 14 0
- Bremer-Tully Euphonic 4.7 to 1 Transformer No. 410 1 17 0



Special attention is drawn to the Centralab Modulator 'Phone Plug, which combines the control of the wonderful Centralab Modulator with the ordinary 'Phone Plug; it can also be supplied with speaker cords for receiving sets, which are not equipped with a jack. This controls the tone of speaker from the loudest that the set can produce down to a whisper, and is a wonderful eliminator of static effects. No such other item is on the radio market to-day.



SOLE AGENTS:

UNITED DISTRIBUTORS LIMITED

343 Queen St., Brisbane.
72 Clarence St., Sydney.

Cr. Jerovis Quay and
Harris Sts., Well., N.Z.
66 Charles St., Launceston, Tzs.

664 Bourke St., Melb.
26 Queen St., Perth.

27 Chester St.,
Adelaide.

Built Like An Accumulator

Slip off the outer coverings of Ray-O-Vac Battery and take a peep at its inward construction. You'll marvel at the thorough and remarkable new principles involved in the assembling.



RAY-O-VAC RADIO "B" BATTERIES

The Ray-O-Vac people have made a radical departure in the manufacture of their new "B" Batteries.

Instead of the old pitch filling between the cells individual insulating cartons are used. The advantages of this newer method are obvious. The cells are packed at low temperature instead of having to undergo the old ruinous pitch-heating process. Air has easy access to all cells, allowing free gassing without destroying the battery. These two points alone ensure a 10 per cent to 15 per cent. increase in the battery's life.

The cells are connected in true accumulator fashion, the connecting rods being securely soldered to the cells. Any one cell may be withdrawn at will and substituted with a fresh cell, stocks of which are always available.

The battery is internally and externally water and acid proof. The cells are housed in zinc containers. Solid post terminals make positive connections with all type of connectors. Over-size cells, measuring 1 1/4 in. in diameter by 2 1/4 in. in depth, ensure double the amperage of ordinary batteries.

45-Volt Heavy Duty 26/-
45-Volt (Master Ray-O-Vac), Extra Heavy Duty ... 36/-

ALL LIVE DEALERS SELL RAY-O-VAC

*If unobtainable locally call or write to the
Sole Agents*

UNITED DISTRIBUTORS LTD.

343 Queen St., Brisbane.
72 Clarence St., Sydney.

Cr. Jervois Quay and
Harris Sts., Well., N.Z.
66 Charles St., Launceston, Tas.

664 Bourke St., Melb.
26 Queen St., Perth.

27 Chester St.,
Adelaide.

When the Duke Arrives

4QG HAS BROADCASTING ARRANGEMENTS WELL IN HAND.

People who live in distant centres and who will not be able to visit Brisbane on the occasion of the visit of their Royal Highnesses the Duke and Duchess of York, may at least enjoy the privilege of hearing some of the more important functions broadcast by Station 4QG.

Very complete arrangements have been made at 4QG for broadcasting the events, which will take place during the Royal visit.

The following is the programme which will be carried out by 4QG:—

Wednesday, April 6th, 3.15 p.m.: Arrival of the Duke and Duchess; civic reception in Albert Square; music by combined choirs and massed bands.

Thursday, April 7th, 11.30 a.m.: Public reception relayed from the Botanic Gardens; 8.0 p.m., V. Regal ball; description of the ballroom and of the arrival of the Duke and Duchess.

Friday, April 8th: 2.30 p.m., school children's sports relayed from Exhibition Ground; 8.0 p.m., Grand State reception relayed from Parliament House, musical programme in Legislative Assembly Chamber and on lawn.

Friday, April 9th: Afternoon functions at Beach desert.

Monday, April 11th: 8.0 p.m., Grand Mayoral reception at Newstead House, singing by combined choirs, music by massed bands, description of the illuminations.

Tuesday, April 12th: 5.30 p.m., returned soldiers memorial function relayed from Toowong Cemetery.

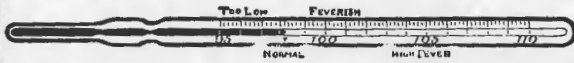
From the above programme it will easily be seen that steps have been taken to broadcast almost every important function which will take place. Those who are sick or who are too far away to attend the functions will be able to hear each event just as well as if they were there.

AMPLION CARBONCELS IN QUEENSLAND

During the month Mr. W. Blogg, Managing Director for Amplion (Aust.) Limited, Sydney, paid a visit to Brisbane to arrange for the Queensland distribution of Amplion Carboncels.

Arrangements were finally made with Messrs B. Chandler & Co., of Adelaide Street, to handle the line in Queensland, excluding Ipswich and districts where the agency has been entrusted to Messrs W. Haigh & Co., Limited.

We believe Amplion Carboncels are going to be very popular in the country centres of this State as they overcome the accumulator problem in centres where recharging is difficult and expensive. Full details of the Amplion Carboncels will follow in future issues of this journal.



PLAGUE, INFLUENZA, DENGUE FEVER, and all other diseases are first indicated by a rise in temperature; therefore, a Clinical or Fever Thermometer is a necessity in every home, especially where there are children. Order one NOW and have it ready. **Price 3/9 each.** Posted 9d extra. If you paid a guinea you could not buy a better article.



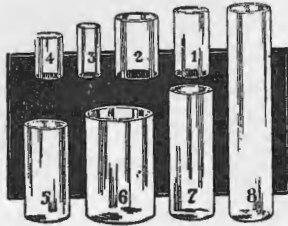
TEST YOUR BATTERIES.

New up-to-date Hydrometer for testing the gravity of the electrolyte of storage batteries. The only Hydrometer that will float right and give accurate tests. The best made. **Price 10/6 each.** Postage and packing 2/ extra.

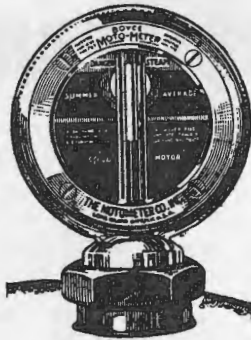
Others at 5/6 each.

IMPROVED PETROL TESTERS

The unsatisfactory working of the petrol motor is often due to the spirit being too dense. The tester will indicate the quality. **Price 10/6 each.** Posted 12/6.



Radio Battery Cells, Crystal Detector, and Lubricator Glasses (all sizes).



MOTO METERS.

Midget size 15/ each; posted 1/ extra. Universal size, 27/6 each; posted 1/6 extra. New tubes fitted to broken ones.

Illustrated catalogue posted free on request

Wilson Nafis & Co. Ltd.

99 Wharf Street, Brisbane

(next Fire Station)

A Corner of "The Queensland Radio News" Laboratory



This illustration of a corner bench in the "Queensland Radio News" Laboratory, shows the Technical Editor carrying out progressive tests on the "Queensland Radio News" **Balanced Crystal Receiver**, described in this issue. He is seen taking readings of the actual energy flowing in the crystal circuit, on a very sensitive micro-ammeter.

All receivers described in constructional articles published in this journal undergo a series of accurate tests before being submitted to our readers.

The apparatus shown on the bench (reading from left to right) comprises: Cone speaker of the free-edge

type; milliammeter cabinet with standard shunt box; 6in. reflecting-type voltmeter; Diode voltmeter, used for measuring R.M.S. value in alternating current circuits; universal testing meter, giving readings from zero to 500 microamperes, zero to 10 milliamperes, zero to one ampere. This instrument can also be used as a voltmeter reading 0 to 5 volts, and 0 to 100 volts. The resistance of each shunt is indicated on the dial.

The apparatus in the foreground is an experimental B battery eliminator of the Ratheon tube type, delivering voltage up to 200 volts D.C.

REPAIRS

We do rewinding and overhauling of all kinds of Electrical Apparatus, including Armatures, Meters, Phones, Loud Speakers, Coils, etc., and guarantee the work. Also Panel Engraving.

HAMILTON & PASS

BURNETT LANE, BRISBANE.

'Phone Croso.

Leighton Gibson

RADIO SPECIALIST

Box 106B, BRISBANE

Phone J 3167

IGRANIC

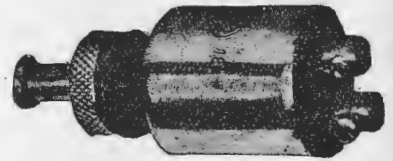


Are Thorough Throughout and Ensure Efficiency

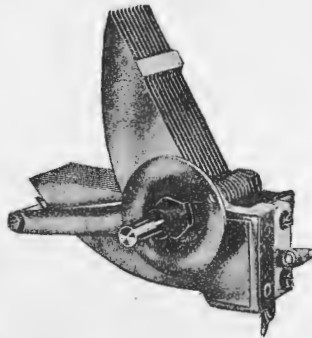


FIXED CONDENSERS.

.0001 mfd.	2/-	each
.0002 mfd.	2/-	"
.0003 mfd.	2/-	"
.0005 mfd.	2/-	"
.001 mfd.	2/-	"
.002 mfd.	2/-	"
.003 mfd.	2/-	"
.005 mfd.	2/6	"
.006 mfd.	2/6	"



IGRANIC-PACENT
Battery Switches 3/- each



IGRANIC PACENT
True Straight-line Frequency
Variable Condensers:—
.00035 £1/4/- each
.0005 £1/10/- "



INDIGRAPH KNOB & DIAL.
1½ in. 2/- each
2 in. 2/3 "
3 in. 3/- "
4 in. 5/3 "



FIXED GRIDLEAKS

Complete with clips and fitting screws. Sizes .05, .01, .02, .05, 1.0, 2.0, and 5.0 megohms .. 3/6 each
Without clips and screws 3/- each



ANTIMICROPHONIC VALVE HOLDERS.

English base, Panel and Baseboard Type 4/6 each



AUDIO-FREQUENCY TRANSFORMERS.

5-1 Ratio £1/4/- each
3-1 Ratio £1/2/6 "

Order Through Your
Radio Dealer

Sole Agents—

NOYES BROS.

(Sydney) Ltd. (Melbourne) Pty. Ltd.

Brisbane: Perry House, Elizabeth Street.

Melbourne: 495 Bourke Street.

Sydney: 115 Clarence Street.

Adelaide: Darling Building, Franklin Street.

Hobart: 145 Macquarie Street.

Launceston: 123a Charles Street.

Newcastle: 11 Watt Street.

Agent for W.A.: J. R. W. Gardam & Co.
138 Murray St., Perth.

Personalities



Mr. E. Grace, of United Distributors, Ltd., radio counter, has just returned from a wonderful fortnight's trip down the Bay. He now regales everybody with the most amazing "fish tales" you've ever heard.

"Morry" Fogarty and Stan Beard, of Wireless Centre, are now cruising around Western Queensland in an ancient "Lizzie" on the off-chance of selling a set or two.

Mr. Chas. Runge has left "You Can't Beat Finneys" Radio Department to take up duties as city representative for Messrs Lawrence and Hansen Ltd., Edward Street. Good luck, O.M.

Mr. Keith Richardson has returned to the country with his pockets and head crammed with new gadgets and ideas. Keith says if you chaps can't hear him when he gets going—well, you'd better see an ear specialist.

Harold Bell, of Toowong, is now on the air on the popular wave-length, and wriggles a decent fist. Follow the good example of your neighbour, 4RB, Harold, and you'll never go wrong.

On 16th March the C.C.M. staff betook themselves to Redcliffe for their annual day out. It is said that Mr. Finney and Mayor Joss ran a dead heat for a pair of green trousers that had been donated by Con. Daley—all members of the C.C.M. Radio Department.

Mr. Joseph B. Leigh, who is in Brisbane on behalf of Latimers Wireless Supplies Ltd., of Sydney, recently paid us a call. He is opening up in O.K. building with some special broadcast receivers and a new line of chargeable dry batteries.

When the Wireless Commission sits in Brisbane the question may be raised: "Why do radio salesmen wear dustcoats?" Admittedly the garb gives an enter-scientist sort of air to the wearer, and a touch of the laboratory to the radio counter, but at what cost? We think that wireless salesmen would be infinitely cooler and look infinitely smarter in shirt sleeves. In Queensland at any rate dustcoats were never intended for wear indoors. Shirt and vest are about all most men care to carry about with them these scorching days.

There's a stir in the amateur camp. Things are moving and 'ere many moons have passed we shall see the evolution of a really worth-while scheme among the Queensland Xmitters. For the present—num's the word.

Mr. Maddocks, manager for the Edison Swan Electric Co., Ltd., Brisbane House, has just returned from a lengthy business visit to the South. Whilst down yon he visited the southern wireless exhibitions, which he stated were a great success.

Col. Grant (4JG) of "Prescorres" fame, is swotting again. He's about the most studious fellow we know. For the present his hobby is collecting letters to append to his august title. He sure has a good start with "B.A.," but there's nine or ten others hanging on to the end of forthcoming exams., so Col. is "all out" to land them. Once these are secured he may be content to settle down and collect QSL cards with the rest of 'em.

Mr. Stevens, of Harrington's Radio Department, recently spent an enjoyable time motoring to Sydney and back. He didn't tell us how many punctures he had or how many times he was bogged; like all good motorists, he refuses to let trifles worry him. Too bad you couldn't wait to welcome the Duke, "Stevo"; he must have missed you.

Look to Your Battery

if you would have perfect reception.

Scratching and sizzling noises which are so familiarly put down to "static," have been proved over and over again to be the result of faulty, inefficient battery power. Get the most out of your set—instal a C.A.V. Battery, and notice the difference.

C.A.V. Batteries are British—are specially made for radio work, can always be relied on to stand the test of hard service, and give no trouble during radio operation.

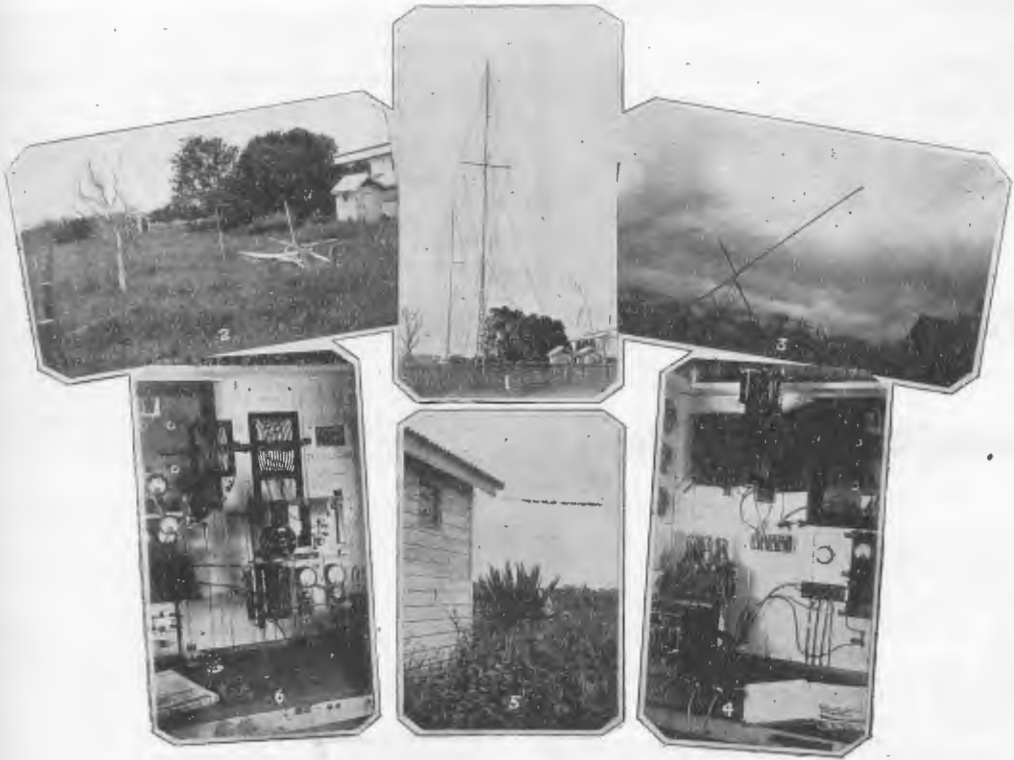


Radio
'A' & 'B'
Batteries

C.A.V. Battery Service Station

(Barnes Auto Co.)

Corner North Quay and Queen Street



Radio 4BW Mareeba

Description and photographs of the Northern Station which carried out such splendid work during the recent Cyclonic Disturbance

Your Editor had the pleasure of meeting Mr. Andrew Couper (4BW) last July, when he was down in Brisbane for a short visit. During the course of conversation a promise was extracted from 4BW to send down some photographs and a description of his station upon his return. Although a little overdue, we were more than pleased to receive a bulky envelope from 4BW the other day, and we now have much pleasure in publishing the following description of his station. In the light of his recent meritorious work with 4AN, this article should hold special interest to our readers.

Station 4BW is owned and operated by Mr. Andrew Couper, of Mareeba, near Cairns, and is the only amateur station operating in Northern Queensland.

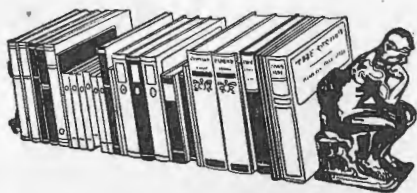
Photograph No. 1 is an old "snap" of the two masts built in three 30ft. sections on the ground and lifted in one piece. A 2ft. 6in. loss in each joint makes the height 85ft. The bottom section is two 4 x 2's braced 2ft. apart at the base. The centre section is of 4 x 3, and the top 3 x 3 timber. The cross arms are 13ft. 6in. long and the braces 4 x 1 and 2 x 1.

In common with many other things up Cairns way, these masts were levelled to the ground. The weakness lay in the stays, which were of only clothes line gauge and which, of course, would not withstand the force of the cyclone. The nearest building to the masts is

the Radio Shack, and the next one houses 250 wet Leclanche cells for H.T. supply. Aerial and counterpoise spreaders are easily seen.

Photo No. 2.—After the cyclone. 30ft. of the rear pole is still standing, while the near pole was flattened. A short wire will be seen stretched from the shack to the little dead tree with a bunch of insulators in the middle, and a prop (8ft. aerial spreader) at the back of the insulators. This wire, which is only 28ft. long, was hurriedly put up on the Friday evening, and without any counterpoise. Japan 1SK reported 4BW strength R6 using 18 watts on a UX.210 tube. It was on this aerial that communication with 4AN was established.

Photo No. 3.—The top section and about three parts of the middle section were still intact, and on the



Bound Volumes

of the

Queensland Radio News

Vol. II.

This issue is Number 3 of the third volume of this journal. The January issue marked the completion of a splendid volume—filled with valuable information that radio amateurs and listeners will find helpful and interesting reference.

We have a limited supply of Volume II., beautifully bound in full-cloth stiff covers and gold-lettered on the back. These we are offering to our readers at the low price of 9s. 6d. post free—or just 3s. above the cost of the papers. If you have the twelve last issues complete you may have them bound up in the same manner for 6s. 6d. post free if you forward the issues on to us.

Secure your volume or have your own copies bound up right away. It is the only way to preserve and keep your copies intact.

Complete Bound Volumes

Comprises 12 issues of "Queensland Radio News," from February, 1926, to January, 1927, attractively bound in full-cloth stiff covers with gold titling.

Post **9/6** Free

Binding Own Volumes

Post us your issues of Vol. I. or II. and we will bind them in the same style as detailed above, for

Post **6/6** Free

Queensland Radio News

Box 1095N

G.P.O., BRISBANE

following afternoon in heavy rain it was prepared for re-erection. This photo shows how it stood at dusk with the same 28ft. wire attached to its end.

Photo No. 4 shows the receiving outfit. The jigger on the wall is an old-timer belonging to pre-war days. The receiver is the usual low-loss throttling condenser control with interchangeable coils. The cigar box houses a 3-step choke amplifier. All power supply, A and B batteries comes to the terminal board under the clock, where it can be easily tapped off for experimental work. The aerial and counterpoise terminals in the window are the plug and socket type—home-made. The row of terminals under the bench are for adding phones to the circuit.

Photo No. 5 shows the lead-in window, made of 1/4 in. plate glass with six holes for different aerials and counterpoises. The earth cable is seen lower down. This is a 9/16 cable fanned out and soldered to a 7 x 3 zinc sheet, buried six feet deep.

Photo No. 6 shows the transmitting panel mounted on gauge glasses 12in. from the wall. Coupler Hartley inductances 7in. diameter 3/16th wire. Meter range from 25-225 metres. At present the station is working on 36 metres.

Mr. Andrew Couper stated that it was most difficult to get the interior views of his shack, which is only 6ft. square. Finally a 12in. hole had to cut in the wall, and the camera taken outside and the lens inserted through the aperture. Lighting was then a big difficulty, and the finished pictures were taken by flashlight, two flashes being fired simultaneously—one at the door and the other at the window.



LAURI—The Entertainer

Who, together with the remaining company of excellent artists that comprise McLeod's Bookstore Concert Party, are to give another of their popular entertainments from 4QG on the 3rd May next.

This concert will be under the direction of Mr. W. A. Braiden and Miss Nell Douglas Graham.

Broadcasting Notes

From Sydney Town

RADIO FOR PRISONERS.

Proposed by Magistrate.

The value of radio as a means of uplifting the moral outlook of prisoners has engaged the attention of Mr. Peisley, lately a stipendiary magistrate in Sydney. Mr. Peisley has written a letter to the Sydney "Guardian" in which he says:—

Having recently had an opportunity and the pleasure of seeing in Bathurst Gaol the beneficial effect of humane and kind treatment upon men whose hearts are filled with despair, I take the liberty of asking for your assistance in further lightening the dark lives of those poor prisoners.

"It being taken for granted (although I by no means concede it) that the sub-normal must be incarcerated and forced to live almost hopeless lives in anguish, it seemed to me that the best way of bringing them into touch with the world, the world into which they were born and in which they have a right to live is by wireless.

Hoping that you will appeal to the known generosity of your readers, I suggest the obtaining and presenting to Bathurst Gaol of a wireless set, and forwarding herewith my contribution."

A cheque for one guinea was sent by Mr. Peisley.

It is understood, however, that the Comptroller-General of Prisons cannot see his way to agree to an installation of radio in the prison owing to the early hours kept by the prisoners, and the fact that it is considered undesirable to allow them special privileges during the day time. In America, of course, things are different. Every prisoner, at least the well-to-do ones, has his own radio set, and the social standing of the inmates is judged largely by the number of valves in his set.

"THE MIKADO" BY RADIO.

Opera Broadcast.

The broadcasting of "The Mikado" from Her Majesty's Theatre, Sydney, by Station 2FC on Wednesday, March 9th, must have been greatly appreciated by listeners.

It is not generally known that all the operas of Gilbert and Sullivan are the subject of stringent copyright laws, preventing their being broadcast without special permission. This even applies to songs such as "Take a Pair of Sparkling Eyes" and "A Wandering Minstrel," sung at an outside concert, when the concert is being broadcast for listeners generally to hear. At such times the operator in charge of the broadcasting has to cut off the radio while the copyrighted music is being rendered.

Ever since it was known that the Gilbert and Sullivan operas were to be performed from Her Majesty's Theatre, requests have been received by the broadcasting stations for the operas to be placed "on the air." It was explained that this could not be done immediately, but for several weeks negotiations with the owners of the copyright were in progress, and finally permission was given for the first act of "The Mikado" to be broadcast.

Care was taken by the broadcasting station to see that the transmission was carried out in the best style, and it is to be expected that listeners generally thoroughly relished the delightful music of "The Mikado."

It is understood that there will be no further broadcast of Gilbert and Sullivan operas during the present season.

CRYSTAL RADIO SET.

Listening-in for 600 Miles.

Crystal radio sets are usually reliable for distances of under 50 miles, but occasionally much further distances are covered. Broadcasting Station 2FC, Sydney received a letter a few days ago from Alan W. King, of Bathurst, Victoria, stating:—

"I picked up your station with such clearness on Tuesday evening last that I and others heard every word of the announcer, and the items from the Darlington Town Hall by the Metropolitan Band. You can guess we nearly hit the roof with joy, when, with just a little crystal set we were hearing your station over a distance of over 600 miles."

ROYALTY AND RADIO.

Stimulus to Broadcasting.

The visit of the Duke and Duchess of York to Australia is already having an influence on the radio industry, and on broadcasting generally. Many persons who have not made a practice of listening-in are securing radio sets for the purpose of hearing the official ceremonies at the opening of the Federal Parliament at Canberra.

This point was touched upon by the Chairman of the Radio and Electrical Exhibition which has just concluded at the Sydney Town Hall. The Chairman remarked that the historic nature of the Prince's visit was responsible for a marked increase in the sale of radio appliances.

The broadcasting stations are making elaborate preparations to do justice to the official ceremony at the landing place of the Duke on the shores of Farm Cove. A special platform is being prepared from which descriptions of the scene will be broadcast throughout the length and breadth of Australia. These will doubtless be of interest to persons living at a distance from the historic festivities who will be able to hear an exact account of everything as it occurs. When the American Fleet arrived in Sydney 18 months ago radio listeners heard the whole thing described. One of the best accounts published was that of the Coonabarabran Clarion, the editor of which paper picked up the official description by radio and wrote it down in shorthand.

SPORTSMAN'S RADIO.

How He Heard the News.

An interesting story comes from Melbourne, showing the ramifications of broadcasting applied to sport. Harry McCalman, trainer of the V.R.C. Leger winner, Epilogue, was in hospital ill when the race was run. He had his radio set in action, however, at his bedside, and as the horse flashed past the winning post the glad news of victory reached the trainer's ears.

Mr. McCalman had precisely the opposite experience in regard to the St. George Stakes at Caulfield. Manfred, trained by Mr. McCalman, refused to move from the barrier, and turf expert who was broadcasting a description of the race informed radio listeners of the fact. With a sweep of his hand, McCalman, in disgust, knocked the portable set off the bed. There it lay on the floor calmly announcing how Heroic won the race, while the trainer of Manfred lay in bed gnashing his teeth in anger.

POPULAR BROADCASTS.

Departing Artists.

More artists of Broadcasting Station 2FC are journeying to London. Mdle. Marie Segur, the well-known French soprano, left a week ago. "Imito" (Corporal Phillips) the remarkable bird and animal imitator, will leave shortly to try his luck in London. He plans to take some kookaburras with him, so that he can work a novel act throughout England with

the birds. Corporal Phillips is a wonderful imitator of birds. Recently he had a jackie and a parrot at the studio, and his imitations were so much like the real thing that the kookaburra had to be taken away from the studio so that "Imito" could be heard by the listeners. His items on the musical saw are remarkably good from a transmission point of view. By bending an ordinary saw and drawing a resined bow across the edge he produces music of the quality of the human voice.

A FAMOUS CLOCK.

Interesting Broadcast.

There is on view in the Sydney Technological Museum a famous model of the Strasburg clock. For many years it was on view in a shop in Oxford Street and was one of the sights of Sydney. Ultimately the Museum authorities bought it. It was made by Mr. R. B. Smith, who completed his task 40 years ago. Since its transfer to the Museum he has been in constant attendance upon it, keeping it wound and regulated and giving public demonstrations on Sunday afternoons. It is a remarkable piece of mechanism and is spoken of throughout the State. The original Strasburg clock was erected in 1432. Not only has Mr. Smith faithfully copied it, but he has added many features. He has faithfully followed the old model with the procession of the Apostles, the denial of the Saviour by Peter, and the crowing of the cock. As each hour is struck the procession passes. Every hour for many generations this reminder of the great Christian epic has gone on. An interesting description of this clock was recently broadcast by 2FC.



The "BLUE SPOT"

Aristocrat of Headphones
(4000 ohms.)

Very sensitive, weight only 4oz., will not twist or tangle on the head, exceedingly comfortable to use. In Black, Green or Mahogany.

Pric 27/6

The "GREEN CROSS" 4000 ohms—equal to any Phone costing double the money.

Pric 21/6



The "Blue Spot" MULTIDYNE-COIL

Indispensable for every Radio Amateur Price 18/- Postage 6d

THE UNIVERSAL ALL-WAVE RECEIVING COIL—covering all wave-lengths from 160 to 4300 metres. One single Multidyne All-wave Coil replaces any type of the conventional plug-in coil.

THE MULTIDYNE ALL-WAVE COIL is equally suitable for use on either a crystal or valve set, and as a primary, secondary or reaction coil.

Sole Australian Agents and Distributors: **ALEC. McCULLOCH & CO.** KING HOUSE, QUEEN STREET, BRISBANE.

Phone C1718 Telegrams and Cablegrams: "AlecMac," Brisbane.

J.O.L.

The A.B.C. of Wireless

A Simplified Description of Wireless for Beginners

BATTERIES

To operate radio sets two, and sometimes three, kinds of batteries are employed, namely, the "A," "B," and "C" batteries. The duty of the "A" and "B" batteries is to supply electrical energy to the valves, the "A" battery lighting the valve filament, while from the "B" battery we obtain the voltage which is connected to the plate of the valve. The effects produced by these batteries were described in a former article on valves.

The "C" battery is only used in cases where it is necessary to use a negative bias on the valve.

Both "A" and "B" batteries may be either the "wet" or "dry" variety, each possessing certain advantages and disadvantages.

DRY BATTERIES.

The dry battery, while certainly being much cleaner and easier to handle, possesses the great disadvantage that it cannot be recharged, and although cheaper in first cost, is not so economical in the long run.

Dry batteries consist of one or more cells of 1.5 volts each, joined together in series, the number used depending on the voltage required. By joining in series we mean connecting the positive terminal of one cell to the negative terminal of the next, and so on, so that if 50 cells are thus joined, the voltage obtained would be 50 times 1.5, or 75 volts.

If one of the usual 45-volt dry "B" batteries is broken open it will be found to contain 30 cells. These are similar to the small unit cells used in an ordinary flashlight torch. As a "B" battery does not use any amperage, it is not necessary for these cells to have high amperage reading, but if we require dry cells to use as an "A" battery (to light the filaments) then we have to use a larger-sized cell, the same as is on an ordinary house bell, as these possess the necessary amperage for longer service.

It is, however, not recommended that dry cells be used as an "A" battery, except where the valves have a very low amperage consumption.

Every dry cell contains two elements—zinc and carbon—and the usual method of construction is as follows:—A carbon rod is surrounded with a mixture of usually crushed manganese dioxide and crushed carbon, the whole being contained in a "sack" made of coarse linen or other absorbent material, which is well soaked with a mixture containing sal ammoniac. This "sack" is placed in a zinc container, which is ex-

ternally covered with stout paper or cardboard. The terminal connected with the carbon rod is the positive, and the terminal on the outside zinc casing is the negative.

WET BATTERIES.

Wet batteries, or accumulators, are becoming more popular, not only because they can be recharged, but also as it is generally recognised that better results are obtainable from them.

The wet battery supplying current to the valve filament is called the "A" accumulator, and consists of several negative and positive plates, manufactured from prepared metal, which are placed alternately and separated from each other by glass, wood or other suitable material. The negative plates are joined together by a strip of lead, while the positives are also likewise connected. To each of these strips are attached the negative and positive terminals. The plates are placed in a container made of celluloid, hard rubber, glass or other suitable material, which is filled with sulphuric acid diluted with distilled water.

The plates used in the "A" accumulator are very large, so as to obtain great capacity. To explain this, let us take for example an accumulator with a capacity of 40 ampere hours. This means that a current of one ampere may be taken from it for 40 hours. If we therefore are using 5 valves, each consuming .25 of an amp., our accumulator will need recharging after 32 hours' use.

"A" accumulator cells are made to register 2 volts each, so that an ordinary 6-volt accumulator consists of 3 2-volt cells joined in series.

The "wet" battery used to supply the plate voltage is called a "B" accumulator, and is made somewhat similar to the "A" type, but on a smaller scale, owing (as we explained before) to there being no necessity for a high amperage capacity. They are usually manufactured in batteries of 60 cells, which, at 1.5 volts each, yield 90 volts.

CHARGING.

Before an accumulator can be used, a charge of electricity has to be passed through it to create chemical action. When fully charged and connected to a set, a current will flow from it through the set. This is caused by the plates of the accumulator endeavouring to return to their original condition. When this eventually happens the flow of electricity will cease, and the accumulator is said to be discharged. It is

never wise to allow an accumulator to run right down before recharging. Any good hydrometer will show the condition of the accumulator. As many people are now charging their accumulators by the aid of home chargers connected to the house electric supply, let us add a word of warning—do not charge at too high a rate, especially the "B" accumulator, if you wish them to have a long life. Also, see that all terminals are clean, and keep them covered with a thin layer of vaseline, and that the plates are just covered with the solution by the addition of pure distilled water, which may be secured at small cost from any chemist.

It is a wise plan to occasionally bring your battery to a reputable firm to have the acid density of the solution tested.

More Praise for 4QG KATOOMBA SPEAKS.

Writing on the 18th March to the Katoomba "Echo" a "Listener-in" says:—

"Easily the best entertainment on the Mountains last night, to honour the Saint of Erin's Isle, came by wireless from Brisbane. It was a glorious night—a trifle warm, but every syllable of Brisbane's special effort came through as clearly as if the concert was being staged in the room. One by one came those Irish melodies of old, from the throats of cultured singers, or choirs rich in tone and true in interpretation."

Radio & N.S.W. Government

State Ministers' Hope.

The New South Wales State Government shows signs of an increasing interest in radio. Mr. George Cann, Minister for Health, speaking at the Radio and Electrical Exhibition recently, remarked that he as a representative of the Government, charged with the responsibility for the care of the sick, looked forward to the time when every hospital would be provided with a radio set. "Radio," said Mr. Cann "can facilitate the spread of ideas and a common understanding, which is the basis of industrial peace and social well-being among all the nations of the earth. In no department of public welfare is radio so essential as in the Health Department, for it infuses new life into the sick, the injured, and the dying in our great institutions."

Mr. Cann is a real radio enthusiast. He listens in at his own home every evening when not engaged in public duties. At Cabinet meetings Mr. Cann often surprises his colleagues by telling them of the things he has heard on the previous evening over the air. Mr. Albert Willis, vice-president of the Executive Council, and Mr. T. Mutch, Minister for Education, are also very fond of radio, and lately the Premier has found time to have a radio set installed in his home.



DIAMOND DRY CELLS



"Diamond Batteries Make Good Sets Better"

Diamond Radio Batteries are powerful, silent, and outlast any other make of Dry Cell. More than a million are manufactured in Australia annually. Every cell is guaranteed, and should a fault be found in any Diamond Dry Cell it will immediately be replaced. Remember a Radio Set is no better than its battery, therefore it is most essential to choose a battery that will give long and honest service. Such are Diamond Dry Cells.

RETAIL PRICE LIST

- A— 1.5-volt Buzzer, for dull emitter valves, 2/9.
- B— 60-volt Super Capacity 27/6, 9 $\frac{1}{2}$ in. x 8 $\frac{1}{2}$ in. x 3 $\frac{1}{2}$ in.
45-volt Super Capacity 22/6, 8in. x 6 $\frac{1}{2}$ in. x 3in.
60-volt Standard Capacity 18/, 6in. x 5 $\frac{1}{2}$ in. x 2 $\frac{1}{2}$ in.
- C— 4.5-volt "Biaxon" 3/3 each.

ASK YOUR DEALER FOR DIAMOND

SUPPLIED TO

P.M.G. Dept., Water Board.
Q'ld Railways. Ordnance
Public Works. Department. Stores. etc.



Wholesale only from:—
JOHN REID & NEPHEWS,
CHARLOTTE STREET,
BRISBANE.

Manufactured by WIDDIS DIAMOND DRY CELL COY. LTD. W. Melb., Vic.

Better "B" Batteries for Your Wireless



Vacuum tube detector and amplifier operation require "B" Batteries which render noiseless operation, give unstinted service, maintain steady voltage, do not "short," and have a low rate of depreciation.

Besides accomplishing these requirements YALE "B" Batteries are outstanding for their quality. From the small-size Battery to the larger double duty Batteries, Yale have an inbuilt quality that makes itself instantly evident when attached to a radio set. Try one on your set to-day and note the difference.

If your local dealer cannot supply you, write direct to the sole Queensland distributors.

Price

45v  **26/-**

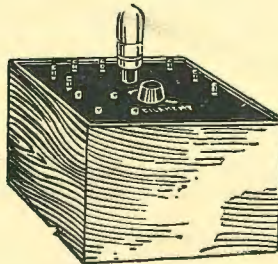
"B" Batteries

"GLORIOLA" Crystal Sets

Increase the volume and range of your Crystal Set by adding a "Gloriola 1 or 2 Valve Amplifier."

Ease of control, simplicity in construction, economy of operation.

Finished in Maple Cabinet.



"Gloriola" 1-Valve Amplifier, complete with Batteries and Valve.

£4-10-0

"Gloriola" 2-Valve Amplifier, complete with Batteries and Valves.

£7-0-0

J. B. CHANDLER & CO.

"For Radio Service"

45 ADELAIDE STREET, BRISBANE

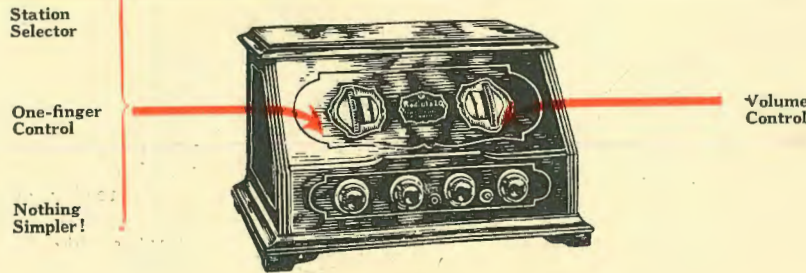
(Next to Allan & Stark's)

S.A.S.

QUEENSLAND'S PIONEER RADIO SUPPLY HOUSE

R.C.A.

MODEL 20



THIS model is the most up-to-date 1927 5-Valve Receiver on the market to-day. It includes Single Finger Control, Mechanical Precision Components, whilst Selectivity and excellent Reproduction are guaranteed.

Price, complete with all accessories £55

A Comprehensive Book of Instructions

Is supplied with Model 20 and Model 25 "A." This Book includes:—

- (a) Pictorial diagrams of set and battery connections.
- (b) Instructions as to insertion of valves, installation, operation and maintenance.

In fact it contains every essential feature necessary for satisfactory result—without instruction by an expert.

Miscellaneous Lines

Philips B 80-v. Accumulator £8 15 0	Ever-Ready 42v. B Battery 0 12 6
Exide B 20-v. Accumulator 1 10 0	Every-Ready 60v. B Battery 0 18 9
Columbia 22½-v. B Battery 0 13 0	Hellesen 1.5-v. Dry Cell ... 0 3 0
Columbia 45-v. B Battery 1 6 0	Hellesen 1.5-v. "Storm," 300 amp. hrs. 0 18 6
Winchester 22½v. B Battery 0 13 0	Columbia 1.5-v. Dry Cell .. 0 2 9
Hellesen 45-v. B Battery .. 0 14 0	UX and UX 199 Valves .. 0 13 0
Hellesen 60-v. B Battery .. 0 18 6	
UX201A Valves, now 0 11 0	

Brand Phones REDUCED

Were 30/- On Price 22/6

Secure a pair at this Special Price

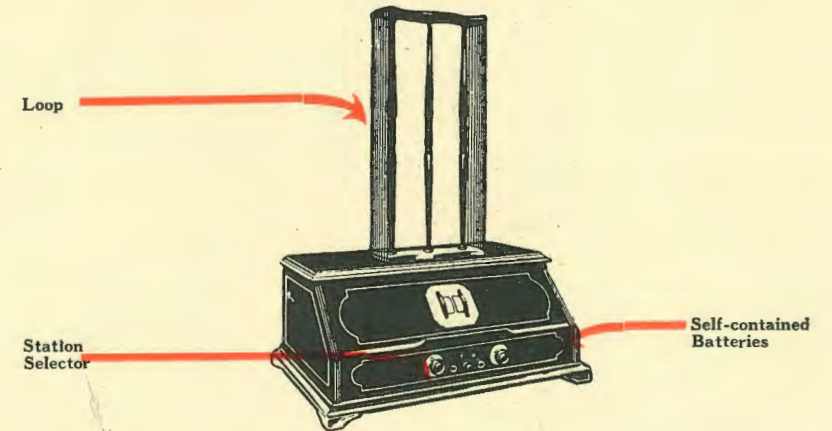
Wireless House

Queensland's Radio House
City Building, Howard Street
BRISBANE

QUEENSLAND'S PIONEER RADIO SUPPLY HOUSE

R.C.A.

MODEL 25



This model is a Six-valve Super-Heterodyne, and represents the last word for a 1927 Broadcast Receiver. The special features of this receiver are:—Simplicity of Control, High-grade Mechanical Workmanship, Faithful Reproduction, and Extreme Selectivity.

Price, complete with all accessories £80

List of Parts for Balanced Crystal One Valve Receiver

Described in this issue of "The Queensland Radio News"

1 Bakelite Panel 7½ x 8 x ½in. 5/-	1 H. & H. Standard Socket, porcelain 3/6
1 Baseboard, 7 x 7½ x ½in. ... 1/6	1 Signal 5-1 ratio Transformer £1/1/
1 H. & H. .0005 Variable Condenser, plain 17/6	1 3in. Cardboard Former /6
1 3in. Dial 2/6	1 Card Engraved Terminals .. 2/9
1 H. & H. 30 ohm Rheostat .. 5/3	1 Bakelite Strip 3½ x ½ x ½in. /6
1 Ebro Vernier Crystal Detector 4/6	1 Bakelite Strip, 2½ x ¼ x ½in. /3
1 Switch Arm 1/6	4 Terminal Strip Supports 1/
6 Contact Studs /3	1 .0001 Sangamo Fixed Condenser 2/3
2 Stops /2	¼ lb. 20-gauge D.C.C. Wire .. 1/5
1 B.M.S. S.C. Jack 2/9	1 Box Assorted Screws 3/6
	6-Lengths Bus-Bar Wire ... 1/-

PROVEN RELIABLE IN THE HANDS
OF THOUSANDS OF SATISFIED USERS

PHILIPS



New *Natural-tone* LOUDSPEAKER

With Patented Balanced Magnet System and floating cone, giving fidelity in reproduction beyond compare.

Popular H.T. SUPPLY UNIT

Which eliminates "B" Batteries for all time. Providing power for your Radio from the Light Supply, costing but a few pence per week.

RADIO BATTERY CHARGER

Giving full-wave rectification not possible in ordinary Chargers and is fool-proof, silent, and simple to connect. Charges 2, 4, or 6-volt batteries at 1.3 amps. without attention.

A 409 MINIWATT

Companion to the Famous B406

A magnificent Detector R.F. and 1st Audio 4 volt Valve—yet requiring a filament current of only .06 of an ampere!

YOUR BATTERIES LAST NEARLY TWICE AS LONG!

The A409 (companion to the B406) constitutes still another triumph for Philips Laboratories. There is no other Valve taking such minute current that gives the same undistorted output.

USE IT IN ANY POSITION.

But we commend the B406 for last Stage Audio.

For even greater volume and full round tone use the—

B403—4V. POWER VALVE

This requires but .15 amps. on the filament and is able to handle without distortion sufficient energy to operate any speaker at full volume.

INSIST ON PHILIPS THEN CHOOSE THE VALVE FOR THE JOB.

AT ALL DEALERS



Club Activities



RADIO CLUBS OF QUEENSLAND.

- ACHENFLOWER AND DISTRICT**—Secretary, L. Cribb, "Frampton," Ridley Street, Auchenflower.
- IRNS AND DISTRICT**—Secretary, Mr. Tarbit, c/o Mr. Les. Fitzsimmons, Cairns.
- ASTERN SUBURBS**—Secretary, A. E. Newnham, Logan Road, Fiveways, Woolloongabba, Brisbane.
- CEVILLE**—Secretary, S. W. Keepink, Ettie Street, Sherwood.
- SWICH**—Secretary, S. J. Aspinall, Brisbane Street, Ipswich.
- SOUTH BRISBANE**—Secretary, W. R. Gilbert, Gordon Street, Coorparoo.
- TOOMBUL**—Secretary, T. Starkie, Sandgate Road, Nundah.
- TOWNSVILLE**—Secretary, E. J. Jefferies, Fletcher Street, West End, Townsville.
- TRUSSARDI INSTITUTE (Queensland Division)**—Secretary, A. JACKSON, A.M.I.E. (Aust.), "Clock House," Elizabeth St. Brisbane.
- WOOLWIN**—Secretary, H. A. Jiear, Lisson Grove, Woolloowin.
- WYNNUM AND MANLY**—Secretary, P. J. Golden, c/o Trackson Bros., Ltd., Elizabeth Street, Brisbane.

Woolloowin Radio Club

The club has passed through quite an eventful month, the most striking feature being a junk sale conducted at a recent meeting. As said in these columns before, at a junk sale, usually everyone wants to sell and no one to buy. But not so this time. Mr. Love arrived at the meeting with a mysterious looking canvas bag which contained coils, condensers, wire and last but not least a healthy sledge. The "pre-amble" of the meeting went through in great style, except for interruptions from members explaining the strong points of their gear, and hushed whispers such as "what do you think this is worth Bill?" "Give you two terminals and an empty valve box for those receivers." "Reserve on this is 25/-," etc., etc.

At last everyone began to make preparations for the sale in real earnest. Mr. Love collected all the gear on the table, Mr. Stephenson acting as tally-clerk. The gear ranged from transmitting valves to whiskers; accumulators rubbed handles with high voltage mercury condensers, while a fine Morse key lay half-covered by half a dozen long wave coils. Nim counted the table, and bidding began. When bidding became slack he opened it himself until he discovered he had sold himself a gridleak for 7/6 (he already had a-dozen at home). However, the sale was a great success. Many brought things they would never want. A dozen brand new rheos. went for 1s. 6d. (one could buy them new at 1/3 at any dealers). But everyone was satisfied, and members who came with the intention of buying nothing went home with pockets bulging.

The club-room looks quite presentable now, with a new bench, and the wall around the transmitter refinished. The high-voltage gear is now all enclosed and is quite safe. This was done to prevent our

friend and mascot, Dawg, from drinking the electrolyte from the rectifier. These changes were wrought by chaos, and Hal. Stephenson, assisted by a goodly gang of offsidiers.

By the way, does anyone remember the three cockroaches which Mr. Robinson used in that interesting experiment the other night? Well, it just struck me as strange that one should be called Charlie. Our Charlie Stephenson, you know, works at 4QG.

Col. Grant recently spent a week-end up at Ipswich with Mr. Syd. Aspinall, of the Ipswich Radio Club. He says he had the time of his life; in fact, he almost missed the last train home on Sunday evening, which means a good deal. Whilst he was up there he renewed a number of old acquaintances. He visited Mr. Handsell, who used to have an 8ft. speaker. When Mr. Handsell built this speaker he found to his dismay he could not get it in through the door of his shack. He then tried the window, but could only get the small end in. So there it stayed for many a long day. When it spoke you simply had to listen. Its range was enormous. War veterans went around with their mouths open, as they did amidst heavy shell-fire at the front; small boys yelled accompaniment. Now, however, all is silent—the returned digger walks with closed mouth, and the small boys yell no more. Peace reigns, for this king of speakers speaketh now in Caboolture—poor Caboolture. I remember another Ipswichite who had the largest panel of all in our ken. His ambition was to wire it up with hollow wire with an earthed lead down the centre for stabilising purposes. Methinks this trip will linger long in the memory of Prescorres.

Toombul Radio Club

At the suggestion of the local Boy Scouts Committee 4TC gave a demonstration at the official opening of the new Scout "den" in Boyd Park. Reception of 4AW was carried out with a three valve regenerative receiver contained in a suitcase.

On the following Saturday, March 12th, several amateurs in New South Wales, Queensland, South Australia, and Tasmania, endeavoured to ascertain whether five-metre signals were audible at long distances. Nothing really wonderful has been accomplished as yet, but the five-metre cranks are still undaunted. Readers will remember that 4AW, who participated in these tests, is a club ham and an enthusiastic five-metre worker.

The three club hams, 4AW, 4NW and 4WE have lately been operating on the 200 metre band, and can generally be heard between 5 p.m. and 7 p.m. on Sunday evenings. Reports of reception would be appreciated.

Rectification is at present being studied by more than one member of the club. One ham has a thermionic tube which appears to be "the berries," while another chap is wondering if he would be justified in depleting his bank credit in order to purchase "S tubes."

The Woolloowin Radio Club (of 4WN fame) has challenged 4TC to a debate, the date of which has not been decided upon at the time of writing.

USE YOUR HEAD

Cut Prices, Slander, Hearsay, Habit,
may cause you to buy other Valves
BUT—

for the sake of your sanity and best results

Buy **DE FOREST** Valves

and have no regrets

FOR SALE EVERYWHERE

De Forest Valves

TYPE D.V.5.—Takes 5 volts
at $\frac{1}{2}$ amp. on filament.

11/-

Plate voltages, detector 18-22 $\frac{1}{2}$
volts.

Plate voltages, amplifier, 60-
150 volts.



D.V.5.
Filament 5 volts
.25 amp



D.V.3.
Filament 3 volts
.06 volts.

De Forest Valves

Type D.V.3.—Takes 3 volts at
.06 of an amp. on filament.

13/-

Plate voltage, 16-22 $\frac{1}{2}$ volts,
detector.

Plate voltage, 60-120 volts,
used as an amplifier.

Both Types Fit Standard American Socket.

Factory Representatives:

INTERNATIONAL RADIO CO. LTD.

200 CASTLEREAGH STREET, SYDNEY.

Queensland Distributors:

HOME RADIO SERVICE LTD. "COURIER" BUILDINGS, BRISBANE.

The club badges have now been completed, and can be well described as "a decent job."

Once again let it be stated that meetings of 4TC are held every Wednesday evening at the residence of 4AW, Eton Street and Sandgate Road, Nundah, and that visitors are always welcome. Enquiries cost nothing, but by joining a radio club enthusiasts are certain to gain a greater insight into their hobby, and there is no doubt that the more one knows about radio the more interesting the hobby becomes.

Eastern Suburbs Radio Club

For the past few weeks the club has been busy on the construction of a low loss receiver, which should be complete very shortly.

The great interest is shown in the Morse class, some of the members being so keen that four spend an extra night at the home of the assistant secretary for practice.

"The Painter" wears a puzzled look these days. He has a 45 volt accumulator "B" Battery and wants to reconvert it to A.C. step it up to 90 volts and rectify it. I think he will decide on getting another 45 volt battery.

Some of the members are of an inventive turn of mind, and many are the gadgets that are produced. The latest "invention" is a patent Oojah-hapivi for winding low loss coils, the work of Brother Daw, who has had a headache since he made it.

Talking of coil winders, the club first started to wind the coil for the low losses on an empty lager bottle, but some of the member objected, so a full bottle was used. After serving its purpose as a coil winder there was absolutely no loss as far as the bottle was concerned.

The recent motor boat trip were a great success socially, but financially—well, ask the treasurer. Motor at picnics are taboo with him.

The club has appointed a new secretary, and all communications should be addressed to him at the following address: H. Pryer, Roberts St., Kangaroo Point.

Graceville Radio Club

The Graceville District Radio Club met at the club room on Friday the 4th instant, after a recess during the summer months.

Judging by the roll-up and enthusiasm the club is in for a very busy time.

The evening was mainly given over to a discussion on the future activities of the club, and in future will meet at Mr. Carter's residence, Molonga Terrace, once a fortnight, commencing on Friday, April 1st. Mr. Williams commences a Morse class on that night, fol-

lowed by practical work on the club's low loss set. We hope to have with us on that occasion the genial Mr. Brayne, our talented expert from Wireless House. We are looking forward to his interesting talks on various wireless gadgets.

The inter-club lectures proved a great success, and the visit of Col. Grant, of 4WN, and his talk on "Battery Chargers," has borne fruit. All the younger fry are busily winding transformers.

It will no doubt be of interest to defaulting enthusiasts to hear that long speeches are now taboo, and they can with safety bring a coil or two and pliers and know that practical work is the order of the evening.

Mr. Harry Carter, our worthy secretary, has gone to a lot of trouble to make his workshop a fit meeting place. The whole place is wired up to take and test any class of set, and his batteries are fully charged. We extend a welcome to any enthusiast who cares to pay us a visit on the 1st April—it will be no fool's errand.

Our Taringa stalwarts still roll up in force, and invariably catch the last train home. There's a reason!

We hope to announce in our next notes the number who are sitting for tickets.

Roll up—there's lots to hear.

ARCADE Wireless Depot

BRISBANE ARCADE,
(Adelaide St. End.)

We stock the Famous Crossley Sets,
Fada Neutrodyne, Rico-Dyne,
Udisco Three and Five Valve Sets,
Radiola 4, latest.
Demonstrations daily.

1 Valve Amplifier

1-Valve Amplifier to attach to Xtal
Set, £ 3/5/—beautiful tone and guaranteed loud speaker results.

Let us quote you for Repairs,
Accessories, and Sets.

G. R. O'FLYNN

The Brandes Condenser

The Brandes Condenser comes into a crowded radio market but it has immediately swept its way into unprecedented acceptances as a *high quality* product. Why? Because the Brandes Condenser has brushed aside outworn traditions and ideas and given a design based on *sound engineering* principles. That is why the Brandes Condenser is the outstanding achievement on radio of 1927.

Important Features to Consider

50-1 VERNIER
SHAKE AND BACKLASH IMPOSSIBLE.
MAKE OF SOLID BRASS
SINGLE HOLE FITTING
BALL BEARING CONE THRUST
PROVIDES 2-1 TUNING STRAIGHT FRE-
QUENCY LINE TO STRAIGHT WAVE LINE.

INTERNATIONAL RADIO CO.

200 Castlereagh Street, Sydney

91-93 Courteney Place, Wellington, N.Z.

In Queensland—HOME RADIO SERVICE LTD
Queen Street, Brisbane

Notes from 4QG

CLASSICS OR JAZZ.

Wireless broadcasting might well be divided into three sections, viz.: information, education and entertainment. To render efficient service all three must be catered for, because all three are important. The arranging of radio programmes so that each item will have the approval of every listener-in is an utter impossibility. It is a true saying, "If you try and please everyone you will please no one." In drawing up radio programmes the director of a broadcasting station tries to visualise his listeners-in. The two main groups are city and rural. He knows that frequently news items broadcast will, in many cases, already have been read by city listeners, but those in remote parts will receive it by wireless long before they could possibly receive it by post, therefore the people in the outback appreciate the news services. Again, the farming community whose bread and butter is governed by the rise or fall of market values, is interested in market reports. Many listeners are interested in lectures, others in weather information, and so on. On the entertainment side there is a wide variety in taste. First of all age has to be considered—hence bedtime stories for the children. In the musical programmes for grown-ups different numbers appeal to different tastes. The old pioneers of British stock like old-time songs of the country from which they hail, then again there is the lover of jazz who would prefer the variegated noises of a jazz band to a song by Melba. The arrangement of suitable radio programmes bristles with difficulties, and the listener-in will understand that 4QG has to take a wider outlook than that which can be seen from the station roof.

TO THE RESCUE.

One Sunday night lately the police authorities informed 4QG that a patient was dangerously ill in the General Hospital, and requested the station to broadcast a message, hoping to locate the sick man's brother, who was living in the Oakey district. The message was announced by the engineer, and a few minutes later a call came from a garage in Oakey to say that the brother had received the message and was leaving for Brisbane.

RADIO DEBATE.

A debate arranged by the Queensland Union of Debating Societies was recently broadcast from 4QG. The subject was: "Does the future of broadcasting depend upon its development as an amusement or a utility?" The adjudicator, in making his summary, decided in favour of the development of broadcasting as a utility. In unforeseen circumstances, broadcasting sometimes develops into something more than a utility. Witness the recent devastations wrought by cyclone and flood in the far North of Queensland. When all telegraphic communication was cut off, and the northern towns were in darkness, wireless came to the rescue and instructions as to how to proceed in the face of the disaster were broadcast from the State Government to numbers of local shires, and also messages of sympathy and the hearty assurance that

everything possible would be done to alleviate distress were sent through the air to cheer the unfortunate victims of circumstance.

X-RAY LECTURES.

Seeing the unseen sounds very ecclesiastical, but the advance of science has enabled us to see by means of the X-Ray the bones of the body or a bullet in the flesh which ordinarily could not be seen.

The term "X-Ray" was given to the peculiar invisible rays discovered by Rontgen and Wurzburg in 1895, which to-day are used by surgeons throughout the world.

Commencing on April 6th, 4QG will broadcast a series of four lectures on "X-Ray for the Layman," which should prove very interesting.

"DAD" LISTENS-IN!

He was from the Western country and spending a few weeks with a married son at a seaside suburb of Brisbane. His sunkissed face and arms bore traces of long days spent beneath the burning rays of Queensland's summer sun. Along with his son and daughter-in-law, one Saturday night he visited a friend's place where a crystal set was installed. An injured leg demanded that he be propped up comfortably, and the hostess suggested that he listen-in whilst the others played cards in an adjoining room. In his heart he had no time for wireless, though he had never before listened-in. People are crazy with these new-fangled notions, he was heard to say, but for fear of offending he allowed himself to be placed in a comfortable position with his leg propped up on a cushioned chair. With much reluctance on his part he allowed the headphones to be adjusted, and at this time 4QG announced a change-over to the National Speedway. The other members of the party commenced card playing, expecting every moment to see the old pioneer enter the room with a plea to be excused for going home. After ten minutes had elapsed the son quietly entered the room and found his dad with set face listening tensely to a heat of the motor cycle races being broadcast and beating a tattoo with the injured foot on the floor. The attention of the other members of the party being attracted a loud peal of laughter brought a sh! sh! from dad, the competitors were entering in the final lap in a close contest. Dad kept the headphones on until 4QG announced closing down for the night.

Away in empty spaces man's greatest invention will bring the lonely bushman in touch with his fellow humans. The irritation of hearing only one's own voice or the voices of those who share in the loneliness is greatly minimised, and the lives of those in the peopleless interior are made infinitely more bearable. The dad referred to spent 40 years along the vast stock routes of Western Queensland. One can readily appreciate the advantages of a listening-in set to those sturdy men of the outback. "Music from Brisbane while the billy boils."

A WELL-DESIGNED STATION.

When Station 4QG was designed, sufficient foresight was exercised to result in the construction of a station and studios sufficiently large and commodious enough to meet requirements for many, many months to come. The wisdom of the careful layout has now been amply demonstrated. In spite of the facts that the broadcasting movement has gone ahead by leaps and bounds, and that Queensland now comes second in Australia in the number of licenses issued per head of the population, the station buildings and studios have proved themselves to be quite able to efficiently cope with the heavy demands made upon them by virtue of improved and increased services.

Station 4QG claims that its studios and station are the finest in the southern hemisphere. The whole service is under one roof, and administrative sections, reception halls, commodious studios, instrument rooms, laboratories, workshops, and fan and motor rooms are all grouped so as to be quite efficiently administered with one control.

The beauty of architecture at Station 4QG is unsurpassed in any station in Australia. The main reception hall itself, built in the form of a double cross and capped by a huge dome supported by eight fluted pillars of exquisite design, is the feature which catches the eye of many visitors to 4QG and draws forth from those who have seen other stations comparisons which are distinctly in favour of 4QG. It is pleasing to note that 4QG finds that its present accommodation was so carefully designed as to be quite adequate to serve present and future requirements.

Chamber Music**W.E.A. TUTORIAL CLASSES.****A NOVEL DEPARTURE.**

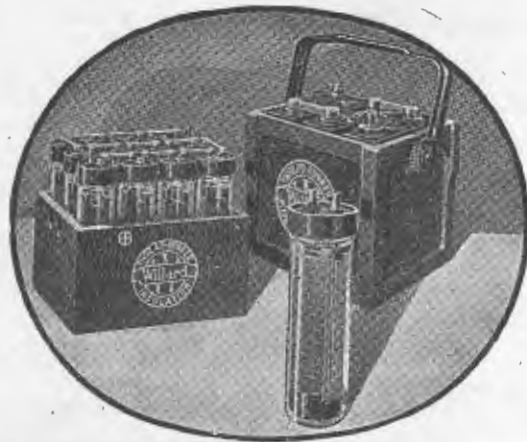
The Workers' Educational Association Tutorial Classes in music will be held this year in novel circumstances. They will be conducted by Mr. George Sampson, F.R.C.O., but instead of the classes meeting in the W.E.A. rooms, the students will gather in the reception hall at Station 4QG, where the evening's instruction will be given.

A microphone will, however, be installed in the hall, and the whole of the proceedings at the classes will be broadcast.

This arrangement will serve two purposes. Those students who desire to attend in the same way as in the past will be able to listen in and follow the lectures.

The classes will commence on Friday, April 1st, and except for one or two short breaks, will be held each Friday night. They will commence at a quarter to eight, and will last until about nine o'clock.

Lovers of good music will doubtless be glad to hear of these arrangements, and will also be glad to know that the various lectures given at the tutorial classes will be illustrated by chamber music played by trios and quartettes arranged and conducted by Mr. George Sampson and composed of Brisbane's leading instrumentalists.

FOR BETTER RECEPTION — *Instal***WILLARD
RADIO BATTERIES**

"A" and "B" types of Willard Batteries are made specially for radio work to suit all sets. Being rechargeable they are more economical than dry cells and they retain their power for a longer period.

MOTOR SUPPLIES LIMITED**PERRY STREET (off Boundry Street) BRISBANE**

The Transmitting License

(By Q.R.N.).

(All Rights Reserved.)

ARTICLE VII.

In the last article consideration was given to capacity—this will commence a study of induction and of inductance. While capacity is the attribute of condensers, coils are measured in terms of their inductance.

Explanations of the phenomena of induction are usually given in terms of lines of force and the number and disposition of such lines of force determine the inductance of the coil.

The ordinary bar magnet affords a good starting ground. When a magnet is brought into close proximity to a metallic object, say, of iron or steel, the metal tends to move towards the magnet. Obviously, there is no visible or physical connection between the magnet, and the iron, so recourse must be had to other modes of explanation.

Briefly, it is assumed that a bar magnet is surrounded by lines of force—so called because these imaginary lines indicate the direction in which each particle in the magnet is tending to strain in order to link itself with certain other particles within the magnet. Thus it is assumed that all the particles of the North Pole of a magnet are straining to reach the complementary particles at the South Pole, and it is imagined that the magnet is in the middle of an envelope of lines of force surrounding it on all sides and both ends.

If now a piece of iron be brought within the sphere of action or field of these lines of force, it is found that polarity is manifest in the iron. That is, the nearer end of the piece of iron will exhibit conditions which are similar to those exhibited by magnetic poles of opposite sign to the energising pole. If the energising pole be of North polarity, then the nearer end of the piece of iron will be a South and the further portion a North Pole.

A long cylindrical coil, when energised by an electric current, exhibits similar characteristics. That is, it becomes a magnet—or more correctly, an electro-magnet—and possesses a magnetic field. The polarity of such a solenoid may be determined by noting the direction of current flow when looking at one end of the coil. If the flow be round the coil in a clockwise manner, the end looked at will be the South and the counter-clockwise end the North Pole.

The magnetic strength, so to speak, of an energised solenoid may be greatly increased by filling the hollow space inside the coil with an iron core—and it is for this purpose chiefly that such cores are used, for example, in the electro-magnets of the common bell and telephone.

From this discussion it will be seen that as a current is applied to and removed from a coil, the lines of force round such coil will alternately build up and collapse. While the current applied is con-

stant, there will be no variation in the strength of the field covered by the lines of force. As a consequence it may be assumed that the lines of force are at rest.

Now, if a second coil in a closed circuit be brought within the field of the first coil, the effects of induction are noticed. As soon as the current is switched on to the first coil—the energising coil—it is noticed that a current is flowing in the second coil. The lines of force from the first coil, while spreading out to their ultimate position, have “cut” the turns of wire forming the second coil—and this cutting produces an electric current in the second coil. When the current, and consequently, the field of force around the first coil reaches its maximum, there is no movement in the lines of force, and therefore no current induced in the second coil.

From this it is understandable that the inductive effect is only noticeable in the second coil, when the current in the first coil is being switched on and off, or more commonly, as in the case of alternating current, when the current is constantly varying from positive to negative, and vice-versa.

The direction of the current in the second coil is given by a principle known as Lenz Law, which states basically that the direction of an induced current is opposed to that of the inducing current and, in the case of the two coils considered above, the coils will tend to repel each other.

A practical illustration of the phenomenon of induction is given in the action of an ordinary transformer. Usually the secondary coil has many more turns of wire upon it than the primary, so that lines of force radiating from the primary coil cut a large number of secondary turns, and thereby give an increased secondary voltage because, in theory, the E.M.F. induced in every turn of the primary coil, will be equalled by the E.M.F. in each turn of the secondary coil, and the ratio of “primary coil” voltage to “secondary coil” voltage will depend directly upon the ratio of turns in the coils.

The inductance of a coil is measured in units known as Henries, after Joseph Henry, a noted American physicist. One Henry is the inductance of a coil in which an E.M.F. of one volt is induced by a current in it changing at the rate of one ampere per second.

Inductance coils, more especially those with an iron core (choke coils) are often connected together in series or parallel, and for purposes of calculation they follow the same rules as in the case of resistances in series or parallel. Such simple calculations will however be true only so long as there is no magnetic coupling between the coils.

Striking Advantages of the New S.R. TYPE CLYDE Radio Batteries



Type 6SR7.

In this new type Battery you get all that sound, honest quality that Clyde has always built into all its products—the quality that makes for powerful performance, for long life, for economy, and for genuine and lasting satisfaction. And in addition you get further distinctive features that definitely rout the last-remaining bug-bears of the radio battery user—leaking cells, corroding crates, and the problem of keeping untidy batteries out of sight.

This new model Clyde is made in 4 and 6 volt units built into ONE CONTAINER, strong and serviceable, thus eliminating all troubles with leaking cells, corroding wood or iron carrying crates, and presenting neat and compact form.

They have non-corrosive terminals and permanent connecting straps. Designed with thick plate, S.R. Batteries deliver strong uniform current over a very long period and do not discharge when idle.

Type	Volts	Actual Capacity	Ignition Capacity	Price
4SR5	4	25 amps.	50 amps.	£ 2 10 0
6SR5	4	25 "	50 "	3 10 0
4SR7	6	40 "	80 "	3 0 0
6SR7	6	40 "	80 "	4 4 0

NOTE.—"S.R." Batteries, 5in. wide, 7½in. high overall.

Motorists!

Economise on your running expenses. Dependably rugged, long lived, and remarkably low in price, Clyde is Battery Value unequalled. Make your next a CLYDE.

The
Clyde Engineering Co. Ltd.

GRANVILLE, N.S.W.

**Main
Service
Station
106-110
Goulburn St.
Sydney**

This virtually completes the basic knowledge required to understand the deeper parts of this series of articles. The reader should have now a fairly good knowledge of such sections of radioelectricity as capacity, inductance, resistance, reactance, current, voltage, and the like, and be quite fitted to go on to the remaining articles.

* * * * *

A transmitting set, to function efficiently, must have an adequate supply of power to feed the plate and filament circuits of the valve.

It is quite feasible to use accumulators or dry cells for either circuit, but this method is too costly for popular use.

Generally there are two systems of plate power supply used in Queensland. The first—and commoner—is by means of high voltage transformers to “step-up” the municipal power supply from the usual 220-240 volts to 1000, 2000 or other higher voltage depending upon the type of transmitting valve to be employed. However, seeing that the holder of an Amateur Operator’s Proficiency Certificate is limited to a power of 10 watts as measured in the plate circuit, a terminal voltage of 400/600 is ample. Powers exceeding 10 watts may be permitted for experimental work at the discretion of the Radio Inspector, to whom application for such permission should be made.

The second source of plate supply is the motor generator, which has an output depending upon the mechanical and electrical construction of the machine.

In either case a separate tapping or winding is incorporated to give a suitable voltage for purposes of filament lighting. It is very desirable that alternating current should be supplied to the filament to conserve the life of the valve. Where a filament is lit from a direct current source the attraction exerted by the positive plate causes the bulk of the electrons emitted by the filament to issue from that side of the filament which is connected to the negative pole of the high tension battery. Also, this side of the filament has a larger current to carry, and consequently, is subjected to greater stress and is unduly weakened. By utilising alternating current for the purpose of filament heating this effect is dissipated. The filament voltage transformer is usually constructed to give a voltage lying between 5 and 15, and the output is controlled by a rheostat or resistance in the prim-

ary circuit. The two ends of the secondary coil are connected across the valve filament, and the filament return lead brought to a centre tap on the transformer, which lead also serves as the negative lead to the high voltage supply.

Where a filament heating transformer has no centre-tap an artificial one is easily made by connecting a centre-tapped choke or resistance across the output terminals of the transformer and utilising this. The correct way of doing this is shown in Fig. 1.

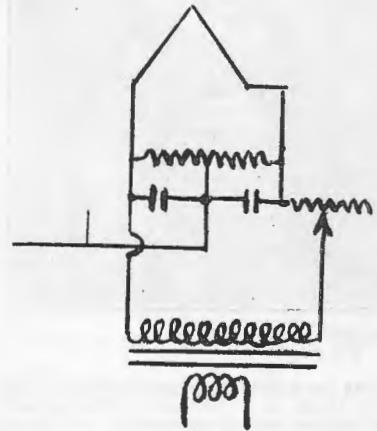


FIG. 1

It is essential for efficient working that the centre tap should be at the electrical centre of the filament circuit for two reasons. First of all, so that the stress on the filament due to the plate current may be evenly divided between either leg of the filament; and secondly, to prevent the A.C. filament voltage from entering into the grid circuit of the tube.

ON WEDNESDAY EVENINGS

If you are a wireless enthusiast you'll want to know all about the Morse Code. You'll then be able to understand those wonderful dot and dash messages from the ships.

LEARN MORSE

Mr. H. L. Miller, the well-known wireless expert, conducts our Morse Class every Wednesday night. Whether you are a beginner or whether you already have a working knowledge of Morse, you'll find the course most interesting, instructive and helpful.

Get Particulars.

UNDERWOOD BUSINESS COLLEGE.
452 Queen Street, (Opp. Customs House).

A CROSS in this square denotes that your subscription expires with this issue.

Subscription **6/6** year

Q.R.W. ?



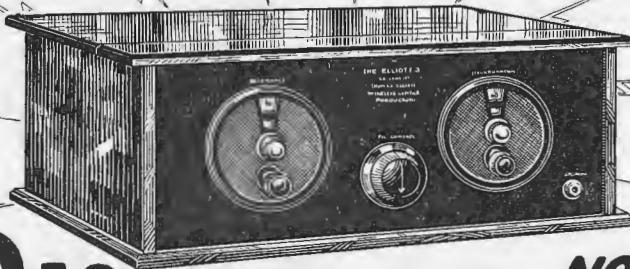
Your editor has much pleasure in reproducing the first authentic photographs of Capt. Leo. Feenaghty—A4LJ—secured at great personal risk by the staff photographer. Leo. is probably the most consistent transmitter in the Brisbane area, and is an enthusiastic member of the Woolloowin Radio Club.

The night was dark and stormy (No, this is not A fairy tale, but dismal dark truth)—
 And the empurpled Cohorts of the omnipotent storm
 Hurl'd themselves across the azure field and all was
 Strangely quiet—strangely silent.
 Came a noise!—a noise of brazen
 Trumpets pervading the circumambient
 Aether. The trees
 Stopped their tremulous whispering and the
 Valve sets stopped oscillat—
 Ing—the crystal sets, too, would have stopped only
 They don't oscillate.
 In any case so they don't enter into the argument at all
 Do they?—while the neighbours rang up
 Central Seven Eight Double-nine
 (However, the Radio Inspector was out
 Chasing pirates!) and the
 Fire Brigade and
 Boy Scouts held themselves in readiness.
 Yet there was nothing wrong.
 It was only the perpetual Scotchman
 I mean, of course,
 4LJ—or rather, now that
 The new intermediates are here
 I should have said
 O—A—4—L—J
 Calling a Yank!

Prescorres

WIRELESS CENTRE

"Elliott 3"



Easy to
Tune—
A Child
can
Operate it.

All
Australian
Stations
on Loud
Speaker.

19.19.0 COMPLETE

**NO EXTRAS
TO BUY**

**Terms
Arranged**

WIRELESS CENTRE Adelaide St. Brisbane

New International Intermediates

(Approved and authorised by I.A.R.U.)

Effective as from 00.00 G.M.T., 1st February, 1927

For the information of our many readers who are interested in short-wave transmission and/or reception, we append a list of the new intermediates approved by the International Radio Union for use throughout the world. All the old intermediates, as A for Australia, U for United State, HU for Hawaii, and so on, have been rescinded.

EUROPE.

EA—Austria.
EB—Belgium.
EC—Czecho-Slovakia.
ED—Denmark and Faroe Islands.
EE—Spain and Andorra.
EF—France and Monaco.
EG—Great Britain and Northern Ireland.
EH—Switzerland.
EI—Italy.
EJ—Jugo-Slavia.
EK—Germany.
EL—Norway, Spitzbergen and Franz Josef Land.
EM—Sweden.
EN—Netherlands.
EO—Irish Free State.
EP—Portugal, Madeira Islds., and the Azores.
EQ—Bulgaria.
ER—Roumania.
ES—Suomi (Finland).
ET—Poland, Latvia, Esthonia, Courland and Lithuania.
EU—U.S.S.R. (Russia) including Ukraine.
EV—Albania.
EW—Hungary.
EX—Luxembourg.
EY—Greece.
EZ—Zone of the Straits.

ASIA.

AA—Arabia.
AB—Afghanistan.
AC—China (including Treaty Ports), including Manchuria, Mongolia and Thiber.
AD—Aden.
AE—Siam.
AF—French Indo-China.
AG—Georgia, Armenia and Azerbaijan.
AH—Hedjaz.
AI—India (and Baluchistan) and Goa.
AJ—Japan and Chosen (Korea).
AK—(Unassigned).
AL—(Unassigned).
AM—Federated Malay States (with Straits Settlements).
AN—Nepal.
AO—Oman.
AP—Palestine.
AQ—Iraq (Mesopotamia).
AR—Syria.
AS—Siberia (including Central Asia).
AT—Turkey.
AU—(Unassigned).
AV—(Unassigned).
AW—(Unassigned).
AX—(Unassigned).
AY—Cyprus.
AZ—Persia.

NORTH AMERICA.

NA—Alaska.
NB—Bermuda.
NC—Canada, Newfoundland and Labrador.
ND—Dominican Republic.
NE—(Unassigned).
NF—Bahama Islands.
NG—Guatemala.
NH—Honduras.
NI—Iceland.
NJ—Jamaica.
NK—(Unassigned).
NL—Lesser Antilles.
NM—Mexico.

NN—Nicaragua.
NO—British Honduras.
NP—Porto Rico and Virgin Islands.
NQ—Cuba and Isle of Pines.
NR—Costa Rica.
NS—Salvador.
NT—Haiti.
NU—United States of America.
NV—(Unassigned).
NW—(Unassigned).
NX—Greenland.
NY—Panama.
NZ—Canal Zone.

SOUTH AMERICA.

SA—Argentina.
SB—Brazil, Trinidad Island and St. Paul Island.
SC—Chile.
SD—Dutch Guiana.
SE—Ecuador and Galapagos Archipelago.
SF—French Guiana.
SG—Paraguay.
SH—British Guiana.
SI—(Unassigned).
SJ—(Unassigned).
SK—Falkland Islands and Falkland Dependencies.
SL—Colombia.
SM—(Unassigned).
SN—Ascension Island.
SO—Bolivia.
SP—Peru.
SQ—(Unassigned).
SR—(Unassigned).
SS—(Unassigned).
ST—(Unassigned).
SU—Uruguay.
SV—Venezuela and Trinidad.
SW—(Unassigned).
SX—(Unassigned).
SY—(Unassigned).
SZ—(Unassigned).

AFRICA.

FA—Abyssinia.
FB—Madagascar, Reunion Island, Comoro Island, etc.
FC—Belgian Congo, Ruanda, Urundi.
FD—Angola and Kabinda.
FE—Egypt.
FF—French West Africa, including French Sedan, Mauritania, Senegal, French Guinea, Ivory Coast, Upper Volta, Dahomey, Civil Territory of the Niger, French Togoland, etc.
FG—Gambia.
FH—Italian Somaliland.
FI—Italian Libya (Tripolitania and Cyrenaica).
FJ—Somaliland Protectorate, and Socotra.
FK—Kenya, Zanzibar Protectorate, Uganda, Anglo-Egyptian Sudan, and Tanganyika Territory.
FL—Liberia.
FM—Tunisia, Algeria, Morocco (including the Spanish zone), Tangier.
FN—Nigeria.
FO—Union of South Africa, Northern and Southern Rhodesia, Bechuanaland Protectorate, and South-west Africa.
FP—Portuguese Guinea, and Cape Verde Islands.
FQ—French Equatorial Africa and Cameroons.
FR—Rio de Oro and adjacent Spanish Zones, Ifni, and Canary Islands.
FS—Sierra Leone.
FT—Eritrea.
FU—Rio Muni (Spanish Guinea) and Fernando Po.
FV—French Somaliland.

FW—Gold Coast Colony, Ashanti, Northern Territories, and British Togoland.
 FX—Seychelle Dependencies.
 FY—(Unassigned.)
 FZ—Mozambique.

OCEANIA.

OA—Australia (and Tasmania).
 OD—Dutch East Indies (*)
 OE—Melanesia (*)
 OH—Hawaiian Island (*)
 OI—Micronesia (*)
 OO—Polynesia (*)
 OP—Philippine Island.
 OZ—New Zealand.
 (*) To be further partitioned when activity warrants.

SHIP STATIONS.

Ship Stations with amateur calls will place an X before their intermediate. E.g., Australian 3AA at sea, calling U.S. 1AW, would send "1AW NUXOA 3AA." The reply would be "3AA XOANU 1AW."

The Royal Commission of Wireless

IMPRESSIONS FROM THE EVIDENCE.

There seems but little doubt that Station 4QG's transmissions are held in high regard for clarity, consistency and quality by southern listeners, if the evidence taken before the Royal Commission of wireless held recently in Melbourne may be taken as an indication.

Through the courtesy of Mr. J. W. Robinson, Director of Station 4QG we recently had the opportunity of perusing the first three day's evidence recorded upon some 200 typewritten pages of foolscap. Practically every witness who came forward to give evidence drew 4QG up as the paragon station of the Commonwealth.

SOUTHERN STATIONS FADE.

Listeners residing within comparatively short distance from Melbourne complained of bad fading and distortion after nightfall from 3AR and 3LO, while it was added, 4QG's receptions could be tuned in clear and sharp at all times.

This it was pointed out was not due to any fault in the stations design or operation but rather to the location of the receiving sets in belts of country known as "dead spots," where reception from the local station is greatly interfered with.

Many other matters were dealt with including the establishment of Relay Stations, Government control of the License Question, the Wavelength Question, Interference, etc, etc, but as the evidence given had no bearing on Queensland conditions, we do not publish it.

The Commission is shortly to sit in Brisbane and listeners will be invited to come forward to give their opinions of 4QG's transmissions, and to give suggestions for the betterment of wireless in general.

Every Listener Should Own—

BROADCASTING By J. W. Robinson.

A history of broadcasting in Australia from its inception. Mr. Robinson, now Director of Station 4QG, Brisbane, has been connected with the movement since it started. Included in this volume are the three episodes which the author has broadcast from 4QG under the collective title of "The Divine Spark." PRICE, 1/6; POSTED 1/8

THE FARMER GRAY VERSES

A little book containing all the verses given by Uncle Ben and Uncle Jim from Station 4QG. Get one for your kiddies. We are being inundated with orders from the storytellers' little friends, and the number printed will not last very long. A post card of the complete Bedtime Session Staff of 4QG is given free with each book.

PRICE 6D. POSTED 7D

WIRELESS By J. W. Robinson and G. Williams.

The best introductory book on the subject. Every owner of a set should read it; it is the most concise and clear exposition of the subject yet presented, and thoroughly explains the operation of sets from the simple crystal to the multi-valve without the use of highly technical terms.

PRICE 3/6; POSTED 3/9

Three new titles in Amateur Wireless Handbooks—

The Practical Super-het Book.

The Short Wave Handbook

Wireless Controlled Mechanism for Amateurs

PRICE 2/9 Each Post Free

A. McLEOD

Brisbane's Best Bookstore

107 ELIZABETH STREET

Brisbane

Notes from 3LO

(From Our Special Correspondent)

THE ROYAL ARRIVAL.

Whilst Melbourne and Victoria will have the greatest interest in the arrival of the Royal party in their own State, the first appearance of the Duke and Duchess of York in Australia was also a red-letter day to every Victorian listener. Arrangements were made by 3LO Melbourne to broadcast the arrival in Sydney on March 26th, of the eagerly-awaited couple, and one of the studio's most competent descriptive announcers met the "Renown" at the Heads in a special steamer and described every detail of the Royal arrival. The 3LO portable transmitter was used, an impression being made on a land line to Melbourne. The studio experts superintended all operations from Sydney.

THE BIRTHDAY BOOK.

The old-fashioned birthday book has faded from popularity, but 3LO, Melbourne, still maintains the old custom with what is probably the world's largest birthday book. Over 10,000 names of children and their birthdays are entered in a special ledger, and every day the children's hour entertainers broadcast their messages to the little members of the Birthday Club. The business of sending happy little messages to children requires the full time services of two clerks, coping with the huge influx of mail and birthday messages. Thousands of letters are received weekly by "Billy Bunny," "Mary Gumleaf," "Mary Mary," and "Miss Kookaburra," and the other members of the children's hour staff. This staff has also to look after the response to various appeals made to the children. For instance, the jam appeal for the Foundling Hospital, Berry Street, resulted in 1100 pots of jam flowing into the studio, and over £35 in cash. A large section of the floor space covered in jam was decidedly embarrassing for the studio. For the Melbourne Hospital Birthday League, over £450 was raised.

3LO'S NEW STUDIO.

I was taken a day or two ago to inspect the big building that is to be 3LO's new headquarters. Its palatial aspect was inspiring. When the first studio was put into commission, 3LO was feeling its way. Its progress of scarcely more than two years may be measured by its new quarters. There are two broadcasting chambers, the smaller of which would rank as the largest in Australia. The bigger room is alike, a ballroom, and will be occasionally used as such.

The building stands up a lane, well screened off from all traffic noise, in a backwater of Melbourne's stream. It contains rest rooms, rehearsal rooms, practice rooms, as well as fine staff offices. There is nothing extravagant about the appointments, but comfort has been the first consideration, rather than ostentation.

A NEW ANNOUNCER.

Listeners probably have noticed the presence at 3LO, Melbourne, of a new announcer. During the holidays of Mr. Alfred Andrew his place at the microphone has been taken by Mr. Hugh Huxham, whose Serenaders have given delight to listeners for several weeks past. Mr. Huxham's lengthy stage experience has given him faultless enunciation, and a personality which is felt even across the ether. His Serenaders have received many appreciative letters from all over Australia, and listeners will be pleased to hear that his announcing work will not interfere with the Serenading Concerts.

MISS MARY CLAXTON.

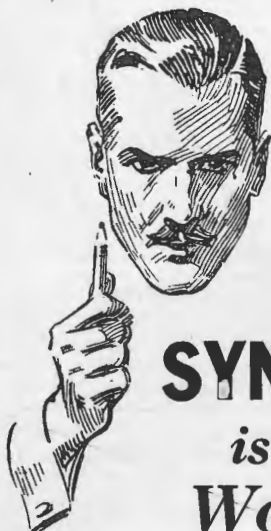
Just as the theatre has its established favourites and old friends, broadcasting audiences are pleased to welcome back their favourites. Miss Mary Claxton, a soprano who was most successful during her recitals from 3LO last September, has been re-engaged, and will be in next week's programmes. In her forthcoming concerts Miss Claxton will feature songs of the bushland. Strangely enough, it was in this class of work that Miss Claxton made her first professional appearances. In the Bush Girl Four Quartette at the Capitol Theatre she sensed the popularity of the typical Australian song, and listeners will find them a pleasant relief from the usual ballad of English or American origin. Miss Claxton has appeared in various musical productions of J. C. Williamson, Ltd., and has also played leading roles with the Rigo Grand Opera Company.

A NEW AUSTRALIAN NATIONAL ANTHEM.

Much as Australians are attached to the British National Anthem, there is a feeling that the Commonwealth still requires a typical and distinctive anthem. There are many claimants to the title, but none has caught the popular fancy. The well known Australian journalist, C. J. Dennis, whose books have been recognised as the most distinctively Australian literature of the day, has written the words of a new anthem: "Oh! Favoured Isle," the music for which has been composed by Mr. W. G. James. The anthem was broadcast by 3LO, Melbourne, on Sunday, March 27th, in a special programme arranged by the Rev. J. H. Cain. Mr. J. Alexander Browne was the vocalist, assisted by the Wesley Church Choir.

MR. ALLEN'S POLICY SPEECH.

Rather a new departure in the way of political broadcasting will be made by 3LO, Melbourne, on Wednesday, April 6th, when the Premier of Victoria, Mr. Allen, will deliver his policy speech from the studio. This is not quite the first time a political speech has been delivered in such a "safe" atmosphere, as Sir Arthur Robinson spoke some time ago from the same place on the Referenda questions, but it has much to commend it, as there must be a fair sprinkling of open-minded listeners who would prefer to give the leader of a party a hearing undisturbed by heckling and humorous interludes, and the inevitable elbowing of a crowded house.



*Experts
Declare
that*

SYNTHITE *is the* **World's** **Master Crystal**

Wherever the Synthite Crystal is introduced it is hailed as a Master Crystal—something entirely different from anything yet offered.

Its loud, clear signals surprise even experienced amateurs. Its entire surface is sensitive—there is not a dull spot to be found.

Discard your old whispering crystal. Fit a **SYNTHITE**, and learn how fine crystal reception really can be.

SYNTHITE CRYSTALS

Price 1/6 Everywhere

Wholesale Distributors

EDGAR V. HUDSON
Charlotte Street, Brisbane

Manufactured by J. PEBERDY, Brisbane



“Little Miss Brisbane”

(The Idol of 4QG's Little Listeners.)

Every bedtime story-teller has his or her own particular style, and it is well that this is so. Take 4QG bedtime story-tellers as an example. The Sandman relies largely upon his musical instruments for the success of his session; Uncle Ben and Uncle Jim count on their novel stunts and topical verses to make their appearance popular; Miss Waratah holds the Saturday matinee with a mixture of fairy tales and aeolian records; but Little Miss Brisbane, well, she is somehow different—it is her sweet winsome personality and her low, quiet voice that holds the interest of the children on Wednesday evenings.

Little Miss Brisbane has been associated with 4QG since the very early days, before the big station was erected, and when but few people had wireless sets.

Her Wednesday evening sessions have, from her first appearance, been a huge success, and the bulky mail arriving at 4QG daily addressed to this trim little lady bears ample testimony to her popularity.

Little Miss Brisbane introduces novelty into her sessions in a very unique and child-like way. For instance, her “Pudding Nights,” “Bedtime Band,” “Blue Bird Orchestra,” original stories, and other such features are very well arranged and sweetly told.

On Wednesday, March 16th, Little Miss Brisbane gave an especially fine Irish entertainment. Irish song, story and history were introduced with the aid of Mr. Geo. Williamson, Uncle Jim Woodland, Mr. Ewing, Mrs. Champion, and Mrs. Corrigan (harpist) who wafted out melodies like a breath from old Erin. “Bebe” and “Bunty,” the two able assistants of Little Miss Brisbane, contribute in no mean way to the success of the session.

It is worthy of mention here that the stories given by Little Miss Brisbane are wholly original, and that the sessions are organised without outside assistance. Is it any wonder that when Wednesday evening comes along all the children say, “Mummy, turn on the radio, we love to hear Little Miss Brisbane.”

J.O.L

The
Children's Corner

A Letter from Little Miss Brisbane

Dear Little Pals,—

You did not expect me to be writing to you in this month's issue of "The Queensland Radio News," did you? But it is the unexpected that always happens.

I would like to thank every little pal who takes an interest in Wednesday night stories. I receive some very sweet letters, not only from the tiny tots, but also from the "big little ones," who have not altogether forgotten their childhood days.

LITTLE MISS BRISBANE'S STORY COMPETITION.

I would like very much to interest all you little ones who read "The Queensland Radio News" in a story competition.

Say we create two little make-believe people and call them "The Gummnut Gnome" (please do not call him "The Gummnut Ganomie"—he is going to be rather a cross little fellow and will always insist on being called the Gummnut "Nome"—pronounce it like "Home") and "The Wattle Fairy."

Now, these two little fairy people are going to have the most wonderful adventures, and you, little readers, I am sure, would love to make up the most wonderful little stories around them.

Perhaps I could start an adventure for you:—The Gummnut Gnome is a very cross little brownie fairy. He really means no harm, but he flies off to school and into the home and whispers all sorts of naughty things in the children's ears and, of course, makes them as naughty as he is himself. But there is also the sweet, good little Wattle Fairy, who follows the naughty brownie fairy and tries to undo all the bad that he does, and very often she succeeds.

Perhaps at school some day the Gnome whispers in one of the boy's ears to "plag the wag." He in turn tells the other boys, and off they go to a water-hole. One of them nearly gets drowned, and only for the little Wattle Fairy whispering brave words into another little boy's ear, the poor little fellow would have been dead.

Oh, there are hundreds and hundreds of adventures which you could make up. You who are interested in bush life could make up some very interesting tales. Say the little Gnome climbed up into a birdie's nest and tried to break the eggs—you could then describe what sort of a nest it was, and to which kind of bird it belonged, and describe the eggs, too—and then how the Little Wattle Fairy saw him and flew from a neighbouring wattle tree and just saved the eggs from being broken. Dear me, I will have to stop or I shall be writing all the stories myself.

In time, these two little people will become real to you if you take them seriously, and always try to make the good fairy triumph over the wicked one. This competition is suitable, not only for girls, but for boys also. What thrilling adventures you boys could make up, and no matter how you might love

that naughty little knome, remember, he is a mischief maker, and if you do not wish to bring the Little Wattle Fairy into your story too much, just make her come in at the last moment and save the situation.

I think we should be able to have some great fun with these two little fairy people. Write your stories and head them "The Gummnut Gnome and the Wattle Fairy" address the envelope to "Little Miss Brisbane", c/o The Editor, "The Queensland Radio News", Box 1095N, Brisbane, and do not forget your own name and address.

There is a prize of 7/6 offered for the best story written by a girl and 7/6 for the best story written by a boy.

I shall be waiting anxiously for the first batch of stories. The winning stories will, of course, be published and will make interesting reading for everybody. The winners will be asked to send a photograph along to "The Queensland Radio News" which will be published. So as well as reading the stories you will be able to see what the writers are like.

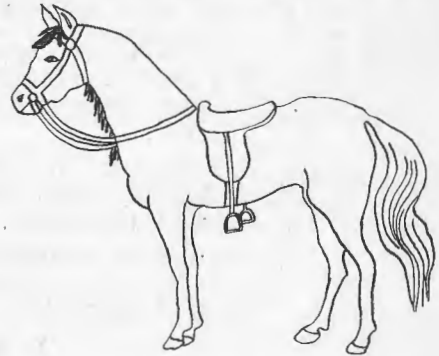
Good luck to everybody

Love from

"LITTLE MISS BRISBANE"

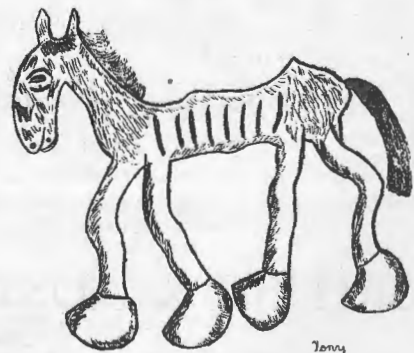
Uncle Jim's Sketching Competition

THE SECOND PRIZE WINNING SKETCHES.



BEST SKETCH SECTION.

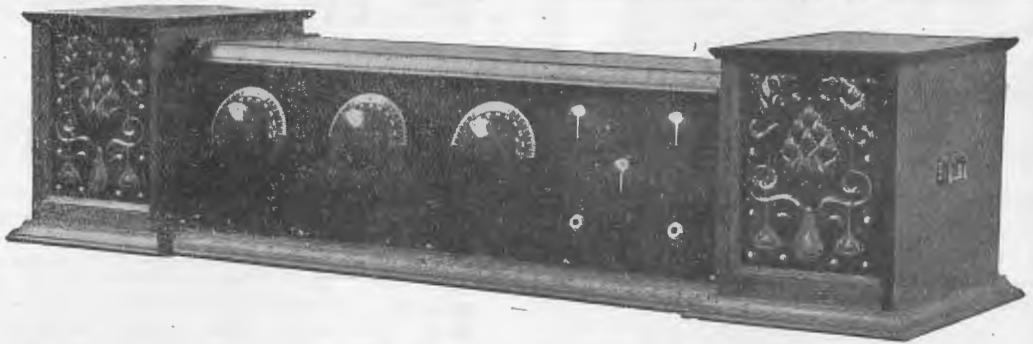
Drawn by Bessie Horrocks (aged 10 years) of Pomona (Q.)
A Second Prize of 4s. will be sent to Bessie for her excellent attempt.



Tommy

FUNNIEST SKETCH SECTION.

Drawn by Alma Uhlmann (aged 11 years), Pendowrie, Thorne Street, Wynnum (Q.).
A Second Prize of 4s. will also be forwarded to Alma for her humorous entry.

BRITISH & AUSTRALIAN WIRELESS COY.*Manufacturers of "B. & A.W." Receivers***"B. & A.W." Receivers**

ALL sets made on the premises under PERSONAL SUPERVISION, and are guaranteed unconditionally to do all that is claimed for them by the salesman. HIGHEST GRADE PARTS are used and we do not spoil good circuits by using cheap components.

OUR PRICES ARE AS FOLLOWS:—

- | | |
|---|--|
| Crystal Sets, complete £ 2 to £ 4/10/-. | |
| 1-Valve Set, complete with headphones, £ 6 (dry cells). | 4-Valve Set, complete with B.T.H. loud speaker, £ 37/10/ (6-volt accumulator). |
| 2-Valve Set, complete with A.R.38 loud speaker, £ 13 (dry cells). | 5-Valve Set, complete with B.T.H. loud speaker, £ 50 (6-volt accumulator). |
| 3-Valve Set, complete with A.R.38 loud speaker, £ 19 (dry cells). | |

B. & A.W. SPECIALS.

- 4-Valve Resistance Coupled Set, complete with B.T.H. loud speaker, £ 45.
- 5-Valve Neutrodyne, complete as above, £ 60.

The latter line is illustrated above. Super-Heterodynes built to order at the lowest possible price.

Note Specially—No poles Required—just an indoor aerial

All prices include installation within 20 miles of Brisbane.

If you are experiencing any trouble with your set, ring Central 2057.

BRITISH & AUSTRALIAN WIRELESS COY.**Note New Address**

18 ALBERT HOUSE, ALBERT STREET - - - - - BRISBANE

Phone, Central 2057.

What is Loud Speaker Strength ?

(By "Ray Dio.")

One frequently hears wireless technical terms bandied about very loosely. Some of these terms are difficult of positive definition or explanation, and others permit of variable definitions. One of the expressions very frequently used and very little understood is "loud speaker strength."

What is loud speaker strength from a station like 3LO, Melbourne? The answer to this question would vary very considerably, according to the psychological and physiological condition of the person providing the answer. The type of loud speaker to which the listener is accustomed would also tend to influence his reply to the question.

Comparison with Gramophone Necessary.

Some authorities define "loud speaker strength" as "that equal to the volume emitted from a good gramophone." This definition, of course, is loose, because the volume given by a good gramophone will vary according to the type of needle used, and to other controlling influences in the gramophone. Possibly a better comparison would be the "volume of sound emitted by a good gramophone when the needle scratch of the gramophone is completely smothered by the volume of musical sound." In point of fact this comparison has been used by Dr. Goldsmith, the American authority, in defining what he calls the "service area" of a broadcasting station. He states that the volume received by an ordinary receiver from the broadcasting station in the service area should smother the static and other interfering noises to the same extent that the music from a good gramophone will smother the needle scratch noise.

The most important factor, of course, in deciding the matter is the human ear. In pitch a good youthful ear can hear very much better than the ear of an adult. The youthful ear can hear tones as low as 16 vibrations per second to as high as 40,000 per second. The range of intensity is likewise enormous. If we regard the strength of the weakest sound we can hear as one, then the strength of the ordinary talking voice would be about 1,000,000.

Our Ears are Deceptive.

It is quite easy for our ears to deceive us in estimating the relative strength of sounds. For instance, one asks a number of people to compare the strength of two radio sets, it will not be surprising to hear very differing opinions. The explanation lies, of course, in the fact that they do not understand the peculiarities of the ear. In other words, our ears are very poor at gauging the intensity of sound. If our ears were sensitive to changes in intensity they would either be insensitive to weak sounds or moderately loud noises would become unbearable.

As an illustration of the difficulty in estimating the intensity of sound, it is related that during the war an American officer conducted an interesting test on 88 airmen. He asked them to listen to two tele-

graph signals and say which was the louder. One signal was adjusted to have twice the power of the other, and a switch was provided to permit of instantaneous switching from one signal to the other. Each man put on headphones and listened once to one signal and then immediately to the other. After that he wrote down his choice. Some of the men said the signals had equal strength, and some even said the weaker signal was the stronger. Out of the 88 men only 43 determined the matter correctly.

"Sounds We Don't Hear"

Many of us, while hearing countless sounds every day, realise that in addition to the sounds which we hear there are thousands and thousands of sounds created daily which we do not hear.

For instance, a fly walking across a sheet of paper or across a table, creates quite a definite sound, although the ear is too weak to detect this sound.

Some little time ago a special super-sensitive microphone was designed and constructed by the engineering staff at Station 4QG. This microphone was used in conjunction with an amplifier, and quite a number of sounds which are not audible to the human ear were broadcast.

Prior to the broadcast, a detailed description of how the microphone operated was given, and then listeners were able to hear quite an unusual number of sounds.

First of all the ticking of an alarm clock was reproduced and amplified until it sounded like the working of a marine engine. An ordinary pocket watch was treated similarly and then a wristlet watch.

The next transmission was even more interesting. An ordinary sewing needle, threaded with cotton was drawn through a piece of cloth, and the noise it created was quite terrific. The announcer next signed his name, and the station's call-sign on a sheet of paper, and the reproduction of this sounded like a thunderstorm. A piece of paper was cut by scissors, and sounded like a liner ramming an iceberg.

Three cockroaches, caught in the station, were then made to walk across a sheet of paper, and the shuffling of the feet was a noise which astounded most listeners. One roach placed his light feelers on the microphone, and so great was the resultant volume of sound that the balance of the reproduction was completely blotted out.

The final demonstration was a reproduction of the noises in the building and was quite as remarkable as any of the others.

The transmission with its description lasted for half an hour, and held spellbound listeners in all parts of the Commonwealth. The success of it was really due to the ultra sensitive microphone, which was a product wholly and solely of the engineering staff at 4QG.

THE CRITIC'S CORNER.

Has Mr. Luis Armedio Pares Too Much Freedom with the Microphone ?

There is a general feeling among listeners-in that the announcements made by Mr. Pares during his Saturday-evening entertainments from 4QG call for censuring.

Like many musicians, Mr. Pares is essentially Bohemian, but he should remember when broadcasting that Bohemianism sounds extremely out of place over the air.

On a recent Saturday night he passed such remarks as: "I am delightfully cool in my silk dressing

jacket and slippers"; "That song was very fine Madame, I'll see you in the dressing-room later"; "Here's something for the critics: Master Johnny So-and-so, aged 12 years, will now play Schubert's Serenade; Johnny has been learning from me for only six months."

Perhaps the biggest insult of the evening was handed out by Mr. Pares in the following form:—

Mr. Pares stated that he was discussing music with a friend who told him that in the next world jazz music only found a place in hell. "Therefore," concluded Mr. Pares, "if any listeners do not enjoy the music which I give them they know where to go."

Such announcements should be suppressed. When an artist is given the privilege of announcing his own numbers and the numbers of his party, he should at least respect the microphone; otherwise it is the station's duty to instal its own announcer to take the offender's place.

RACING AND SPORTS RESULTS

Sit on your home verandah and hear these direct from the grounds — by Radio.

GILFILLAN

Radio

Sets on

EASY

TERMS

The Gilfillan Neutrodyne

(1927) MODEL

In Hand-Carved Walnut Cabinet.

America's Latest in "QUALITY" 5-Valve Radio Sets

£10 DEPOSIT
Balance Monthly

Cash Price £ 59/10/-.

CUT THIS OUT AND POST, TO-DAY.

Please send me, Post Free, Illustrated Booklet of Neutrodyne.

NAME

ADDRESS

Q.R.N. 1/4/27.



Harringtons Ltd

Radio and Photographic Warehouse,
93-95 QUEEN STREET, BRISBANE.

Branches in all States and N.Z.
Representatives Everywhere.

Complete with well illustrated Book of Instructions, Aerial and Aerial Equipment, Lightning Arrester, Ground Clamp, Loud Speaker, Accumulator, "B" Batteries, Valves.

NO EXTRA TO BUY.

How to Solder

Details that Every Experimenter Should Know

How to care for your iron; how to tin it and keep it clean, and how to use it to make good and permanent connections.

(By ROBERT HERTBERG.)

in "Popular Radio"

Of all the processes that are employed by radio fans in the construction of receiving sets, there is not one more important—and not one less skillfully applied—than the process of soldering.

There are capable experimenters who can assemble any kind of standard set from a single-tube regenerative to an eleven-tube superheterodyne without the aid of wiring diagrams, but who can no more handle a soldering iron than a kindergarten student can handle a machine gun. Their outfits are well-proportioned affairs that show every indication of thoughtful design and placement—and every sign of careless and slovenly soldering. Their connections are either smothered under mounds of solder that may be pried loose with a fingernail or else covered with superficial specks that discolour the wire and do nothing else.

The mere mention of soldering often frightens people out of building their own experimental radio sets, yet the process is ridiculously simple after it is once explained properly. The erroneous impression that soldering is extremely difficult and its mastery requires years of arduous application has gained circulation only because its unsuccessful practitioners have loudly proclaimed its difficulty to excuse their own incompetence.

Every radio fan should know how to solder; he has at least the antenna, the ground and battery wires to connect properly.

The first step is to obtain the necessary tools, which are few, simple and inexpensive. They include an electric iron of medium weight and with a small, sharp point; a two-ounce can of non-corrosive soldering paste, or a suitable non-corrosive flux; a roll of soft solder in wire form; and two or three sheets of medium emery cloth.

Don't make your first attempt at soldering at the expense of your set.

Delve into your junk box and select a piece of scrap brass or copper sheet, a few odd lengths of wire and a few soldering lugs such as most landing posts are supplied with. These will serve as the objects for your first experiment; if you ruin them you will lose nothing of value.

If using an electric soldering iron connect the plug attached to the end of the iron wire to the nearest lamp socket. Support the middle of the iron on a small block of wood, and keep the tip clear so that it can not burn anything. Then turn the current on.

Now there is one watchword in soldering. **Cleanliness.** Everything you work with must be bright and

shiny and, above all, free of grease. It is impossible to solder anything that is dirty. Practically every case of poor soldering may be laid to the fact that one of the elements used in process, either iron, solder, paste or the material itself, was not properly cleaned beforehand.

Take the piece of brass and scrub it with the emery cloth until its surface is bright and clean. It is not necessary to wear off a sixteenth of an inch of the material; merely remove the surface dirt so as to expose the bright metal itself. Then, with aid of a tooth pick or match, cover the cleansed section with a very thin film of soldering paste.

Another point to remember is: use just as little paste as is needed to cover the area to be soldered. This counsel is given in interests of both economy and efficiency; the thinnest possible layer of paste works fully as well as the thickest slab and gives less consequent trouble from runovers.

Now, look to the iron. To test its temperature simply touch the end of the roll of solder to the tip. If the solder must be held there for a few seconds before it starts to run, the tool is too cool; if it melts instantly, the iron is ready to be "tinned."

Tinning is simple treatment which prepares the soldering iron for use. To apply it, determine that the iron is hot enough to melt the solder. Pick up the iron, and rub the faces of its tip on the emery cloth to clean them.

Then dab them quickly with some paste, and, before the latter has a chance to evaporate or burn completely, touch the solder to the tip and let a drop run into each face. You will find the tip now covered with a bright coat of solder. The plating looks like tin. This step requires about ten seconds for its completion.

If the solder does not adhere to the iron, but rolls off instead, you either did not clean the copper sufficiently, or you hesitated too long in applying the solder to the tip after you dabbed on the paste or fluid. Repeat the process, handling the materials a little more deftly, and you will be rewarded with a nice shiny iron.

As your first task, you are going to make a layer of solder stick to the surface of the piece of brass you have already cleaned. To do this, place one face of the tip of the iron on the paste-covered surface, and at the same time touch the solder to the point. The solder will turn liquid immediately and will flow onto the brass. Keep the iron on the latter for about three seconds, moving the iron to cover the space

RADION

The Supreme Insulation

“Look after the pennies and the pounds will look after themselves.”
Therefore, when building a set, make the panels and sub-panels of *Radion*. You will save yourself from

CRACKING WARPING LEAKAGE
SPLINTERING FADING LOSSES

*Send for our Catalogue or for
Booklets of Radion*

INTERNATIONAL RADIO CO. LTD.

200 CASTLEREAGH STREET, SYDNEY

91-92 Courtenay Place, Wellington, N.Z.

In Queensland, Home Radio Service, Ltd., Queen Street, Brisbane.

You want soldered, and then raise it. You will find the brass covered with a coat of solder you cannot possibly pry loose.

As a second exercise, take a piece of bus bar, scrape it clean, and coat the end with paste. Touch the roll of solder to the iron so that a drop of solder hangs from the point. Press the bus bar to the piece of brass you have just tinned, and touch the iron to the juncture. The solder will flow onto the wire and the brass.

Then remove the iron, but do not release your hold on the wire until you see the bright molten solder shimmer a bit, whiten, and then finally harden. Remove the iron and you will find the wire held in place as firmly as if it were part of the brass sheet.

The ease with which you will do the whole thing the first time will astonish and delight you, and will make you wonder why you ever considered soldering such a needless undertaking. You will find yourself fascinated by the art, such as it is, and you will experience a rather unexpected thrill out of it. You may be so enthusiastic that you will carry around samples of your handiwork and exhibit them proudly to all your friends. "I made 'em; great, aren't they?" you will remark.

It all sounds foolish, but it has happened time and again. In the past you've undoubtedly associated soldering with rough looking plumbers and tinsmiths, but once you've tried it yourself, with your own hands, you will boost it as a highly diverting as well as useful pastime.

To develop dexterity with the soldering iron, pick up odd pieces of wire and metal, and try soldering them together in various positions. If you remember to keep everything clean, bright and shiny, you will never have a loose joint.

Spare the paste and conserve the solder, but don't kimp on the heat. A lukewarm iron is worse than useless. On the other hand, don't allow the copper to become red hot, for it is impossible to solder with a red hot iron. If you don't believe this, try it some time. You will see the solder roll right off the tip, and all the paste in the world won't make it stick.

Now, when you start work on your set, you will find the soldering the least troublesome of the mechanical details. In fact, you will distinctly enjoy handling the iron, for as it cements each wire in place it puts you just so much nearer the completion of the outfit.

Perhaps you are curious about the function of the paste or flux in the soldering operation. As most soldering directions are strangely silent on this detail, we explained briefly here.

When a high heat is applied to an ordinary metal like copper or iron, the material reacts chemically with the oxygen that forms part of the air, and as a result its surface is covered with a thin film of new substance, known as an "oxide" of that metal. Rusting of steel and iron constitutes a common form of this action. If it is desired to join two metals together through the agency of heat, this film must be destroyed, otherwise it would prevent the molten cohesive agent from attaching itself directly to the surfaces of the metals.

It is therefore necessary to introduce into the operation a substance which is capable of absorbing the film and rendering it harmless as quickly as it

forms. In soldering, the paste, or more properly the "flux," is what accomplishes this devitalisation.

The viscosity of the paste or fluid itself is no factor in the binding practice. The soldering flux serves only to remove the harmful film of oxide. As a matter of fact there are as many liquid fluxes as there are pastes.

BEAM WIRELESS.

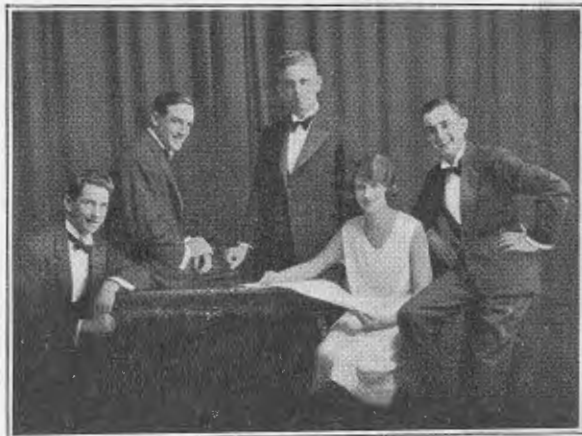
(By R.D.)

The other day I went to Ballan to inspect the new plant that is to operate beam wireless. The chief engineer, Mr. A. S. McDonald, was very patient in explaining the wonders housed there, but my non-technical brain could not take in a tithe of what he told me.

I was chiefly interested in the towers and their wondrous network of rigging, designed to hold the whole absolutely rigid in all weathers. I marvelled anew at man's ingenuity when I saw the devices for reflecting back the escaping energy and directing it in one continuous beam that reached round the world.

Special quarters have been designed and built for the staff. Eight pretty houses, complete with every comfort, stand on the outside of a circle of gardens, specially kept up by a professional. In addition a large bachelor block, with club-room and communal hall, is built in Moorish design at the entrance to the compound. The contrast of this beautiful block of modern brick buildings with the flat, lonely Ballan tableland on which the station is erected is striking.

The whole conception, now translated into reality, marks another milestone on the swift road of wireless progress.



THE 4QG HARMONY FOUR.

A quartette of soloists frequently heard on 4QG's programme—generally of a Sunday evening at the conclusion of the band concerts. The party is building up a splendid repertoire of numbers, mostly of a lighter nature, and some excellent entertainments are being arranged.

The party is shown above. The members (reading from left to right) comprise:—Mr. Geo. Williamson (tenor), Mr. H. E. Higgenbotham (baritone), Mr. Virgil King (tenor), Mr. C. V. Woodland (bass); Mrs. Hilda Woolmer (accompaniste).

The Loop Aerial

(By L. L. Adelman.)

In view of the increasing popularity of the loop aerial, and its suitability for Queensland conditions, the following article, written by a well-known American authority, should be of considerable interest to our readers.

The early history of the development of the loop seems to be very much in obscurity. But whatever the truth about its origin and inception, we do know for a certainty that in the latter part of the nineteenth century Hertz used small loops in some of his famous experiments. One of the experiments showed that when a loop contained a spark gap and was held in certain positions in the neighbourhood of apparatus radiating electromagnetic waves, a spark would pass between the spark balls, while if, on the other hand, the orientation of the loop were slightly changed, but the loop kept at the same mean distance from the source of radiation, the spark would no longer be produced.

Early History of the Loop.

This showed conclusively two things: first, that electric or electromagnetic waves were phenomena having definite wave motion in a given direction and, second, that the loop antenna or resonator, as it was then called, had directional properties.

It was not until 1905 that Round published an account of the directive properties of frame aerials, or more properly, loop antennas. From that time on, the loop has experienced more or less popularity with a public quite unacquainted with its characteristics.

This article has for its purpose mainly the design and use of a practical loop antenna for receiving, so that it is not proposed to go to any length into the theory of propagation of electromagnetic waves.

It is essential, however, that the reader have a clear perception or mental picture of an ether wave in order that he may understand the explanation of loop reception. The following hypothesis, accepted by scientists, is given as the most plausible explanation of electromagnetic wave phenomena:

Electromagnetic Wave Phenomena.

Waves are propagated in straight lines; that is, between the transmitting station and a distant receiving station, the wave travels by the shortest path—on the arc of the "great circle," passing through both points. This wave consists of a system of electric and magnetic lines of force at right angles to each other. The magnetic force is parallel to the earth's surface, but is at right angles to the direction of travel of the waves. The electric lines of force are also at right angles to the direction of travel of the waves, but are perpendicular to the ground. For our purpose, it will be necessary to consider only the three factors of velocity, frequency and wave-length as represented by the accompanying diagram.

First, let us consider velocity. Electricity travels at the rate of 186,000 miles per second. This holds good regardless of whether the wave form is purely direct or whether the frequency lies between one cycle per second or the highest possible frequency to obtain.

In other words, the speed of the electric current is always the same, no matter what the frequency may be.

Next comes wave-length. The wave-length of an electromagnetic wave is defined as the distance between two points where the forces comprising the wave are a maximum in the same direction.

In broadcasting, we encounter frequencies included between 200 and 600 metres, or from 1500 to 500 kilocycles.

To receive this band of wave-lengths properly, it is essential that the loop have the correct number of turns of wire. In other words, the inductance of the loop must be such that when tuned by a suitable capacity, no difficulty will be encountered in covering the whole band.

The frequency is obtained from the number of times the successive wave crests pass a fixed point in the path of the wave and must, therefore, be equal to the velocity of the wave divided by the wave-length. Expressed in terms of meters, 186,000 miles are equivalent to 300,000,000 meters. Thus:

$$\text{Frequency equals } \frac{\text{Velocity}}{\text{Wave-length}}$$

and in the instance of a 600-metre wave used as an example, we have

$$F \text{ equals } \frac{300,000,000}{600} \text{ equals } 500 \text{ kc per second,}$$

Types of Loop Antennas.

There are two types of loop antennas, the pancake or spiral-wound loop and the solenoid or box type.

Since the principle of the loop is that the total E.M.F. that can be generated in its windings depends upon the phase difference in the vertical wires, it can readily be understood that the best loop is one which has its vertical windings separated by one-half the wavelength. Maximum energy can thus be picked up, and the amount of this energy will be practically equal to the amount that can be picked up by a simple wire antenna one wave-length long.

It is not practical, however, to have such gigantic loops for reception purposes. What is done is to bring down the size to limits which will allow of operation in a room. Thus, for the average loop, about ten turns of wire wound in a form, say one metre square, may have the same inductance as the theoretical half-wave loop, but is capable of receiving approximately but 3 to 5 per cent of the energy, invested depending upon the wave-length-broadcast range,

So it can easily be seen that the loop appears to be a rather inefficient collector of radio wave energy. How, then, does one account for the very wonderful reception being accomplished daily by those who use loops instead of an outdoor antenna?

This is readily and most satisfactorily explained when:—

- The set used is a sensitive one.
- Radio frequency amplification is used.
- Regeneration is used.
- The loop is near or in a steel structure.
- The loop is in the neighbourhood of a number of antennas.
- Radiation takes place from a more powerful receiver in the vicinity.
- The territory is free from "dead spots."

Each condition in itself is a very important item and, in some cases, there may be present several contributing reasons for the excellent results being obtained with a loop.

The first condition mentioned is the use of a sensitive set. Just what constitutes a sensitive receiver? A brief summary of the existing types of circuits will help us answer the question.

Types of Radio Receivers.

There are five distinct classes of receivers: non-regenerative, regenerative, radio frequency, super-regenerative, and super-heterodyne. In the first class, the use of a loop is restricted to an extremely short radius from the broadcast station, since this type of set is neither sensitive nor selective. It is wholly inadvisable to use a loop with such a set.

The regenerative set includes the regenerative reflex and the greatest success can be obtained by using a loop instead of an aerial. Under the category of regenerative sets is included the use of inductive or capacitative feed-back in conjunction with a detector and one or more stages of audio frequency amplification. Only one thing can be said about using a loop with a set of this kind; and that is, when an inductive feed-back is employed, be careful not to allow the loop to get too near the tuning inductance, as excessive feed-back resulting in oscillation will be produced.

The use of a loop with a tuned radio frequency type of receiver has been condemned by some who have experienced poor results with the arrangement. But there is no reason for not being able to get just as good results with a loop as with an outdoor antenna on this kind of set. No matter whether the set be of the straight tuned radio frequency type, neutrodyne, superdyne or other modification, the loop can be successfully employed. By using proper care in preventing the loop from receiving energy from the field set up by the radio frequency transformers, the trouble is at once remedied. This can be done either by placing the loop at a safe distance from the set or else by completely shielding the latter. Of course, the formality of dispensing with the first radio frequency transformer will have to be enacted and the loop directly connected to the grid of the first radio frequency tube. The more interstage regeneration which takes place, the better the selectivity, sensitivity and volume, but take care to keep the loop far away.

—“Radio News”

“A Thought for To-night”

Arrangements have been made by 4QG to broadcast as above, the “From My Notebook” articles that have been written by Mr. Will H. Lister for his weekly paper, “The Moreton Mail.” Mr. Lister will be known to many listeners as the writer of short verse which, from time to time, have appeared in the daily newspapers, and these “Thoughts,” because of their up-lift character, will be much appreciated, and are a welcome additional feature to 4QG's programmes.

HOW 1YA (NEW ZEALAND) BROADCASTED THE ROYAL TOUR.

From New ealand comes items of interest in connection with the visit of Their Royal Highnesses the Duke and Duchess of York to Auckland. Station 1YA was on the air at 7.30 a.m., and transmitted an account of the entry of the Renown into Auckland harbour by means of a portable short-wave transmitter, placed upon the deck-roofing of a ferry boat taking passengers to see the giant warship enter the harbour. Mr. J. M. Prentice was in the charge, and maintained a running fire of comment on what was happening, until a sudden rainstorm caused the transmission to end. His humorous description of being driven to shelter under a tarpaulin in a frantic endeavour to save the costly apparatus from the effects of the rain gave a most unusual finish to the performance.

With a microphone on the roof of an many-storeyed city building, and Mr. Prentice perched precariously beside it, Station 1YA was able to transmit a detailed description of the Royal procession from Government House to the Town Hall, Auckland. Every detail of the decoration, streamers, etc., were placed upon the air, and the description of the Royal party as viewed from the roof was greatly appreciated by the country listeners. Unfortunately official permission to broadcast the speech of H.R.H. at the civic reception was not forthcoming, to the equally great disappointment.

A WELCOME TO THE DUKE AND DUCHESS.

Tune in, Renown; we well remember you;

A happy second greeting to our seas.

Tune in, Renown, and hear a welcome flung
From 3LO across the southern breeze.

To Henry and his Lady fair, we sent

A greeting over waves that roll and toss,

A greeting and a hope that you will love

Our newer Britain neath the Southern Cross.

Canberra waits, our city yet to be.

She waits the magic of your Royal hand,

To bid her rise and take her rightful place

As sovereign city of our southern land.

As Duke and Duchess, we will watch you pass,

And mile on mile will send its ringing cheer;

But more than this, we hope to meet you both

As man and woman and to count you dear.

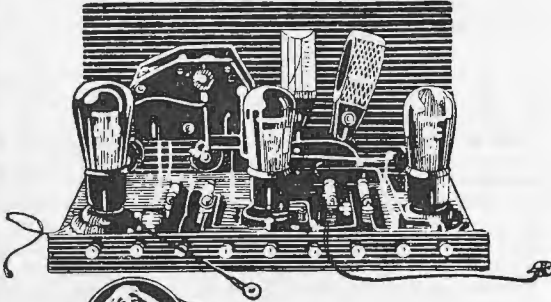
So welcome, Royal Henry, Duke of York;

Elizabeth of Glamis, welcome too.

From 3LO for all the sunny south

We send a welcome warm for both of you.

The R.C. Threesome!



3 valves

3 hours to make

£ 3-15 for parts

A Screwdriver is all you need!



NO longer need you postpone getting a 3-valve set "until your ship comes in." The Ediswan R.C. Threesome has arrived—another triumph for Ediswan. Its simplicity, its economy, its wonderful reproduction, would commend it—its low first cost makes its simply unbeatable. The circuit employs resistance-coupling; valves used are the Ediswan RC2 and PV2—famous for their economy and freedom from microphonics.

The quality of reproduction is amazing—beautiful, mellow—not a trace of the throatiness evident in transformer coupled sets.

Instruction Book and Blue Print Free on Request.

Fill in the Coupon and post to our address, and blue print of the wiring diagram and a book of simple-to-follow instructions will be sent you **ABSOLUTELY FREE AND WITHOUT ANY OBLIGATION.**

If you can use a screwdriver you can make this set in one evening — and enjoy reception the same evening.

EDISWAN

The Ediswan Electric Co. Ltd.

156 Creek Street, Brisbane

HILL IN THE COUPON NOW!
To the Edison Swan Electric Co., Ltd.
Please send me, post-free, a copy of the "R.C. Threesome" Instruction Book and Blue Print.
Name.....
Address.....
Q.R.N. 1/4/27.



Shown here is Mr. Donald B. Knock, who has recently joined the staff of Amplion Australasia Limited, as engineer salesman. Aged 28 years and a native of Manchester (England) he was educated at Wigan Grammar School, commencing the study of the radio science as a hobby whilst apprenticed as mechanical engineer.

During the war Mr. Knock served in the Royal Naval Air Service in the observation and transport section in the Middle East and Southern Russia. After demobilisation he carried on with his radio work while acting as sales representative of the Vulcan Motor and Engineering Company.

In amateur radio circles in Great Britain he was known as 6XG, and under this call sign his station carried out the first low-power two-way communication between England and America. He was with the Sterling Telephone and Electric Company Limited at the British Empire Exhibition at Wembley as their sales representative. In 1925 he served with the British Broadcasting Co., Ltd., as engineer, leaving that company for Australia in 1926. Although he has been in Australia only a comparatively short time, he has made himself extremely popular in radio circles.

A FALSE ALARM.

One night lately a member of 4QG's staff was just leaving the building when he noticed a crowd of people on the opposite side of the street. On making enquiries he was informed that they were trying to locate what direction the sounds of revolver shots were coming from, as by the number fired it seemed as if the murderer was making sure of his work. Another shot was heard, and enlightenment dawned on the 4QG man. He reminded the crowd that 4QG was situated on the roof the building opposite, also that this was the night that Uncle Ben and Uncle Jim were to race at the Speedway for the much coveted prize, the Green Trousers, and that the reports they heard were from the starter's gun.

A.W.A. Radio Guide for 1927

A HANDY COMPENDIUM.

We have seen many radio text books, but few, if any, can compare with the Radio Guide for 1927, published by Amalgamated Wireless (A.'sia.), Limited.

A bulky book in quarto size, numbering in all some 176 pages, and filled from cover to cover with information that every keen radio man enjoys reading.

Not too technical, but withal instructive and absorbingly interesting; a handy reference book, filled with news and data that no radio man can afford to be without.

This remarkable book includes illustrated articles on every phase of Australian wireless activity. Many full page photographs of the latest commercial transmitting and receiving equipment, several colour plates, large range of technical and service articles, many charts, and much invaluable wireless data. Twelve home construction diagrams, call signs of coast stations, ship stations, short-wave stations, and experimental transmitting stations.

At the absurdly low price of 1/- (posted 1/4), this book should find ready entrance to all radio fans' books shelves. It is safe to say that the Radio Guide for 1927 is the biggest, best, and cheapest radio handbook yet published in Australia.

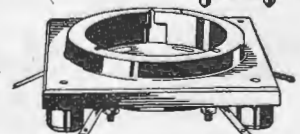
Our copy is from Messrs Amalgamated Wireless (A.'sia.), Ltd., King House, Queen Street, Brisbane.

LOEWE Multiple Valves

*A Marvellous Advance
in the Radio Art*

Are meeting with exceptional success everywhere. Because of their high sensitivity and simplicity they permit of the construction of extremely powerful yet inexpensive local and long range sets, the ideal instruments for music lovers.

*Sole agencies open
for various territories,
radio factors of good financial
standing please apply.*



Loewe Radio G.m.b.H.
BERLIN—STEGLITZ WIESENWEG 10

NOW!

The EMMCO SUPER-HET. KIT



A long-felt want
comes true.

You can own a
super set and
You can build it
yourself.

Consists of—Aerial coupling
coil, plugs, three interme-
diate transformers, filter,
and oscillator. All prop-
erly matched and balanced.

£7-0-0

AT ALL DEALERS

Manufactured by

**Electricity Meter Mfg.
Co. Ltd.**

SYDNEY, N.S.W.

At Last!

After months of experimenting, testing, and
retesting, Emmco—pioneer of radio and creator
of the finest radio parts, now announces

A New

Super-Heterodyne Kit for Home Constructors

No hit-or-miss combination in this kit. In
every separate unit and as a whole it is perfect.
It represents more value for price than ever be-
fore.

Full size blue prints, wiring diagrams, and full
details for building, go with it. Follow these
and—

You Can't Go Wrong

Start in and BUILD ONE NOW. It is a set
you will be proud to own.

Whispers from Maoriland

A deputation from the New Zealand Amateur Radio Transmitters' Association recently awaited upon the Postmaster-General, to ask that restrictions in regard to wave-lengths and the nature of messages transmitted be removed. Mr. J. E. Strachan, President of the Canterbury Progress League, who acted as spokesman, in the course of his address to the Postmaster, said: "The sending of friendly messages overseas by young men is one of the most powerful means of bringing about among nations that understanding which will prevent war." The Postmaster-General said that he would give the matter his attention and forward his reply at an early date.

It is not uncommon for the surgeons on ocean-going boats to receive requests for medical advice from smaller vessels without a doctor on board, but Dr. Tudpole, of the liner "Tamaroa," received two such requests on the vessel's last trip from home. Call No. 1 came from a Spanish tramp vessel, asking for directions for the treatment of a seaman who had contracted pleurisy after an injury to his chest. Dr. Tudpole gave the necessary instruction in a series of messages, and he had the satisfaction of learning, some time later, that the patient was making good progress. Call No. 2 came from the "Mahia," the surgeon's advice being required on this occasion in the case of a seaman who had contracted a septic hand and arm. Again Dr. Tudpole had the pleasure of learning that his unseen patient had made rapid progress.

During the visit to Wellington of the H.M.S. "Reynold," representatives of the Amateur Radio Society of Wellington were entertained at dinner upon the warship by Warrant-Telegraphist G. H. Rowsell. There was an interesting talk on wireless matters, and Warrant-Telegraphist Rowsell showed his guests the many features of the mighty warship.

Many, through illness, etc., were unable to be in the city during the arrival of their Royal Highnesses, and for those who stayed at home the Broadcasting Coy. made due provision—that is, for those who possess receiving sets. Mr. J. M. Prentice, from a point of vantage on the route, gave a running account of what he saw, and this was excellently transmitted to those who listened in. His comments on the scene prior to the arrival of the procession were at times highly amusing, and the microphone picked up the music of the bands and the noise of the crowd. The brevity of the description of the actual procession let the listeners know that it was not travelling at a walking pace.

Sir Thomas Beecham seems to have a grouch, a very bad one indeed, against radio, for did you all notice his remarks in the press that he had "never yet heard on any wireless set the reproduction of a piece of great or good music that was not ghastly." I do not know if Sir Thomas has a very small son or not, but it would seem to me that he has, and also that that selfsame small son has manufactured a wireless set out of his own head, "just to surprise daddy!"

The official opening of the Christchurch 3YA Broadcasting Station took place recently. The Post-

master-General (Hon. W. Nosworthy) consented to perform the opening ceremony, and after an opening musical item, he made a short address, in which he referred to the progress made in broadcasting in this Dominion. He referred to the opening of 1YA, Auckland, being the first milestone, and 3YA the second, and expressed a hope that Wellington's new station would be opened before many months had elapsed. He believed that the time was not far distant when we should be listening to the relay of a powerful station now being erected in the old country. Bishop West-Watson spoke of the great possibilities of radio for country listeners, and expressed a hope that its influence would be felt in the same way as in the rural districts of England.

This is the "off" season for radio. The attractions of the open air and the distractions of static cause the receiving set to be neglected temporarily. But already a growing army of listeners is looking forward to the coming winter nights, when the set will be the centre of interest in the home.

Miss Eileen Harper, of Melbourne, the winner of the 3LO competition, who has been touring New Zealand, has endeared herself to all. Her most natural and unassuming disposition is so seldom met with these days that it has indeed been like a breath of the good old days to come into contact with her young and winning personality.

HELPFUL TO A RADIO SET

Exide

BATTERIES



For a silent, clear
reception, install an
Exide
Wireless Battery

EXIDE BATTERY SERVICE

(Q) LTD.

PETRIE BIGHT, BRISBANE

S.A.S.

When the shadows lengthen, your wireless set becomes interesting in the home. It is entralling, but unless efficient batteries are used to give uniform current, it would be displeasing. To save disappointment be sure of efficiency by seeing that your set is fitted with EXIDE BATTERIES.

Questions Answered

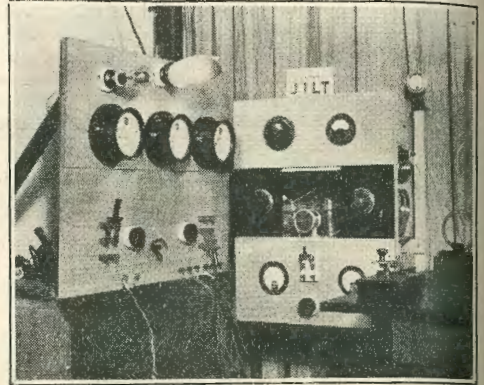
W. S. Solman, Ipswich.—You will be able to secure pure aluminium from Messrs Edgar V. Hudson, Charlotte Street, Brisbane.

"A.S." Gayfield, Gladstone.—(1) The spark plug is not the only part of the ignition system which interferes, as the contacts of the make-and-break can cause a lot of trouble. In most of the modern house-lighting plants, the ignition coil is fed direct from the 32 volt accumulator which in turn supplies the energy for lighting purposes. Thus this contact-breaker interference will find its way into the house wiring and ultimately into your set. We suggest that you experiment with a filter circuit in the leads leading to the coil and contact-breaker. (2) Modern broadcast receivers are now fitted with at least two stages of radio frequency amplification, enabling excellent reception to be secured without bringing the set close to oscillation point. Under these conditions spacing of the leads is not essential.

"Reader," Nundah.—A .0005 condenser would be quite suitable for a wave-trap; it should, however be of good quality. A circuit diagram for a wave-trap using one condenser has been posted to your address.

"Puzzled," Clayfield.—We would refer you to the Reinartz short-wave receiver article published in our January, 1927, number.

"J.V.D.," Thursday Island.—The issue you refer to has sold right out, and we cannot therefore send you a copy.



JAPANESE 1LT.

A well known Jap. station popular among the Aussie hams. On the left is the power and charging panel. The transmitter is the panel on the right.

Removal Notice !

Owing to our urgent need for expansion, caused through greatly increased business, we have been forced to acquire larger premises. From now on we will be located at—

160 Edward Street, Brisbane

(A few doors from Elizabeth Street)

Old friends as well as all those interested in radio, or general electrical goods, are cordially invited to call in when passing. We control the following popular radio accessories:—

All American Transformers
B Battery Eliminators
Super-Het. Kits
Toroid Coils
Bakelite Dilecto

Trimm Phones and Loud Speakers
Balkite Battery Chargers (including
the famous Trickle Charger)
Wires and Cables

W. E. PETERMAN

(Late Perry House, Albert Street)

Complete Electrical Supplier

Now 160 Edward Street, Brisbane

(A few doors from Elizabeth Street)

"Larger and Better than Ever"

AWA
A BOOK—
You cannot afford to be without—

The AWA RADIO GUIDE for 1927.

The Most Comprehensive Wireless Handbook yet Published in Australia

176 *Pages of Interesting Informative Wireless Matter.*

PRICE 1/- POSTAGE 4d. Extra

Published by
Amalgamated Wireless (A/sia) Ltd.

IT INCLUDES :

Illustrated Articles on every phase of Australian wireless activity. Many full page photographs of the latest Commercial Transmitting and Receiving Equipment. Several Colour Plates. Large range of Technical and Service Articles. Many Charts and much Invaluable Wireless Data. Twelve Home Construction Diagrams, Call Signs of Coast Stations, Ship Stations, Short Wave Stations and Experimental Transmitting Stations.

Amalgamated Wireless (A/sia) Ltd.
King & King Chbrs, Queen St., Brisbane

Enclosed
Copy of A.W.A. Rad'o Guide.

Name

Address

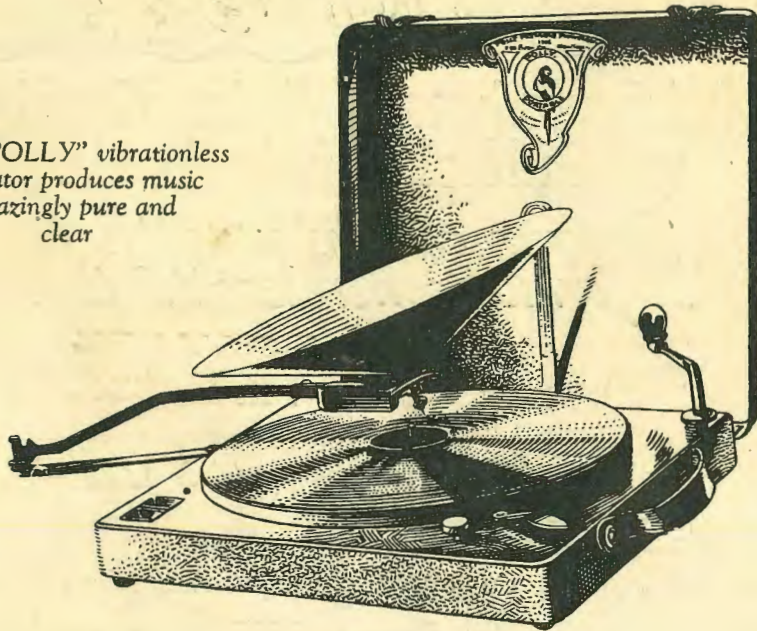
Send for Your Copy Today—



Take **POLLY** with you

For Easter, for Picnics, for Car Jaunts, for Week-ends, etc. Wherever you are you'll find "Polly" the best pal and most congenial companion. "Polly" is no larger than a collar-box but is made of steel with an unbreakable silent spring. "Polly" will stand plenty of hard knocks as well as producing music equal to a high-grade cabinet phonograph.

The "POLLY" vibrationless oscillator produces music amazingly pure and clear



£4-10-0

"Polly" weighs 11 lbs., when it is carrying 6 records inside and measures only 12 x 10 x 2½ inches thickness.

WIRELESS SUPPLIES LTD.
ASCOT CHAMBERS, [Corner Queen and Edward Sts.]
BRISBANE