

The Queensland Radio News

"Your Own Wireless Journal"

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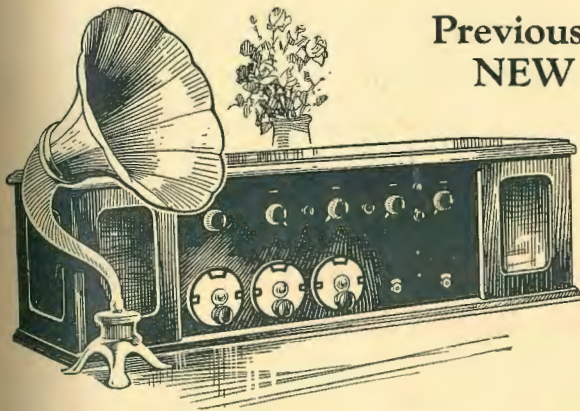


Vol. II.

Saturday, 1st May, 1926

No. 4

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Special Features of the 1926 PACIFIC

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SPECIAL SYSTEM OF WIRING—reducing capacity effects and distortion.
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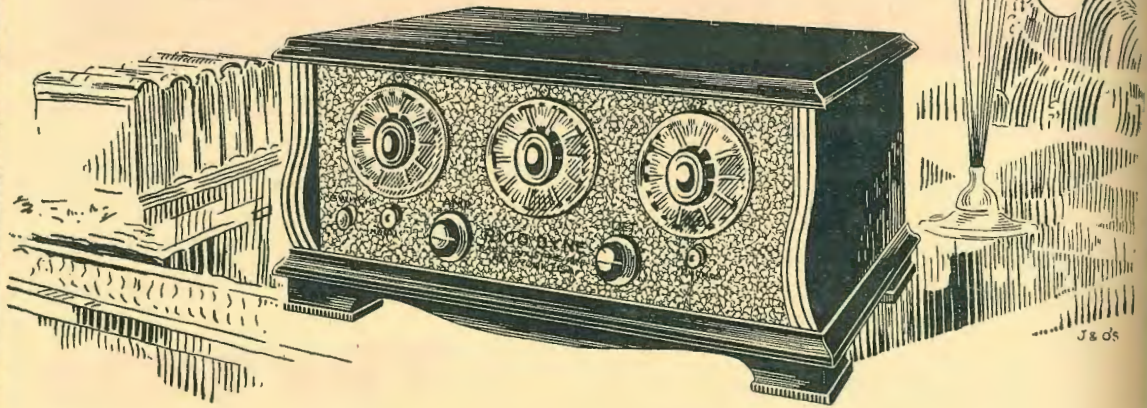
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and

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(Instructor, Marconi School of Wirless, Sydney)

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Read This Letter from the President of the All Clubs' Council

March, 8th, 1926.

A. McLeod, Bookseller,
Elizabeth Street,
Brisbane.

Dear Sir,

It has been my pleasure to peruse the advance proof of "Wireless," by Messrs. J. W. Robinson and G. Williams.

Wireless experimenters and club members will welcome this book, as it deals with technical subjects in a simple manner, which can be quickly understood.

I would also recommend it to the broadcast listener who seeks information on the transmission and reception of programmes, or the control of his set.

The book is profusely illustrated with circuit diagrams and photographs, and is written for Australian conditions, by two well known Australian radio experts.

In fact, here is a book which every prospective buyer, or owner, of a radio set should possess.

I congratulate the authors, and feel sure their efforts will be appreciated by all wireless enthusiasts.

Yours for radio,

HUBERT KINGTON,
President, Woolloowin Radio Club.
Chairman, All Clubs' Council.

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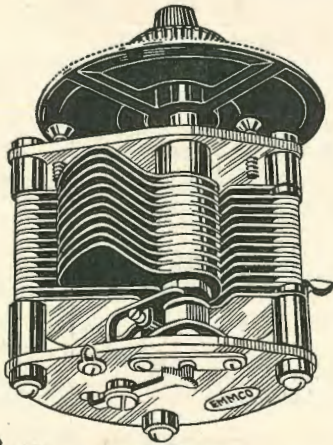
4QG's Reception Hall

Taken from the studio doors. This photograph of the beautiful Reception Hall at 4QG scarcely does it justice. It was taken early in April, before the builders had evacuated it. But it serves to give some idea of the handsome architecture that is incorporated in the design of the station. The dome (of which only a portion can be seen) is a magnificent piece of work and when completed will house an indirect lighting scheme.



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Open Circuit Jack .. 2/6
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To Diggers, Anzac Day, '26

Eleven Anzac days have been and passed,
Since that grey dawn that saw the Diggers' rise
In all their manhood through the foeman's blast,
To plant our flag forever in the skies.

Eleven Anzac days, and each more dear,
For each one shows their glory still more real;
In paying now this tribute which you hear,
We 3LO but speak what all must feel.

For not alone the crescent lighted shore,
Beheld their steady valor and their worth;
Their deeds before the stubborn western door
Still echo and re-echo round the earth.

They paid the price ungrudging; still they pay;
They fade away, good soldiers never die;
But in Australia's soldier of the day,
The spirit of the Digger lives for aye.

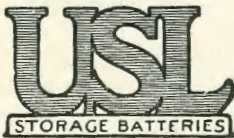
You Diggers who went fearless at the call,
To you Australia owes unending debt:
We 3LO salute you one and all
On this, Australia's day—lest we forget.

Long Reach to Bring a Son to His Mother

Away up in Central Queensland where the gidgee plains extend for miles there are many cattle and sheep stations which greatly appreciate the programmes transmitted by radio. During an announcement made at 3LO on the 7th April last, one of these long distances listeners-in at Longreach, Q., was interested to hear that it referred to a young fellow he had met that day. He at once rang up the Avondale station and informed the owner, Mr. Rutherford, that his new station hand, Mr. F. Creber, was wanted urgently in Melbourne where his mother lay sick. Mr. Creber at once set out and arrived in Melbourne after a journey of 2000 miles in nine days. Mr. Creber had not seen his people for the last three years, and had been working from station to station in the far North without keeping those at home informed of his whereabouts. When one looks at the map and realises that this message was delivered at a distance equivalent to that of Italy from England, and that there was no other possible hope in life for Mr. Creber's whereabouts becoming known to his relatives in such a wonderfully short space of time, one realises the great boon that wireless has become to those who use it not only as an entertainment but as a service to humanity.

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THE QUEENSLAND
RADIO NEWS



A Magazine for Amateurs
A. T. BARTLETT, Editor

THE EDITOR'S PAGE

Is Radio Developing Our Love for Good Music?

IT must be recognised that until the advent of the Radio Programme, the wonderful works of Beethoven, Wagner, Bach and the more modern masterpieces of Kriesler, Elgar or Saint-Saens and other famous masters, had never been heard in thousands upon thousands of homes throughout the world. Because of this, many great musical critics look upon the introduction of Broadcasting as the greatest event in the art of music.

Two years ago, in England and America, the listening public was inclined to disfavour the Broadcasting of what they termed "high-brow" music. They wanted more popular numbers—jazz and the like. The Broadcasting companies, however, continued to engage highly professional artists to Broadcast—and as these people's repertoires were practically confined to music of the better class, the programmes still featured a sprinkling of classical music.

Radio was a great novelty then, and the Radio public listened indifferently to such numbers simply because of the novelty. Little by little, however, the beautiful themes so frequently revealed in the works of great masters captivated them. They listened more and more intently—unconscious of the fact that meanwhile their musical temperament was undergoing a great change. To-day fully 80 per cent. of the listening fraternity of this and other countries can intelligently follow the emotions expressed in a good interpretation of a classic. Indeed, the great majority have come to look upon programmes devoid of such music as second rate.

Such a reform must leave its impress upon the morale of a community. Psychologists tell us that an appreciation and love of good music is a tremendous factor in the development of intellectual and high-minded citizens. If this be so, it is indeed good to know that Radio has accomplished so great a service to humanity.



Build a *better* set with IGRANIC Radio Devices—



Igranic Audio Transformer.
Correctly designed for purity
of reproduction. Guaranteed
free from distortion. The
finest transformer procurable.
3-1, Price 30/-
5-1, Price 32/6

The world wide prestige and popularity enjoyed by IGRANIC Radio Devices is not due to mere chance. It is because they are the finest Radio parts procurable to-day, and are built to one quality only—the highest.

Every part is the result of careful research, correct design, and skilled craftsmanship expressed in the finest quality materials.. Is it to be wondered they are supreme? Yet, withal, they are moderately priced.

IGRANIC Radio Devices may cost a little more but they are infinitely cheaper in the long run. They will give years of troublefree operation, make your Radio activities more pleasing and enable you to hear Radio at its best.

IGRANIC Radio Devices are sold under a guarantee; are backed by a sound technical service which is free to all users; are British made, and represent the finest value in Radio parts to-day.

The first Loud Speaker ever made for wireless was a BROWN. Such lengthy experience must obviously be productive of an immeasurably higher standard of results. There is no distortion with the BROWN, nor is there any tendency for the instrument ever to become overloaded with a greater volume of sound than it can conveniently handle.

If your previous experience with Loud Speakers has been unsatisfactory, for your own sake you should hear a BROWN—Britain's first and finest Loud Speaker. We are confident that you, too, will quickly appreciate its remarkable true to life reproduction.

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Insist on—
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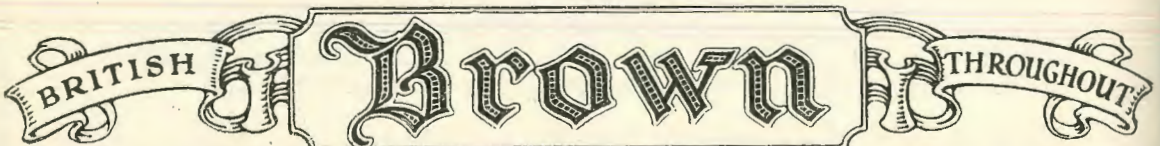
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The Premier of Queensland officially opening Station 4QG, Brisbane.

Station 4QG Officially Opened

Brief but Important Ceremony Broadcast

The beautiful reception hall of Station 4QG presented an animated scene on the afternoon of Thursday, April 22, when quite a large number of guests witnessed the official opening of Station 4QG by the Premier (Hon. W. McCormack).

Invitations were issued by the Director of the Station mostly to Cabinet Ministers and their wives. Altogether there were over 100 people present to witness the ceremony. The Savoy Orchestra and other artists were broadcasting prior to the opening speech, and those in the reception hall were entertained by their music through a Radiola super receiver, which was stationed in one of the little alcoves.

The Premier, who spoke from the reception hall, paid a tribute to the construction of the wonderful broadcasting apparatus installed at the station. He was proud, he said, to know such splendid apparatus was designed and manufactured in Australia. Mr. McCormack then stressed the educational value of

radio, and stated that in the near future Station 4QG would be utilised to educate children in isolated places where it was practically impossible to send teachers in person. He concluded by urging all listeners who had not taken out licenses to do so. It was useless, he stated, to complain of mediocre programmes when there were a great number of people listening in nightly who did not hold licenses.

The programme was then resumed from the studios, and the Director invited those present to inspect the station. He advised everybody to touch nothing in the transmitting room. Needless to say, his advice was, without exception, followed—some of the ladies venturing no closer than six feet from the panels.

And thus a long-awaited-for and much-delayed event has at last come to pass, and this journal in common with all radio enthusiasts, extends its best and sincerest good wishes for the prosperity of Station 4QG.



A CORNER OF THE BIG STUDIO AT 4QG.

This studio is used for the broadcasting of orchestral, band, choir, and ensemble numbers of all description. Its dimensions are approximately 26ft. x 17ft., and it is effectively draped in shades of beige and blue. As will be seen, a heavy plate glass window at the end of the studio gives the operator an uninterrupted view of the studio.

The adjoining smaller studio is used for solos, duets, or lecturettes, etc. Its dimensions are 18ft. x 14ft. 6in., and is beautifully draped in royal blue, relieved with old gold. Both studios are sound proofed from each other, thus a transmission can be taking place in the small studio, whilst a rehearsal is being held in the larger one.



THE CONTROL PANEL.



A PORTION OF 4QG'S BIG AIRY TRANSMITTING ROOM.

These photographs were taken by our photographer before the finishing touches had been effected and show the work (especially of the studio) at a very rough stage. By the time this issue is in the hands of readers furnishings will be installed, carpets laid, and the finishing work practically completed.



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Lower Cost!*

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**PHILIPS
RADIO VALVES**

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**All the above are obtainable in English or Standard
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The A.306 and A.310 are also obtainable in 199 Cap

A Very Selective Three Valver

Enabling 4QG to be tuned in or out at will
without the use of Wave Traps

(By F. NOLAN.)

(It is our pleasure to present in this issue a most selective circuit which we feel sure will be available to many local enthusiasts who find difficulty in eliminating 4QG, and who do not desire to utilise a Wave Trap with their present receiver. With this set it is possible to completely tune out the local station and bring in Southern music, even within a half-mile radius of 4QG's aerial. Mr. Nolan has worked for some considerable time endeavouring to devise such a circuit, and in the circuit he describes herewith, we believe his efforts have met with success. As in the case with all selective receivers tuning is sharp and a little volume is lost, but these points are greatly compensated for by the fact of being able to tune in to three or four broadcasting stations instead of being confined to one station.—Editor.)

Ever since 4QG went on full power the writer has been experimenting with every conceivable type of circuit (excepting the Super Het), with the hope that one of them would eliminate the local station. I have built and tried P.1's, Cockaday, Reinertz, Hartley, Colpitts and Neutrodyne Circuits, with little or no effect. Living, as I do, within a half mile radius of 4QG, I could hardly expect much success to follow my efforts. At last I tried an old favourite circuit which many will recognise by the illustration. In the original circuit, all coils were fixed in relation to one another, but I altered all this to various ways of my own, and what, to my mind, is the best method of coupling, resulting in the most selective receiver I have yet handled.

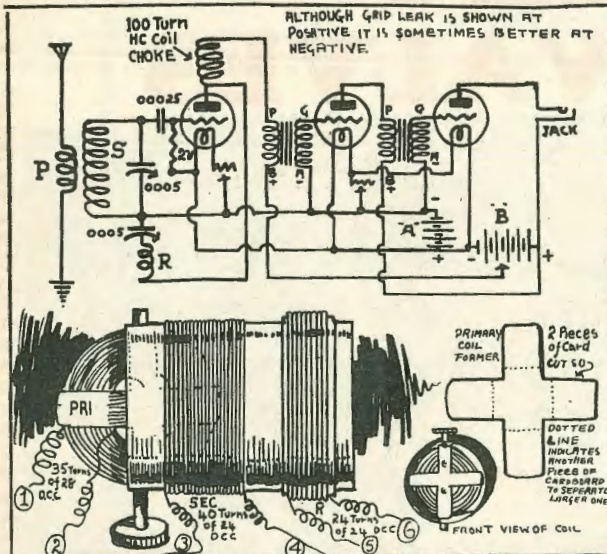
Now to wind the primary. Take a piece of cardboard and cut two crosses as illustrated, measuring two and three-quarter inches across both ways. Cut a smaller cross measuring an inch across both ways. Then glue a large cross to each side of the smaller one. When dry, wind 35 turns of 26 or 28 gauge D.C.C. wire on this former, fastening the outer end on to the former with sealing wax. Next take the secondary coil and punch two holes through the former, one on either side five-eighths of an inch from the end. Through these holes pass a quarter inch wooden spindle to which the primary coil is fastened with two small wood screws near centre of primary coil. Having done this, see that the primary coil rotates freely inside the secondary coil.

Now to wind the reaction coil. Take a cardboard former one and a quarter inches wide by three and a quarter inches in diameter. On this, wind 24 turns of D.C.C. wire. This coil must slide freely on secondary former.

The following are the components required:—

- Two .0005 variable condensers.
- Three valves and sockets
- Two rheostats to suit valves
- Two transformers, 5-1 and 3-1 ratios.
- One coil mount
- One mounted 100 turn honeycomb coil
- One .00025 fixed condenser
- One 2 meg. ohm grid leak.
- One grid leak holder
- One single circuit jack
- Six terminals
- Two shillings worth of Bus-bar wire
- One baseboard, 15½ x 10
- One panel 16 x 8

Mount variable condensers, rheostats, jack, aerial, and earth terminals on panel. To mount tuning coil take a round piece of wood three inches long and one inch in diameter. Fasten one end to baseboard with wood screw, then fasten tuning coil to top of this upright with wood screw at primary coil end. The object in fastening it in this manner is to allow ample room for moving reaction coil. Now mount your valve sockets, transformers, etc., to baseboard. A strip of three-ply wood two inches wide by six inches long well waxed and fastened to back of baseboard will serve to carry battery terminals.



By following the instructions mentioned below, any average amateur should be able to construct for himself a similar set that will solve his problem of overcoming 4QG's interference.

Take a cardboard former, 3 inches in diameter and five inches in length. On this former wind 40 turns of 24 gauge D.C.C. wire, starting one inch from one end. When completed this will be your secondary coil.

Now connect your tuning coils. No. 1 in diagram goes to aerial terminal, No. 2 to earth, No. 3 goes to fixed plates of secondary condenser and grid condenser. No. 4 is connected to the moving plates of secondary condenser, negative filament and fixed plates of regenerative condenser. No. 5 goes to moving plates of regenerative condenser, and No. 6 goes to plate of detector valve. The remainder of the wiring can be easily followed from the circuit diagram.

Using UV201A's, 6 to 15 volts are ample for the plate of the detector, and the set will almost oscillate with three volts on plate.

Tuning with this set when the primary coil is at right angles to the secondary is extremely sharp, and 4QG can be tuned out on two degrees of the tuning condenser. 3LO can be brought in on the loud speaker quite clearly while 4QG is transmitting on full power.

The volume of this receiver is all that could be desired, when listening to the local station. When listening to Southern Stations while 4QG is on the air,

nothing but a strong carrier will be heard from 4QG until the reaction condenser is slowly opened.

3LO's carrier will be found about seven to ten degrees below 4QG, and 2BL five or six degrees still lower. Should there be any point of which the reader is not too sure, the writer will be pleased to answer any query provided a stamped addressed envelope is forwarded also.

Address: F. Nolan,
All Saint's Rectory, Wickham Terrace, Brisbane.



"IT'S GREAT FUN."

So say Thea and Aileen, of Newmarket, Brisbane, two young friends of Uncle Ben. By the intent expression of Thea it would seem she was something of a critic. Aileen's expression suggests that she knows something. Probably she noticed the aerial was disconnected.

A Noble Spirit

Welfare of fellow-amateurs more important than personal gain.

Mr. Nolan, the author of this article, has proved himself to be a man of fine principles. He refused, point blank, an offer by a Brisbane Radio House whereby he could have made money through the marketing of his coils, and has chosen to offer this article to "The Queensland Radio News" so that readers and fellow-amateurs may make these coils themselves at little cost.

The royalties which Mr. Nolan would have collected on the sale of these coils would have been considerable, and we are proud to see such a splendid spirit manifested. It is the REAL spirit. As we have pointed out before, helping each other is a thousand times better than "keeping it dark."

the volume is somewhat reduced, but a certain amount of volume must always be lost to gain selectivity. Greater volume could, of course, be obtained with resistance coupling.

To those living outside the city area, say three to five miles, this circuit and these special coils should come as a boon, for they should get far better results than the writer, who is living practically on top of the station.

Experience has proved the following to be the best method of tuning. First turn primary coil at right angles to secondary coil then slide reaction coil right on top of secondary coil. Partially close reaction condenser, light filaments and tune in 4QG. Further adjust primary, which when properly adjusted, will make the set absolutely silent two or three degrees either side of 4QG's reading. When adjusted, thus

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Built with more plate
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Roma Street, Brisbane

"The House of Westinghouse"

People You Hear from 4QG



REV. J. COSH,
Of St. Ann's Presby-
terian Church, Brisbane,
from whence Church
Services are frequently
broadcast.



Hon. W. McCORMACK,
Premier of Queensland,
who officially opened Station 4QG on
the afternoon of Thursday, April 22,
at 3.30 o'clock.



MR. B. KELLY
(Flautist),
A member of 4QG In-
strumental Quartette.
His solo items find
favour among 4QG's
listeners.



MISS MAY DOBBYN.
Leader, Vice-Regal Orchestra
at Lennon's Hotel.



MISS NELL DOUGLAS GRAHAM
(Elocutionist).



MISS C. SPRINGALL
(Elocutionist).

PHILIPS VALVES REDUCED.

We have been advised by Philips Glow Lamp Works Ltd., of Sydney, to the effect that the popular Philips Radio Valves have been substantially reduced in price. The new prices stand as under:—

D1, D2, D4, D5, and E	7/- each
A110, A306, A310, B406, C507	13/6 "
A106 and B6	17/6 "
D6	10/- "
A141	20/- "

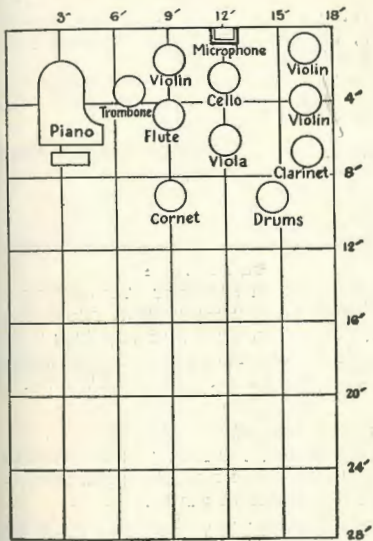
Arranging Instrumental Ensembles Before the Microphone

There are very few broadcast listeners—or radio amateurs who are not keen to read of the methods and systems employed by modern broadcasting studios in the transmission of programmes. A great many have not the faintest idea of the care which must be exercised in arranging artists—particularly ensembles—before the microphone. The following article written from data contained in an article by T. L. Bayard in "Popular Radio," explains how one, A. G. Popcke, an engineer attached to the staff of KDKA, devised a system of arranging instrumental ensembles before the microphone—a method which is now used in many broadcasting studios throughout the world.—Editor.

While the child is growing from a tiny baby of a few pounds to a strapping big boy of more than a hundred pounds, the mother, who sees him every day, is scarcely conscious of his increase in size from month to month, and realises that he is growing rather by observing his change in moods and expressions than by making particular note of his increase in size. But the grandmother or the aunt who sees him only at intervals of three or four months, is quick to observe the change in size, and the increased dexterity with which he uses his body and powers of expression.

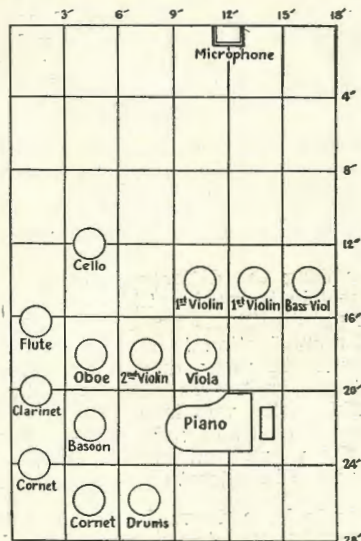
three or six months ago, and he seldom realises to the full the extent of improvement in radio transmission that is made in a year's time.

This improvement is strikingly revealed by two charts made by A. G. Popcke, an engineer attached to the staff of Station KDKA, showing the proper position of orchestra instruments in a broadcasting studio now and two years ago. Mr. Popcke is a musician in addition to being an electrical engineer, and he checks the programme daily to learn how different groupings of instruments affects the blending and tonal quality of the orchestra and band selections.



THE OLD "HUDDLE" METHOD OF GROUPING MUSICIANS.

Because of imperfections in the transmitting circuit, which prevented much amplification of sound between the microphone and the transmitting set, the orchestra used to be crowded together—a system which gave improper tonal values to the various instruments. Compare this group with the one illustrated opposite.



THE MODERN SYSTEM OF GROUPING THE MUSICIANS.

Note that the microphone is at one end of the studio and the orchestra is scattered about the far end. This arrangement is now possible because of the improvements made in the transmitting circuit, which permits the sound to be greatly amplified without loss of quality.

Most of the radio listeners are like the mother who lives with her child every day and who fails to note the weekly growth and improvement. After one acquires a radio set and gets a taste of the fascination of listening to the radio programmes, he usually hears them more or less regularly; it is seldom that a confirmed fan will forsake his set for a time and turn a deaf ear to all radio programmes for a long period of months. As a consequence he cannot readily compare to-day's programme with the one

Two years ago the imperfections of the best transmission sets then in use made it necessary to group the orchestra instruments as close to the microphone as possible. The nearest instruments were two feet away, and the farthest often of necessity would be eight to ten feet away—four or five times the distance from the microphone to the nearest instruments. This made the nearer instruments sound much louder proportionately, than the instruments farther away, as the strength with which a voice or musical instrument is recorded by a microphone

diminishes very rapidly as the music moves away from the microphone. This wide difference in the strength registered by the various instruments threw out of balance the orchestral unity which had been developed by a long line of musicians through decades of study and practice in writing orchestral music scores.

It was realised that it would help a little by placing nearest the microphone the instruments the tones of which possessed the least strength and carrying power, and Mr. Popcke set about to determine which these should be. He had been interested in this world's pioneer broadcasting station from early days, when he had asked to pass on the talking machine records that were broadcast on some of the first programmes, and determine which one would transmit well. Musical ensembles, of which he was a member, also had furnished music for some of the early programmes.

As the result of his tests, the string instruments of the orchestra were placed nearest the microphone, the wood winds next, and the brass wind and percussion instruments farthest away. This order is still employed generally in studios.

While proper arrangement helped considerably in regaining the desired balance for a band or orchestra, the results still were not entirely pleasing to the radio audience, which was constantly growing more and more critical of the radio programme as the novelty of it began to wear off; people had begun to demand of the radio—the degree of perfection asked in the other things they used every day.

The studio directors were prevented by limitation of the early transmitting circuits from moving the orchestra players back from the microphone, and thus narrowing the difference between the nearest and farthest instruments. The microphone of to-day gives off practically no noise, even when maximum practical amplification is applied, but those of the early broadcasting day, due to imperfections of the transmitting circuit, gave off a spluttering or "frying" noise. This noise was increased in volume as the tones were passed along the transmitting wires and through the vacuum tubes that amplified them before they were broadcast on the ether waves.

In order to keep down this "ground tone" as the engineers call it, and to prevent it from being broadcast with the music, the music was amplified as little as possible between the microphone and the antenna. To accomplish this, the radio people endeavoured to have the musical tones strike the microphone with as much strength as possible, so that the volume of these tones would be considerably above that of the spluttering noise, and so that great amplification would not be necessary. This meant that the instruments were placed as close to the microphone as the players could conveniently sit.

As the transmitting circuit was refined the spluttering noises were eliminated from the microphone, and it became possible to increase greatly the amplification of the tones picked up by the microphone. This refinement has made such progress that to-day, it is possible to group an orchestra from 15 to 30 feet from a microphone so that no instrument is more than twice as far from the microphone as another.

In the charts shown on page 13, made by Mr. Popcke, the one used two years ago to indicate the proper positions of the orchestra instruments shows all the instruments huddled together in a third of the studio nearest the microphone, while the chart that shows present positions shows the instruments grouped in the half of the studio farthest from the microphone.

The floor at the KDKA studio from which most of the musical programmes are broadcast is divided into imaginary squares three feet wide, and four feet deep, this being the usual amount of space required for each musician. The squares are indicated by letters placed during certain programmes on two opposite walls and numbers placed on the other two walls of the studio. The instruments are moved from one square to another between programmes, and sometimes between selections of the same programme, to see just which locations are giving the best tone effects.

In one of the Westinghouse Saturday night band programmes (which are relayed in London by the station's international short wave relay system), it was found that on the first selection the tuba was too loud for the rest of the instruments. The tuba was about seventeen feet from the microphone, while the instruments nearest the microphone, the first clarinets, oboe and bassoon, were fifteen or sixteen feet distant. In playing later selections the tuba was moved back to the twenty-four foot position, as it still was somewhat too loud for proper blending of the band instruments, the bell of the instrument finally was turned away from the microphone before the desired results were obtained.

During the programme, the cornets and baritone were in the square twenty-four feet from the microphone, while the second clarinets, flute, drums and horns were situated between the nearest instruments and the brasses in the rear. The drums were placed well up towards the front row, because much of the band music is rhythmic and requires that the sound of the drums be prominent to give it proper effect. This in general is the arrangement used in the KDKA studios.

When orchestra music is broadcast, the violins and cellos are placed nearest the microphone with the oboe, clarinets, flute and the bass next, and the cornets and drums in the rear.

The arrangement is varied, however, as some selections will require that the cornets or drums be close to the microphone as are the string instruments. When a string or wood wind instrument has a solo part, the player moves to a point between the microphone and the front row of players, when possible to do so without causing too much confusion in the studio. The brass instruments with their great penetration are usually heard well in solo parts when they remain in place. Sometimes, however, the brass instruments must be moved closer to the microphone as when "The Lost Chord" is played as a cornet solo. In this selection, there is a full harmony swelling to a climax at the end which sometimes buries the cornet part unless the cornetist takes advantage of the position and moves between band and microphone. "The Rosary" is another selection of the same kind. In a selection like Schubert's "Serenade," however, the accompaniment is less prominent and no change in the cornet soloist's position is necessary.

The distance a singer should stand from the microphone depends upon the strength and pitch of the voice. In general a bass or baritone should stand nearer the microphone than other singers, as the lower vibrations of the bass voice do not make the same impressions on the microphone as are made by the higher vibrations of the other types of voices. The contralto voice may usually be placed farther from the microphone than the bass, the tenor next and the soprano farthest away. Actual strength of voice must also be considered.

Not all sopranos, however, should stand exactly the same distance from the microphone, nor at the same position in relation to the piano. In general, the piano for solo work should be placed fifteen to twenty feet, with the piano opened. For vocal solos used in the orchestra, when orchestra accompaniment is used, is placed at its usual position, with the singer ten to fifteen feet, depending on the type and strength of voice. When piano accompaniment is used, the piano is usually placed at a distance of fifteen feet.

A New Coil

Quite a new feature on the market is the Circloid or Doughnut coil and transformer being manufactured by Keith Stokes, of Sydney. In America it is referred to under various names, such as the Torus, Toroidal, Doughnut, and Circloid.

Of most attractive design and appearance, this coil produced by Keith Stokes was evolved after much experimenting to hit upon something which has not the inherent weaknesses of the ordinary coil. The main features claimed for the Circloid are that its construction in the form of a solenoid bent round until the ends almost meet eliminates stray fed-backs, and that the spaced windings constitute a natural low loss coil.

Used in a set, the Circloid coils may be placed as close as half an inch to each other. The sample shown to us certainly represents the latest step in coil construction. Standard Circloid transformers are wound to cover broadcast wavelengths up to 550 metres.

The First Receiver To Be Bequeathed

For the first time on record in New York at least, a radio set has been bequeathed by its owner by will and testament. The official files contain mention of practically everything imaginable, from fountain pens to millions of dollars in legacies, but it was a new one on the Surrogate's Court when the will of Edward F. Gordon was filed and it was shown that a beneficiary was to receive the radio set prized by the late departed. Gustave W. Fuerth, of Newark, was the friend named to enjoy that distinction.



BEARD RADIO SETS

Cost Less and are 100% Efficient

Only High Grade Trouble-Proof Parts are used throughout

SPECIAL FEATURES:

SIMPLICITY OF CONTROL, combined with hair-splitting final adjustment, thus ensuring volume with clear and pure tonal quality.

DISTINCT PANEL DESIGN enhanced by highly polished Silk Oak Cabinets.

Beard Standard 1 Valve Receiver, with all the improvements of the Beard multi-valve sets, built for headphone reception of local and interstate stations, £10/10/- with Brandes Phones.

Beard Standard 2 Valve Receiver, includes a 1 Stage Amplifier, giving enough volume to operate a loud speaker on the local station, and consequently gives comfortable volume for the headphones on the interstate stations, £12/12/- without loud speaker, £16/16/- with Amplion AR111 Speaker.

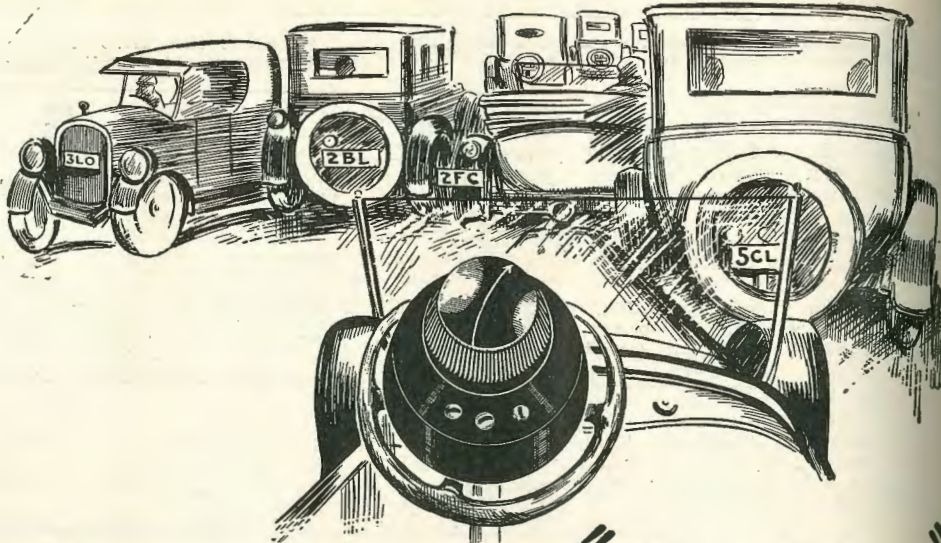
Beard Standard 3 Valve Receiver is built to give ample volume on the loud speaker for the interstate stations under favourable conditions, £22/10/-, with Amplion AR111 Loud Speaker.

Beard Standard 4 Valve Receiver has been specially designed for broadcast listeners who are situated a long distance from the broadcasting stations, and who want to hear stations from a great distance with enough volume to operate a loud speaker comfortably, £30, with Amplion AR19 Loud Speaker.

L. S. BEARD LOSE STREET
SOUTH BRISBANE

Phone J4320

Demonstrations arranged. Other Sets made to your order and to suit your pocket.



Through the Radio Traffic

When you run into a bunch of high-powered broadcasting stations, all riding the ether at the same time, can you pick your way through to your desired destination without getting tangled up in the jamb?

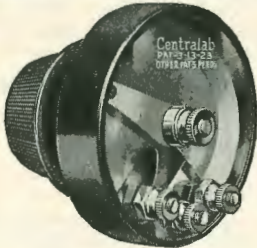
The CENTRALAB Radiohm

will enable you to get through the Radio Traffic with ease—slip past unwanted "locals," and bring in the long-sought-after long distance Station, loud and clear.

Smooth variation from zero to 200,000 ohms. Especially adapted to plate circuit control of oscillation. Centralab Radiohms and Modulators are used as the standard Units of control by all the top-notch American circuit designers

RETAIL PRICE

14/6



The Centralab Modulator

A 500,000 ohm Amplification control that gives perfect control from a whisper to maximum volume.

Used by United Distributors in the new "Capacidyne" circuit.

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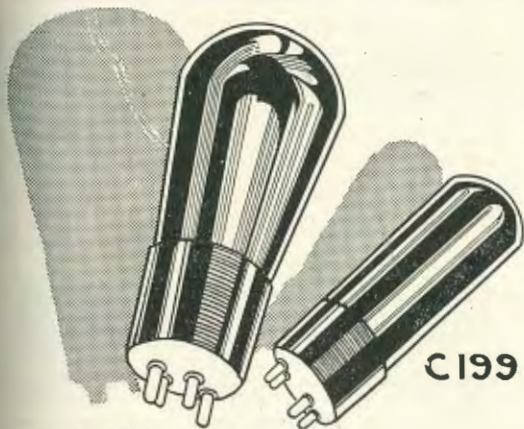
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During this season's boom-time of American Radio, **QUALITY** and **DURABILITY** has produced enormous sales. Quantity of sales has lowered cost of production, and thus we can now sell these Valves at 12/6 each.



C 201A

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Type C201A

Detector and Amplifier. Fil. Volts, 5. Fil. Amps., 25. Plate Voltage, 15-140. **RETAIL PRICE .. 12/6**

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If your Dealer cannot supply, let us know at once

"MEANDERINGS"

(By "HELLO.")

By a piece of good luck I was able to accept an invitation to be present at the opening of the Pennant Hill Station, just erected by Amalgamated Wireless Ltd., for Farmer's. It was interesting to compare the new station with 3LO.

I found a good deal of confusion in the minds of Sydney people with regard to the two stations. They are very proud of their big 400 feet mast, and their extra power, which makes the Pennant Hills Station compare with the best in the world, and they are rather inclined to crow over 3LO Melbourne as being slightly behind the times.

With the aid of Mr. Fisk, of Amalgamated Wireless, I was able to put them right. Their mast is certainly much higher than that of 3LO Melbourne, but broadcasting is more than a matter of height of aerials, and 3LO has compensating advantages not enjoyed even by this fine new station. Broadly speaking, 3LO and 2FC are now on an equality as regards strength of broadcasting. In the matter of programmes, after due investigation, I am inclined to think that the crack Victorian Station gives greater variety. The instructional talks in both studies are of a high order, but I found over there that there is a tendency to monotony in these talks that is absent from our own. The studio manager admitted to me that country listeners-in were inclined, at the first sound of a speaking voice to cut off until it was over. They prefer the music. Now it is not so in Victoria, where the talks however educational are interspersed with chats that are informal enough to appeal to all sorts and conditions of listeners-in.

Mr. Fisk, by the way, in his speech at the Pennant Hills ceremony, gave a capital exposition of what happens when a speaker talks through the microphone. It was so free from boring technicalities that it is worth paraphrasing for the benefit of readers.

"When a voice goes through the microphone at the studio," said he, "it is brought along 10 miles to this station. It goes into that little black box in the corner," and he pointed to a box about three feet by two, "where something happens to it. It is amplified largely, and then taken into that concern protected by a grill, where you see the lights burning. Here it is increased up to about 7-h.p.

"Over in the opposite corner another process is going on. The current from the ordinary electric supply is taken in there, and turned into vibrations of about 200,000 a second. These are the horses on the backs of which the human voice after being raised to 7-h.p. are mounted for their journey across the world. Ordinarily, the human voice is only able to travel about a mile in five seconds. It is necessary therefore to mount it on something faster. The electric vibrations are just like the ordinary sound vibrations, except that they are faster.

"In that middle box the two things meet—the voice, increased in power up to 7-h.p., and the electric vi-

brations, increased by the same h.p. They are brought together in the middle box; the voice mounted on the back of the vibrations, which climb the steel mast to the height of 400 feet, and set off on their journey round the world—186,000 miles in a second."

Thus, colloquially he made his hearers understand broadly what goes on in broadcasting. For my part I am never able to grow used to the marvel of the thing. Have you ever reflected that when you listen in to a church service or a theatre, though you may be a thousand miles away, you are actually in possession of the speakers' voices before they reach the people sitting in the front seats? Not only that, but those voices travel $7\frac{1}{2}$ times round the earth per second. In other words, they have been round the earth almost before the front seat holders have fully taken them in. It will be quite competent for some dweller in the Northern Territory next year to boast that he heard the opening of the New Parliament House at Canberra before the Prime Minister himself, for the latter will only have the doubtful advantage of being present in person, under the horrible necessity of waiting for the Duke of York's voice to reach him by the slow process of ordinary methods. But the inhabitant of the North will have the help of five whole kilowatts to give him advance information of what is being said thousands of miles away.

And yet, I suppose that soon we will grow accustomed to these wonders as we already are to those of the telephone and the gramophone. Before many years that child of yours who has just learnt his first syllable of "Ma-ma" will twist a button as he carelessly passes a wireless set and shout out to his brother in the yard that Australia is playing at Lord's, and is all out for 727. He will take it as all in the day's work.

I was reflecting much in this vain as I drove home from Pennant Hills yesterday, along the Paramatta Road. My earliest Australian forbears used to drive along that road to Sydney, leaving themselves a whole day for the adventurous journey. The bush closed them in, and their rifles lay handy at the bottom of the cart, lest escaped convicts should attempt robbery or murder from the recesses of the trees. An escort of redcoats, accompanied Governor Phillip when he drove that way.

We glided along a perfectly surfaced highway in less than half an hour, dodging hundreds of cars, passing hugh motor buses laden with home-returning Paramatta citizens who had gone in to Sydney to shop for an hour. The robbers had gone from the bush and were now driving taxis; that was the only point of similarity between now and then, and in the hills to our left there rose the giant mast which directed the thoughts and the messages of Australian across the trackless air. It was almost impossible to realise that all this had happened in little more than

a century. Was any century in the history of the world so significant? There was once a century of war in Europe, when dynasties fell and frontiers were changed. People then felt that history could only be measured in terms of warfare. Time counted from one battle to another. Yet, essentially, the face of Europe remained unchanged. Travellers still came and went in the same old way; letters were delivered over 20 miles distance in two days, and smiles of wonder and satisfaction greeted the messengers who had undertaken incredible hardships to carry out the mission; prayers accompanied the hardy travellers whose business forced them to undertake a journey of 100 land miles. The century's end was as the century's beginning. Yet, what of the 100 years just past? The beginning lay in barbarism; the end finds achievement which, while beggaring even the imagination of our grandfathers, has grown a commonplace, so easily does it teach us to look forward to the future.

That is the lesson I would like to instil into the minds of children—to try and regard these wonders in their proper perspective, to realise the magnitude of science and the importance of the men who are pioneering this new marvel of wireless, which, great as it seems to us oldsters, is already becoming ordinary to children who have been born into a world of magic. They should be taught to think of what has gone to its making, not only to the thing achieved. Romance is stifled in the commonplace; the world needs romance, and where can it be found in such measure as in the wondrous scientific dis-

coveries of to-day, so long as we have the wit to find it? What genius Aladdin ever summoned was half so potent as those who come as slaves of the valve and the coil?

HOW TO AVOID MISTAKES BY DRILLING

I was surprised some time ago to see the rheostats in the filament circuits of my five-tube neutrodyne get heated up red hot. After investigation the trouble was traced to an "accidental ground."

What had happened was that the entire output of the "A" battery had short-circuited through the portion of the rheostats in use, and as this device is made to carry only a small amount of current it was badly burnt.

The ground connection of the receiver is usually placed in the negative filament lead of the vacuum tube. The rheostat then is in the negative lead and in series with the "A" battery. Then the negative side of the "B" battery is connected to the positive terminal of the "A" battery.

Now, if some misconnection is made, say in the "B" battery circuit, the "A" battery discharges through the rheostat.

The only way to prevent this trouble is to obviate any possibility of an accidental ground. This can be done cheaply and conveniently by placing a large capacity fixed condenser of say a one microfarad capacity in series with the ground lead. It will not interfere with ordinary reception, and will prevent any trouble of this sort.—F.P., in "Popular Radio."



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.

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A-	Battery "Coil"	
	1.5 Vt. "Coil" ..	2/9
	1.5 "Buzzer hamp" ..	3/-
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C-	45 "Large Type	22/6
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Manufactured by **WIDDIS DIAMOND DRY CELL PTY. LTD. W. Melb., Vic.**

Television Now Established

*Workable "Televisor" Receiving Models to be
Shortly Placed on English Market*

**Broadcasting Stations to be Established
in England and France**

Those who have hitherto taken a skeptical view of the ultimate success of Television will sit up and take notice of the statement recently made by Mr. John L. Baird, inventor of the "Televisor." At a recent successful demonstration to British press officials Mr. Baird said that about 500 workable sets that would not only receive speech and music, but also moving scenes and objects were under construction and when completed would be offered to the public at £30 each.

The lenses used in the "Television" at this demonstration were from a cycle lamp and cost 1/- each. Looking down a dark tube on to a screen those present at the demonstration were able to see one of their colleagues smoking his pipe in another room. They also saw a mechanical doll perform through an inch wall. The "Televisor" can see through brick walls and round corners. A land line was used in this particular case, but it is equally efficient with wireless control. A man listening in to a radio concert can see as well as hear the artist appearing before the microphone.

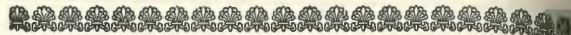
A company has been formed, licenses have been applied for in Britain and France to operate a special broadcasting station and sufficient capital has been raised to further the perfection of the invention.

Portable sets have been constructed, and one operates the televisor and the loud speaker simultaneously. Mr. Baird stated that 500 sets at about £30 would soon be on sale, so that wireless enthusiasts would soon be able to "look in" as well as to "listen in" to pictures from a broadcasting station.

Actually, the "televisor" is an electrical telescope, which enables objects to be seen, not by light, but by electrical vibrations. A large disc containing lenses is used, with a revolving shutter, to pass the image of the object to be transmitted at an immense speed over a special light sensitive cell.

This photo-electric cell acts in proportion to the light falling upon it, and the varying current is transmitted to the receiver, where it controls a light behind an optical apparatus similar to that at the transmitter. All that one sees at first glance is the huge revolving disc of the transmitter and the smaller one of the receiver going at exactly the same speed. Upon the screen of the receiver the light controlled by the varying electric current flickers, so that one sees the picture which has been wireless something like the images produced in the early days of the bioscope.

This journal is more than confident that Television will shortly assert itself. The principals have been proved, problems solved, and it now but remains for the final improvements to be made to make radio television as world famous as radio telephony.



Announcing The "SIMPLEX"

A Receiver of Unusual Ability and Construction

The "Simplex" is a pleasant surprise to all who hear it. Its round, full and mellow tone—its handsome finish—its ease of operation have earned for it a very fine reputation.

We are proud to put our name on these receivers. We build them—and thus we KNOW that only the best and most expensive components are assembled by highly skilled mechanics. Notwithstanding these advantages The "Simplex" are no dearer than other sets.

Write or Ring Ipswich 491 now.

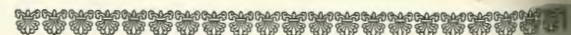
One Demonstration Will Convince You

Let us prove this set to you by actual demonstration. If you live within the precincts of Brisbane or Ipswich we will be happy to give you a free demonstration.

Evans Electrical Company

Radio Dealers and Electricians

Brisbane Street, IPSWICH



PERSONALITIES

Mr. "Bob" Littler has been appointed manager to Wireless House Ltd., to fill the vacancy caused by the retirement of Mr. McLeod. We heartily congratulate "Bob" upon his promotion, for we know him to be a young man of sterling qualities and great ability, which will help him greatly in his new sphere.

Sir Alfred Cowley is the latest and greatest recruit to the "Flock." It has been noticed that he has not been present at several important social functions lately. Oh, yes! a man may be "indisposed" to attend Mrs. So-and-so's "At Home," but when there is a six valve super beckoning him from the corner of his radio room, he may be forgiven if the "indisposition" is not so serious as one may imagine.

Mr. E. H. Macartney, President Brisbane Golf Club, and a notable figure in law and political circles has also contracted a great affection for radio, and finds endless amusement in tuning all Australian stations in on his six valver. Indeed, so enthused is this gentleman, that we feel safe in saying that if any brilliant experimenter could devise an efficient and inconspicuous portable receiver which could be carried around the golf links on the person, he would find a ready buyer in Mr. Macartney.

Mr. Wally Best, the popular radio salesman attached to the Brisbane House of United Distributors, Ltd., has just returned from a flying trip to Sydney. He states that radio is as popular as ever "down yon."

Mr. H. H. Evers, of Evers Motor Co., has been gathered into the fold of the smitten. He says that apart from his "Hup," car his super-six receiver is the finest piece of apparatus he has yet handled.

Mr. R. S. Reid, a local enthusiast who has just returned from a trip through the Burnett district, states that since 4QG went on full power, reception is well-nigh perfect in this locality.

Mr. Walter Langworthy, of "Myora," Bowen Terrace, New Farm, has notified us that we mis-spelt his title on this page last issue. Sorry, Walter O.M. The typo machine could not have been functioning too well, probably caused by a defective rheostat.

Mr. John Dennis, of Manly, well known in the wool buying and selling world, has discovered a radio more firmly embedded in his fleece. He states that "Home Sweet Home" never sounded so sweet as it has since the little three valver came along to entertain the folks at home.

Mr. Arthur Jackson, the active secretary to the Queensland Wireless Institute, has been wearing a fogged expression latterly. We think he must be engrossed in mental calculations of the nett profit the Institute will show after the raffling of the six valve Burginphone receiver. Try a pencil and paper Arthur, it's easier.

Mr. Frank Scott, well known among Brisbane experimenters, is now attached to the S.S. St. Albans as Chief Radio Officer. Mr. Scott has just returned from England, and before leaving for the East renewed old acquaintances in Brisbane.

Messrs. A. G. Flood and L. C. Cusack, radio telegraphists from Thursday Island Radio and Port Moresby Radio respectively, who are at present on tropical service recreation leave, have been appointed to Pinkenba Radio (V.I.B.).

Mr. Humphrey, of A.W.A., the assistant installing engineer at 4QG, has returned to Sydney after being laid up with a severe attack of dengue fever. Mr. Humphrey spoke excellent French when testing 4QG with New Caledonia.

Mr. Annand, Town Clerk of the Greater Brisbane Council, is an old radio enthusiast. He states that before the War the crystal receiver was good for a greater range than it is to-day with the air full of radio traffic. He says he remembers when, with a simple crystal set, he could hear all the Australian coast stations, including ships, working traffic. Those sure must have been wonderful days, Mr. Annand. Howling valves are the vogue these days.

Dr. J. Avery, a well known medico on Wickham Terrace, has operated a crystal set for some time now, but he's out after bigger fish now. He's building himself a portable three valver, so that he can listen in at his seaside residence at Tugan (Tweed line) when holidaying.

Mr. George Smith, of Pinkenba Radio, has been getting himself into trouble with the church minister of the district. George has a jolly good set, George has. Naturally George is rather proud that his set can get 4QG on loud speaker, and is inclined to forget the church next door. On a recent Sunday evening George had the congregation quite confused. They couldn't quite decide whether they were sitting in Albert Street Methodist Church or in the Pinkenba Presbyterian Kirk. Anyway, George doesn't do it any more.

We learn that Station 4QG does not intend to keep the lonely 2 a.m. watch on May 8th, as it did on Federal Election Day. Election results are to be broadcast until midnight, further results will doubtless be announced on Sunday.

New 2FC Opened

Power 10,000 Watts

World's Second Largest Broadcasting Station

The new 2FC station ranks next to that of Davenport in England, which is the biggest in the world. One of its immediate benefits will be appreciated by that numerous body of "listeners-in" whose equipment consists solely of a modest crystal set. Hitherto, users of the crystal set, outside a radius of 25 or 30 miles, have suffered under a handicap; now that the new station is operating the effective radius extends to a hundred miles or so, taking in Newcastle to the north, Bathurst to the west, and Goulburn to the south, and all the territory lying between. For users of valve sets the advantages are correspondingly great.

In the unavoidable absence of the Postmaster-General, Mr. Hughes, on Monday, March 29th last, at 3.30 p.m., switched on the new power, by virtue of which his speech and the others that followed it were broadcast. Ordinarily the news and entertainment programme of 2FC will be despatched from Farmer's city studio as at present, the voice of the speaker or singer being carried by wire over the intervening ground to the Pennant Hills' transmitting station.

WONDER OF WIRELESS.

In his opening address, Mr. Hughes said that the new broadcasting station was perhaps the most striking and inspiring of the very many great things that distinguish this age.

"Wireless," he declared, "has revolutionised, is revolutionising, and will continue to revolutionise the whole world. Every phase of human activity, every branch of science of human effort, of the relations between nations, will be profoundly affected by this wonderful means by which distance is annihilated, and the peoples of the earth, long separated by distance and by barriers that no other means of communication could break down, are now made part of the great human family. In this age we are literally citizens of the world. Every morning we hear of what has taken place in the most distant parts of the earth.

"While electricity has, in other directions, made tremendous strides, has changed civilised man in his relations to society, and has opened up before the world, before mankind, distances literally undreamt

of, wireless places us in communication with our fellow man wherever he may be, which has banished isolation, which enables us, sitting in this comfortable and sunbaked spot—I say sunbaked because it is the happiest trait of human nature to forget all that has passed and to remember only that which is or is to come—we are in communication with one of our greatest Australians, who is to-day on the very brink of making a dash into the Polar regions. There is no place so inaccessible but wireless can reach it. There is no barrier between nations that has existed so long but wireless can overcome it.

INFLUENCE FOR PEACE.

"Wireless not only revolutionises the relations between men and between nations, but it will be the most powerful influence for abolishing war. Wars arise because of clashing interests, no doubt, but also from misunderstandings, and misunderstandings have arisen from the isolation of man through the distance which has divided him from his fellow man. Wireless and those other kindred wonders which attend in its train, will tend to make us dispel misunderstandings of our fellows that have done so much to burn the tribal emotions which, after all, linger in us."

"It will also help materialy to enable us to govern the Empire. We are citizens of a world Empire. The banner of this Empire flies in the most remote corners of the earth, and if we are to act, as we must, unitedly, then there must be communication between every part of the Empire. So far that communication has been impossible. Wireless has bridged the gulf of the impossible, and in a little while we shall be able to sit here or in some other part of this great Commonwealth and communicate with the statesmen who control the destinies of the Empire in London and elsewhere.

MEANS OF EDUCATION.

"Wireless is going to play a great part in the education of man. This is the age of the people of democracy—the people rule, and it was well said in the early days of democracy that it was necessary that the people should be educated. There is no more powerful, no more effective means of educating people that what remains to wireless telegraphy and telephony, and this wonder has not yet begun to pall on us. We have not yet altogether accepted it as one of the facts of everyday life. It is only yet in its swaddling clothes.

"I remember very well only three years ago when it was said by the greatest experts in the wireless world in England and by the Postmaster-General, and by others who had given many years to the study of it, that wireless communication between England and Australia was out of the question, except through a chain of relay stations.



DREAM COMES TRUE.

"As for wireless telephony, all the experts declared that to be a Utopian dream, but we have seen in these three years that which was impossible become an accepted fact, and we shall yet live to see the day when men who are the rulers of England, when the Prime Minister of England, wishing to address the whole people of the Empire, will be able to speak and the people of the Empire hear it, and one barrier, and one barrier only, can shut his voice from the millions upon millions scattered all over the globe, and that is the barrier of language. But that barrier itself will be dispelled by wireless telephony. The need for a universal language becomes in this latest of miracles a necessity.

This wonderful apparatus which has been manufactured by Amalgamated Wireless (Australasia) Limited, will speak for itself, but I want to congratulate the company on what it has done, and Farmer and Company on their enterprise. It is an unalloyed delight to participate in the delights of wireless. It cheers the sick, it helps those who are depressed, and it brings to those who are pioneering in the most distant parts of this country all the joys and the benefits of life in the crowded city."

FROM SMALL BEGINNING.

In outlining the history of broadcasting in Australia, Mr. George Wright, managing-director of Farmer and Company Limited, said that when the old station at Willoughby was first opened in December, 1923, their programme covered about five hours daily. Now they were giving 5 sessions each day, with an actual running time on the air of 10 hours per day, or nearly 3600 hours in the year.

The controversy that had raged around short and long wave-lengths had, he said, in many instances been mainly influenced by commercial reasons, and the reason that Farmer and Company had not reduced the present wavelengths of 1100 metres, was because of the directors' desire to give a service best suited for Australian conditions, and not for any local advantage that might be gained. The man on the land represented the most important section of the State, and to weaken his service would be contrary to the wishes, he felt sure, of city listeners-in, and would certainly be opposed to the Federal Government's idea of giving the man on the land the finest news and market service possible.

On the motion of Mr. J. M. Dunlop (President of the Associated Chambers of Commerce of the Commonwealth), a vote of thanks was accorded to Mr. Hughes for performing the opening ceremony.

THE ACCOMPLISHMENTS OF STATION 2FC.

When Farmer's commenced broadcasting in December, 1923, there was no precedent in Australia as a guide. It was necessary to pioneer the work and feel the way towards meeting the popular taste.

When the old station at Willoughby was opened two daily sessions were given, covering five hours. At the moment five sessions each day are given with an

actual running time on the air of over 10 hours per day, or nearly 3600 hours in the year, when due allowance is made for the shorter period of Sunday sessions.

2FC is connected with five theatres of the J. C. Williamson circuit, also three Union Theatres, the Haymarket Theatre, and Prince Edward Theatre.

Four times each day news services, provided by the "Sydney Morning Herald" and "Evening News," are broadcasted; also the cable services of the Australian Press Association and Reuter's.

On an average 400 artists contribute to 2FC programmes every month, and nearly 100 aspirants for inclusion in the programmes are given trials each week.

Over 350 programmes are typed and dispatched each week to papers in this and adjoining States.

Seventy-five pairs of telephone and special broadcasting lines, with outside points of control, are permanently connected to the Studio; amplifying apparatus for outside special transmissions is sent to over 100 places every month.

2FC is linked with 15 places of public worship, covering practically every denomination.

Six of the leading metropolitan bands are now regularly performing for 2FC, while installed in the studio are a light orchestra and dance band.

(Continued on page 26.)

DON'T!

Hump Your Battery to the Charging Station—

IF—

You are living in the South Brisbane area and adjacent Suburbs, we will call for and deliver same promptly. We charge and repair any battery.

Phone J2350

J. E. DYNE

Exide Service Station

525 Stanley Street, South Brisbane.
Near Vulture Street.

WIRELESS — WONDERFUL — WIRELESS

Valves

- RADIOTRONS—**
 UV201, UV199 13/6
 PHILLIPS—D1, D2, D4, D5, E 7/-
 PHILLIPS—A110, A306, A310 B406, B507 13/6
PHILLIPS—
 A106 and B6 17/6
 PHILLIPS—D6 10/-
 PHILLIPS—A141
 EDISWAN—AR, R 5/-
 EDISWAN—ARDE 12/6
 EDISWAN—ARO6 13/6
 EDISWAN—PV5, PV6, PV8 18/6
 MULLARD—DO6, DFA1, and PM4 13/6
 De Forest, DV5, DV3 13/6

We are tickled that these valves have been reduced—Tickle us more, by giving us your orders. After all, the bigger the consumption, the better the price—in a word—Co-operate.

Headphones

- Scientific, 3000 ohm. 15/-
 Kilbourne-Clarke, 2000 15/9
 DULCEPHONE, 4000 17/6
 Brandes Matchtone 30/-

At Bargain Prices—but supply limited.

Accumulators

- .. Exide (Fully Charged) ..
 6 volt 20—40 amp. hour capacity £3/6/-
 6 volt 30—60 amp. hour. cap. acity £3/18/-
 6 volt 40—80 amp. hour cap. acity £4/10/-
 6 volt 50—100 amp. hour cap. acity £5/5/-
 6 volt 60—120 amp. hour cap. acity £5/17/-

The Exide Accumulator has stood up to all sorts of tests for many years—so you are sure that it will accomplish all that the makers claim for it.

UNDER THE HAMMER! Yes! one might well imagine that Wireless House Prices are Auction Sale Prices—so reasonable are they. We are placed in the fortunate position of being able to buy direct from overseas market, thus saving agents' profits. Anything thus saved is, of course, passed on to our clients.

Transformers

- KILBOURNE-CLARKE—**
 3-1 15/-
 Jefferson-Star, 3-1 and 6-1 18/6
 Jefferson, 3.75-1 25/-
 Igranic, 3-1 29/3
 Igranic, 5-1 31/6
 Emmco, 3-1 and 5-1 21/-

A catch line, easily worth 25/-.
 The first popular Audio Transformers on the Australian Market, and still going strong.
 One of the best English Products on the Australian Market.
 The best Australian-made Transformer.

Sockets

- Kilbourne-Clarke, V.T. 2/6
 H.H. Suregrip, Bakelite 4/6
 H.H. Suregrip, Porcelain, 4/-
 English Sockets, panel 1/3
 English Sockets, base and 2/6

Another catch line—only a few available.
 No risk of bad contacts, and fitted with rubber feet.

B Batteries

- 42 volt Ever Ready 12/6
 60 volt Ever Ready 18/9
 36 volt Hellessen 10/6
 45 volt Hellessen 14/-
 60 volt Hellessen 18/-
 22½ volt Columbia 13/-
 45 volt Columbia 26/-
 22½ volt Winchester 13/-
 45 volt Winchester 26/-

Australian-made—good job that gives good results.
 The reliability of the Hellessen Dry Batteries is a fact too well known to be disputed.
 These are batteries intended for use on 4, 5, and larger valve sets—they give excellent results, free from cracking and under favourable conditions should last approx. six months.

BREAKING RECORD

The ever popular "Dulcephone Receiver" is the record-breaker in the radio field to-day. Day by day we are receiving letters from our clients in all parts of Queensland, testifying to the wonderful ability of the Dulcephone. The remarkable performance of this popular receiver is due to the excellence of design and construction.

Wireless House

RADIO BARRIERS



OR

FEE

CATALOGUE

To those who expressed appreciation of our new 64 page Catalogue, extend our sincere thanks to those who have not secured their free copy. EARLY. Thousands of thousands have been ordered, and the first edition is running low. We have a repeat order with us, but as these will not be ready for some time, please all who can to send us a copy of the present supply in the name of our friends whom you would be interested in, and we will forward the free copy also.



WIRELESS — WONDERFUL — WIRELESS

Miscellaneous

- Best Dial on the Market. EMMCO VERNIER DIALS 9/6
 Busbar Wire, square, per ft., 1d.
 Busbar Wire, round, per yd. 2d.
 Spaghetti Covered Wire, per length 9d.
 Spaghetti Tubing, per yd 9d.
 Earpads, rubber 3/-
 Jacks, K.C. 2/6
 Insulators—Green Shell—
 Small 4d.
 Medium 6d.
 Large 1/-
 Marco Multiple Phone Plug 5/-
 Rotary Switch Arms 9d.
 Engraved Terminals (set of 8) 2/3 and 2/9
 Neutralising Condensers 5/-
 Spider Formers—
 .. Unmounted 7d.
 Mounted 1/3
 Mounted with Swivel 1/9

Ensures a decent job.
 Use this and avoid shorts where wires cross.
 For Comfort—You can't beat them.
 The best glazed Insulators on the market.
 Cheap!—What!!
 Make sure of your connections by using these terminals.
 Designed for use in Neutrodyne Circuits.
 Wire your own Coils and save money.

Crystal Sets and Parts

- METRO JUNIOR, complete with headphones, aerial wire, insulators, etc. £1/7/6
 Dulcephone, complete with headphones, aerial wire, insulators, etc. £2/15/-
 Astrophone, complete with headphones, aerial wire, insulators, etc. £2/15/-
 T.M.C. complete with headphones, aerial wire, insulators, etc. £2/15/-
 Crystal Detectors—
 Suregrip 1/6
 Ajax 1/-
 Fortevox, mounted 1/9

Fancy! The most wonderful invention of all time, brought into your own home for a few shillings!!

CRYSTALS

- NEUTRON 2/3
 Tungstatite 1/6 to 2/3
 Hertzete and Galina, N.H.M. Also well in 1/6
 Formers, Cardboard 6d.
 Winding Wires—
 Enamel, D.C.C. D.S.C. (4oz., 8oz., 1lb., reels), stocked.

The Crystal without a dead spot.
 Another bonson crystal

OUR SERVICE DEPARTMENT.

If you have not yet been introduced to our Service Department, you are missing something good. Here are assembled at your disposal a group of radio experts who are always ready and anxious to help you solve your problems. Advice on all matters pertaining to radio, whether it be over our counters or through the mail, is always given the best of our ability. We test batteries and valves free of charge. Send or bring yours along.



AT LOUD SPEAKER STRENGTH. Yes! we'll say this at "loud speaker" strength: "No other radio house in Australia can offer you better value, better quality, or better service than that offered by Wireless House Ltd. We pioneered Radio in Queensland. We sold accessories in Brisbane before broadcasting came to Australia. We are the oldest and most reliable Radio Supply House in Queensland.



RADIO PUBLICATIONS.

We sell all Australian Radio periodicals, and a good few overseas publications, too. Call and choose your radio literature here.

WIRELESS HOUSE LTD.

Brisbane's Oldest Established Radio Supply House

ADELAIDE ST. [Opposite Normal School] BRISBANE

Telephone 7730 Central

We answer any enquiry and give advice over the phone to the best of our ability. Do not hesitate at any time to come to us with your radio problems.

For lovers of massed performances, five choral societies and several amateur theatrical bodies give regular programmes.

Three times every day the weather news, as supplied by the Commonwealth Weather Bureau, is fully covered.

Three times each day full quotations dealing with all the markets are given, not only for New South Wales but interstate and overseas.

Every evening, in the early session, special attention is given to the children; the success of this work is borne out by the fact that to-day the "Children's News" Radio Birthday Club has over 2600 members.

Every horse race result of any note is on the air through 2FC within a few minutes of its starting time; track work from the courses is fully dealt with. Interstate cricket and football matches are described in full from the playing fields during the progress of of the games.

During the past twelve months station 2FC has created records in regard to unique transmissions: Meeting the American Fleet at sea and describing its arrival; the description of the Great Public Schools Regatta; the broadcasting of two divers' stories from the bed of Middle Harbour; the 600-mile land line transmission of the Prime Minister's speech; the description of every ball bowled in the "Australia versus The Rest" cricket match and the Imperial Press Delegations' harbour trip, and now

in train are several unique transmissions, such as the description of the Jenolan Caves and the Blue Mountain beauty spots, also the illuminated Ice Carnival to be held at Kosciusko.

THE NEW TRANSMITTING STATION.

Pennant Hills, the site of 2FC's new transmitting station, is just ten miles, as the crow flies, from the broadcasting studios in Pitt Street. Situate on one of the highest spots of what is known as the Cumberland Hills, the station will be nearly 350 feet above sea level, and when the height of the aerial, approximately 400 feet, is added, the point at which 2FC's transmissions will in future pass out on the air will be from an altitude of 750 feet.

Pennant Hills and Wireless Broadcasting are synonyms, for at the spot on which the new 2FC station has been erected, all experimental work in connection with wireless transmission, and the subsequent successful broadcasting, of Amalgamated Wireless (Australasia) Limited, has been carried out. From the great open spaces of the Cumberland Hills no better position could be chosen to serve, not only the metropolitan area, but the hinterland of New South Wales and the rest of Australia.

Photographs of the tremendous power unit and aerial system arrived too late for publication in this issue, but will appear in our June number.



WINCHESTER Radio 'B' Batteries

22½ Volt Size

13/-

See these famous Batteries in our Windows and Show Cases, or if out of town write us for further particulars.

45 Volt Size

26/-

There's Longer Life and More Power in WINCHESTER 'B' Battery

There's long life and power in the Winchester Radio "B" Battery, better Service and Dependability.

Winchester "B" Batteries are guaranteed for 12 months. No other Battery carries such a guarantee.

AMICO [Q'LAND] LTD.

"Brisbane's Electrical House"

Queen Street, Brisbane

Anzac Day by Radio

Australia's Glorious Milestone Commemorated

Anzac Day 1926—the eleventh anniversary of the unforgettable epoch of the landing at Gallipoli—found the ether a-quiver with commemoration services and gatherings in all States of Australia honoring those brave men who faced colossal odds with amazing courage.

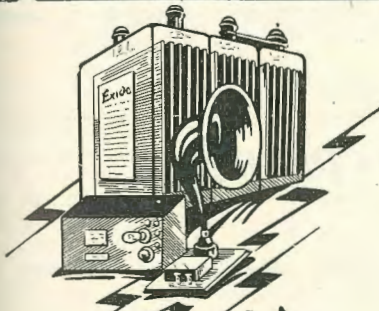
The services broadcast by 4QG from the Ann Street Presbyterian Church on Sunday, April 25, featured two fine services and addresses by the Rev. J. Cosh, B.A., in honour of the Anzacs.

The afternoon session included a description of the Anzac Day procession as it marched down George Street towards the Botanical Gardens to join the monster afternoon service which was also broadcast by 4QG. The demonstration was broadcast by arrangement with the Returned Soldiers and Sailors' Imperial League of Australia.

On Monday, 26th April, the commemoration service from the Exhibition Hall was relayed and broadcast. Several fine speeches were made, and judging by the applause registered at the microphone, the gathering must have been a huge one.

3LO Melbourne arranged a really splendid entertainment from their studio on Monday, April 26. It took the form of a descriptive play entitled "A Day in the Diggers' Life." It was very enjoyable and covered every duty of the Diggers' daily routine, from "Reveille" to "Last Post." The Australian Air Force Band contributed appropriate selections—the whole making a really excellent entertainment.

Station 2BL and 2FC also supplied splendid transmissions in honour of the day. It was well-nigh impossible for any Australian listener to overlook Anzac Day 1926.



Exide
WIRELESS BATTERIES

For a Clearer Reception over the longer distances.

"Exide"

Obtainable from all Leading Radio Dealers.

**EXIDE BATTERY SERVICE
[Q.] LIMITED**

QUEEN ST., PETRIE BIGHT, BRISBANE.

S.A.S.

OREGON WIRELESS MASTS

IN the use of Masts to carry Wireless Aerials, Rosenfeld's Oregon has proved to be the most serviceable. The Oregon for these masts is specially selected. Call, 'phone 5991, or write to us for further particulars and prices of Wireless Masts.

You can purchase your Masts in one length of Oregon Pine, from 30ft. lengths of 3 x 3, to 80ft. lengths of 6 x 6, also 4 x 4, and 5 x 5 to any length.

Rosenfeld & Co. (Q'ld.) Ltd.

"The Oregon Specialists"

TIMBER MERCHANTS.

Moray Street, New Farm, Brisbane

'Phone C. 5991.

OUR WONDERFUL NIGHT

"Queensland Radio News" Concert Tremendously Successful

STATE-WIDE APPRECIATION.

The concert arranged by this journal in conjunction with Mr. Erich John eclipsed all that we have yet arranged. It was our first entertainment to be broadcast since 4QG went on full power, and it was the third concert to be transmitted from the new studios. Transmission was wonderful—and the quality of the items broadcast, was to use the term of one enthusiast, "in a class by itself."

Since, we have received dozens of letters, several telegrams, and fully 20 phone rings congratulating us on the success of the event. We are naturally glad. It gives us pleasure to know that our little effort finds such great appreciation.

One wire came from a man at Duchess, up near the Gulf—1380 miles from Brisbane—who said, "Congratulations splendid programme broadcast from 4QG last night. Items greatly appreciated here,"—W. Rosevear. Other letters and wires hailed from Rockhampton, Cairns, Longreach, Winton, Charleville, Roma, Dalby, etc., etc., while a still greater number were sent by listeners within the suburbs of Brisbane.

The thanks are not so much due to this journal as they are to Mr. Erich John, and his party, who worked arduously in their effort to make this, our first concert from the new station, an outstanding success. We thank Mr. John and his artists for their splendid services, which were rendered absolutely without payment or fee whatsoever.

OUR NEXT CONCERT.

On account of pressure of business, Mr. John cannot see his way clear to organise a concert for May, but on Friday, 18th June, we, in conjunction with Mr. John, are arranging another entertainment which will be broadcast from the Albert Hall, Brisbane. There will be a small charge for admission to the hall, and any profits that may accrue from the holding of this concert will be distributed among the artists. We make this as a preliminary announcement. Fuller particulars will appear in our next issue; meantime we appeal to local readers to keep this date free and attend to see and hear the artists broadcast.

*You'll spend less for batteries—
You'll have better reception—*

When you buy Willard's you buy Batteries that last for years. Your investment in Battery economy is an investment in better reception, too, for these

Batteries are rechargeable. No need to tell the difference this makes in the quality of reception.

Obtainable from all Licensed Dealers

Queensland
Agents

Motor Supplies Ltd.

Where Adelaide and Boundary
Streets meet—Brisbane.

Willard

**RADIO
BATTERIES**

The Construction and Tuning of a Short Wave Transmitter—35-45 Metre Band

(By 4CM.)

It has been definitely proved in this and other parts of the world that the 300-1000 metre band is best suited and most used for broadcasting purposes. The wave band used for marine wireless hovers between 500 and 1000 metres, whilst for long distance commercial communication anything between 5,000 to 20,000 metres is employed.

In the writer's opinion the 20-100 metre band should be reserved strictly for the experimenter. Commercial stations for the most part do not favour the use of the short wave lengths on account of their alleged unreliability. Few of the Pacific Coast commercial stations who transmit on long waves utilise a method of operating the transmission of long and short waves from one control. After twelve months' experience it was found that short waves proved reliable on an average of one hundred hours in seven days. The long waves on the contrary were found to be continuously reliable.

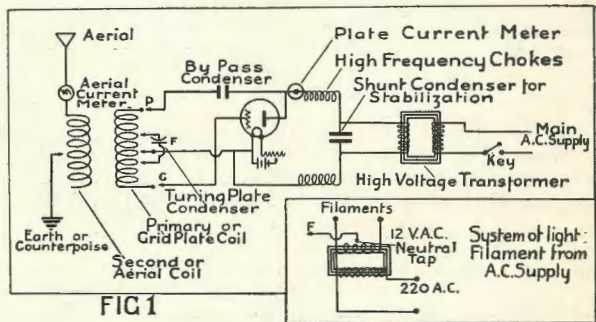
Further proof of the reliability of long waves for commercial communication is evidenced in the 18,000 metre wavelength used by the British General Post Office at their giant high power station at Rugby, which is making astounding long distance records on telephony and telegraphy.

Towards the end of this year, the short wave Beam Station, now being erected outside of Melbourne, will be in operation, and all interested amateurs will be anxious to hear the result of the use of short waves with the reflector method of direction. The wavelength for this station, we believe, is to be somewhere between 40 and 60 metres.

The transmission of short waves from an experimenter's point of view is much easier to understand and operate than long waves, for the apparatus used in the production of high frequencies is very simple. Small aerials are mostly used, requiring but small power to saturate them. Power as low as 250 watts is all that is needed to span the globe, and for these reasons the short waves make a strong appeal to the genuine DX amateur, who tries to push his signals into the uttermost corners of the earth.

THE CIRCUIT FOR A SHORT WAVE TRANSMITTER.

The circuit shown herewith is widely popular for short wave transmission. It is not necessary to go into details of rectification of high voltages etc. for a simple method can be used at first to give good results. Later on the experimenter could improve his transmitter by rectification of A.C. or by employing a D.C. generator for use as plate supply.



Aerial.—Should be constructed by means of 3/20 stranded copper wire, into small cage, 60ft. vertical.

Earth or Counterpoise.—Would suggest single wire counterpoise same as aerial and placed five feet parallel with ground.

Tuning Coils.—Both coils should be wound with 12 gauge copper wire, and the turns spaced. The secondary or aerial coil should be wound with 12 turns and the primary or grid plate coil 15 turns. The diameter of coil could be made from 4ins. to 6ins. in diameter, and placed side by side to each other so that coupling is obtained.

By-Pass Condenser.—Could be made of glass plates or mica and tinfoil to have a capacity of .0005 mf. This capacity is not critical but should be kept small.

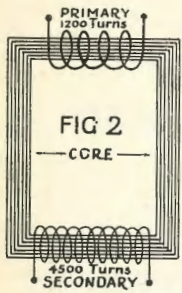
Stabilising Condenser.—Should be made same as by-pass, and have a capacity .001. The actions of this condenser seems to stabilise the high voltage.

Tuning Plate Condenser.—A double spaced receiving condenser functions and by means of this condenser the final adjustment of primary coil can be made.

Aerial and Plate Current Meter.—Aerial meter should read from 100 to 1000 M.A., and the plate current meter from 1—500 M.A.

High Frequency Choke Coils.—The coils prevent the high frequency currents from passing back into winding of high voltage transformers, which may cause a burn out. They should be made by winding 100 turns of 28 gauge s.s. wire on 3 in. diameter formula.

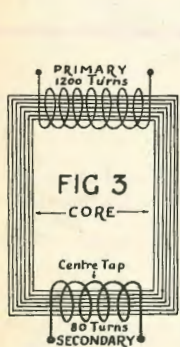
High Voltage Transformer.—This transformer steps up the low voltage to high value, and should be designed for wattage up to 100.



The core is made of soft iron laminations into a frame measuring 6ft. x 6ft. x 1½in. On one leg of core the primary winding is wound which consists of 1200 turns of 22 gauge enamel covered wire which is wound in layers. On the opposite legs 4500 turns of 30 enamel covered wire is wound in layers. This is the secondary winding and should be very carefully insulated.

This transformer is suitable for use up to 100 watts, and for operation from the 220v. A.C. house lighting supply.

If it desired to light the filament of oscillator tube by means of the house lighting main, the following instructions will be found suitable to construct a transformer to step down from 220v. A.C. to 12v. A.C.



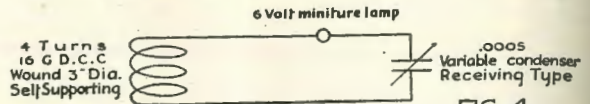
The primary winding should have 1200 turns of 22 enamel covered wire, and the secondary 80 turns (approx.) of 16 D.C.C. wire. The number of turns could be experimented with until the right voltage for filament is obtained. A tap is taken from centre of secondary winding, and is termed the neutral tap where connection is made to filament in an oscillating circuit. Again the use of A.C. on filaments prevents one-half of the filament from carrying more and the other half less than their share of current as in the case of D.C. on filament.

HOW TO TUNE CIRCUIT.

First light filament of oscillator tube to correct brilliancy, then close primary circuit of high voltage

transformers by means of telegraph key or switch, and if no reading is obtained at plate current meter try adjusting the taps on primary coil, P.F.C. The number of turns between F and P should be approx. six to seven, and from F to G five to six turns is all that is needed to obtain coupling between grid and plate circuits. Try coupling between secondary and primary or aerial coil, and after arriving at the correct adjustment the plate and aerial meters should register. Do not strive for maximum aerial current, for aerial current is very deceiving, also make sure that the plate current shown on plate current meter does not exceed the plate current stated by the makers of the valve, otherwise the plate will become hot—decreasing the life of the valve. This advice also applies to overloading filament voltage.

A wavemeter suitable for adjusting the transmitter to the correct wavelength can be constructed so as to tune from 32 to 48 meters.

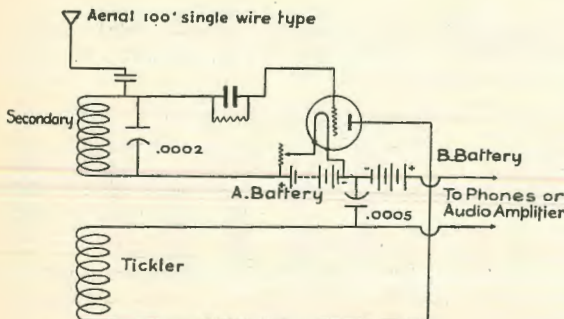


To calibrate this wavemeter it should be held near the coils of a short wave receiver, and when a known wavelength is being received the wavemeter condenser should be varied and a certain adjustment will stop receiver from oscillating if too near the coils, but at a further distance away a click is heard. The condenser of wavemeters should be marked. Then hold wavemeter near transmitting coils and adjust the taps, P. F. and G till the small lamp on wavemeter lights up to maximum brilliancy.

The wavemeter can be calibrated by the above method and no difficulty should be experienced to tune the transmitter to required wave, and after a little experience the experimenter should be able to find his wavelength in a few seconds.

The Construction of a Short Wave Receiver for Wavelengths from 12 to 113 Metres

For those who are interested in the reception of short wave reception, the following circuit will give excellent results:—



Secondary Turns.	Wavelength.	Tickler
19	58—113	4
10	35—70	4
6	23—45	4 or 3
3	15—26	4, 3 or 2
1	5—12	3 or 2

The necessary coils are made from 16 d.c.c. wound Lorenz type, about 3in. in diameter.

The coils can be fixed in position side by side for the coupling is obtained by adjusting the condenser connected between filament and tickler coil.

The small aerial series condenser consists of two small pieces of sheet brass, air spaced by a distance between, ½in. and ¾in. apart.

This circuit functions without an earth connection, and is found excellent for short wave reception. We suggest the use of Radiotron U.V. 201A for reception, as these valves function very satisfactory on short waves.

HAIL FOOTBALL!

(By C.E.)

Old Cricket, in his flannel robes,
 Has left his willow throne,
 And Football, King of winter sports,
 Goes up to claim his own.
 See how he struts all eagerly;
 The people shout and sing;
 From 3LO we too must send
 Our welcome to the King.

So blow the whistle, bounce the ball—
 The winter game is King of all.
 They're off, away, and round the wing—
 A skimming kick, a pass, a fling—
 Quite right, a free—they're off again;
 The backs are fighting might and main—
 The forward, watch him—bless his soul—
 Hurrah, he's kicked a bonzer goal.

Each year we make a grim resolve
 To keep as cool as ice.
 We'll see the matches, yes, of course,
 But be as quiet as mice.
 But I suppose this year will be
 The same as all before,
 And long before its lemon time
 We'll join the rest and roar.

Come on you beauties, beat them all,
 But kick it, kick it, KICK the ball
 You're not the only one can scoot,
 So cut it out and sink the boot.
 That's better now, they're off again;
 A man apiece and watch your men
 We want the goals so make things hum;
 Play up and earn your chewing gum.

Some folk have spoken of our game
 In phrases fairly terse.
 They've said it's just a waste of time—
 In fact, they've said it's worse.
 Our answer is a simple one;
 What need to more than tell
 The Digger grew on 'footer' and
 He grew up pretty well.

So don the guernsey, play the game;
 The Digger made himself a name
 By learning on the 'footer' field
 The manly lessons there revealed.
 He learned to do, as well as dream,
 That life, is playing for the team;
 And that was how he made a name
 When playing in the sterner game.

To those who wear the guernseys, and
 To those who watch as well,
 We wish a happy season from
 The first to final bell.
 And may each game the whole year through
 Be fairly fought and keen.
 From 3LO our wish, this year,
 The best that's ever been.

So blow the whistle, bounce the ball;
 The stage is set, the people call.
 The players, too, say "Look alive,
 We haven't played since '25."
 Hurrah for Football on his throne;
 The winter game is on its own.
 So where's the time bell—make it ring.
 Old Cricket's dead—Long live the King.

**Roberts' Exhibition
 Wireless Cabinets**

A well-built, finely polished Cabinet, will make all the difference to the appearance of your set.

We build Wireless Cabinets of Maple, Silky Oak, or Rosewood, to any size, and polish them in any color. The cost is very reasonable. Call and see us.

To Those in the Country

To facilitate packing we supply "knock-down" Cabinets, cut and polished, ready to screw together. Write us for prices.

**HENRY ROBERTS
 BRUNSWICK
 HOME FURNISHERS**

BRUNSWICK ST. - OPP. JACKSON'S BOND
 STORES - NEAR EXHIBITION - VALLEY - BRISBANE

When You Buy a—

**G.A.C.
 Radio Receiver**

You get the benefit of Eighteen Years Radio and Electrical experience.

**5 Valve Set £37-0-0
 4 Valve Set £29-0-0
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COMPLETE.

We specialise in overhauling Sets, Speakers, Phones, and Transformers and Batteries charged.

All our sets are Built on the low loss system, which gives greater distance, selectivity and easy control

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SUPERTONE RECEIVERS

The most wonderful Sets yet placed on the market, for the discriminating Radio buyer.

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Any of the three famous Models will tune all Southern Stations on the Loud Speaker at full volume.

Distinctive Features

- (1) 4QG can be tuned out at will.
- (2) Full volume with distortion eliminated.
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- (4) Simplicity of Control.

B.G.3. 3 Valve £25-0-0
COMPLETE.

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COMPLETE.

B.G.5. 5 Valve £44-10-0
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The three models are complete with polished cabinet, all accessories, 6 volt accumulator, loud speaker, aerial equipment, and with a

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BURGINPHONE WIRELESS RECEIVERS.

Catalogues, etc., Mailed Free.

RADIO SUPPLIES Coy.

DENHAM STREET,
ROCKHAMPTON



Mr. Harry Borrodale

Whose announcements on "The Queensland Radio News" night were much enjoyed and commented upon.

Mr. Harry Borrodale, in the opinion of this journal and of many listeners to "The Queensland Radio News" concert, accomplished the finest piece of announcing work on that occasion that could be desired. Practically every congratulatory letter we received after the concert made mention to Mr. Borrodale's excellent announcements, and we feel it our duty to place his services on record here.

Mr. Borrodale possesses three essentials necessary for perfect announcing. He has command of good English, he has the happy way of putting bright personality into everything he says, and he has ready speech, which enables him to make an impromptu announcement without the slightest difficulty. The latter qualification is not a common one. It is a gift, but it is one which every broadcasting announcer must possess, for in a studio, positions or delays are likely to arise in an instant, and it is left to the announcer to make announcement of the facts to the thousands of his unseen listeners.

In our very first issue (February, 1925), we made mention on the "Personalities" page to Mr. Borrodale's ability as an announcer. That was in the good old 4CM days before the advent of 4QG. To-day, we are still of the same opinion. Such a man at 4QG's microphone would add volumes to the prestige of our station.

Mr. Malone Replies

Your Editor is in receipt of a communication from Mr. Malone in reply to our Open Letter, which appeared in our last issue. While not being free to publish the text of the letter we are able to say that Mr. Malone expressed his appreciation for the splendid spirit behind the letter, and stated that the authorities in Melbourne had the matter referred to under review.

CLUB ACTIVITIES

Wireless Institute of Australia (Queensland Division)

With the worrying matters that have interfered with the work of the divisional committee during the last three months now out of the way, it is possible to get on with the year's work. The first item is the annual meeting and election of officers, which will be held on Friday, May 14, at 8 p.m.

Nominations for the various positions must be in the hands of the hon. secretary by May 7. It is hoped to have a team this year that will give us a record year, circumstances being so favourable. Don't neglect to keep this date free and come along to show your interest. Subscriptions for the year are also due and remittances will be appreciated. As the profits from the art union are not as anticipated, the equipping of the experimental room will have to be done from the ordinary revenue which at all times

is difficult. With the coming of the winter or stay-at-home nights it is hoped to provide members with some interesting work. As a start, it has been decided to give Morse practice by means of slow signals from 4W1, and some short explanations of various wireless matters. The wave length will be in the allotted amateur band, probably about 150 metres. 4RB, Mr. R. B. Browne, will have charge of this work. Results of the art union drawing will appear elsewhere in this issue if the paper has not gone to press before the drawing, which is to take place on Wednesday, the 28th April. Sufficient lectures have not been offered for this year yet, and the committee would like to hear from anyone willing to arrange a lecture or demonstration at a general meeting of the division.

Woolloowin Radio Club

Since the last issue of this paper we have been honoured with an official visit from the members of the Graceville Radio Club. Through having to leave somewhat early in order to catch their train they could not stay with us as long as we would have liked. An interesting and enjoyable evening was spent.

On the 8th April last, Mr. J. G. Reed, of A.W.A. and 2JR, paid us a welcome visit. He gave us much interesting and informative matter concerning radio generally and Station 2JR in particular. The opportunity was taken to ask Mr. Reed many questions, which were readily answered. Our secretary, who escorted Mr. Reed from the city to the club room, claims that contrary to recently circulated reports, Mr. Reed is keenly interested in the amateurs. His visit leaves us all with the same impression. We

hope to have the pleasure of meeting 2JR again before he leaves this city.

At the meeting held on 8th April, a move was made in the matter of the present interference by 4QG. A special meeting of members was called for Thursday, 29th April, to discuss the question of enlisting the aid of BCL's, in an attempt to have the Australian B.C. stations more widely separated in wavelengths. All other radio clubs in and around Brisbane were invited to send representatives.

This club meets every Thursday evening at 8 p.m. at the club room, in Wilmington Street, Woolloowin, and visitors and intending members will be made welcome. Correspondence, which is invited, should be addressed to the Hon. Secretary, Mr. H. A. Jear, Lisson Grove, Woolloowin.

Graceville District Radio Club

The general monthly meeting of the Graceville District Radio Club was held in the Graceville Methodist Hall on Friday evening, the 9th inst., and although the attendance was not as large as expected, marked enthusiasm was shown by those present in the discussions which ensued during the evening.

It was decided to make application to the Director, Queensland Radio Service, for permission to inspect

the transmitting plant of Station 4QG, when it is expected considerable knowledge will be gathered by the members from such a visit. It is hoped on a date when a suitable dance programme can be arranged to hold a Radio Dance one evening during the month of May.

The Secretary was instructed to write to the Wireless Institute of Australia and obtain details re affilia-

tion with that society. The President, Mr. Pledge, had on view as an interesting exhibit a very fine example of construction in the line of crystal sets, with which he is capable of getting splendid phone strength from 3LO and 2BL, and loud speaker strength from 4QG.

During the latter part of March a visit was paid by some of the members to the Woolloowin Radio Club, where a hearty welcome was offered them and an enjoyable evening spent.

Marked improvement can be shown in the attendance at the monthly meetings, and all members and intending members are asked to keep in mind that these meetings are held on the first Friday evening in each month, the next meeting night being on the 7th May.

Application for membership should be made to the secretary, S. W. Keeping, Ettie Street, Sherwood.

THIS IS YOUR JOURNAL.

Make it bigger and better by getting your friends to buy it also. The subscription rate is 6/6 per year posted. The address is Box 1095N, G.P.O., Brisbane.

The Five States Now Linked Up

"The Queensland Radio News" now has subscribers in every Australian State, Tasmania and New Zealand. The chain was completed last month when we received the following letter from Mr. Reg. M. Anthony, of South Australia:—

3 High Street, Unley Park,
South Australia,
16th April, 1926.

Editor Queensland "Radio News,"
Brisbane.

Dear Sir,—

I have received a card from A4CK and he gave me the subscription and address of your Magazine. He stated that it contained a lot of good information, so I will be very pleased if you will enroll me as a subscriber. I am enclosing 6/6 for one year's subscription.

Wishing your paper every success.

Yours faithfully,
REG. M. ANTHONY.

You will be doing your paper and your editor a good turn if you, too—like 4CK—will pass the good word along.

Thanks muchly 4CK—jolly good of you. (4CK is Mr. E. L. Morris, Hume Street, Toowoomba.)



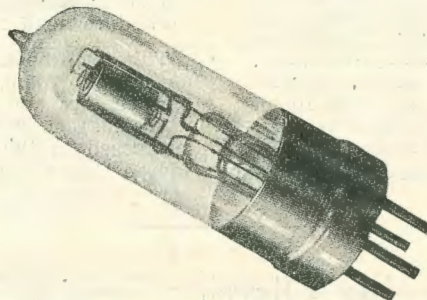
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The World's First Valve
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Filament Voltage, 4.
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Reduced Prices of the Famous AR Valves 5/- each

Stocked in English and American Caps by all Wireless Dealers or Wholesale from—

THE EDISON SWAN ELECTRIC CO. LTD., 156 Creek St., Brisbane

People in the Programmes 4QG



MR. ALBERT KAESER.
A well known musician of Brisbane who conducted the Ithaca Orchestral Society at 4QG on Monday evening, April 19. This orchestra, under Mr. Kaeser's baton, broadcasted some splendid items.



MABEL SUNSHINE,
who assists "Uncle Ben" in his popular Saturday evening Bedtime Stories. She is really Miss Mabel Cormack, and has just returned from studying elocution and dramatic art abroad.



MR. W. H. DAVIES,
Solo Cornetist and conductor of the Brisbane Federal Band frequently broadcast by 4QG. Both Mr. Davies' individual solos and the items by his excellent band are greatly enjoyed by listeners.



St. Lawrence's Boys' Choir, with their Music Master (Mr. Erich John).

This Choir of Boys' voices was greatly appreciated by those who listened-in to the last "Queensland Radio News" Concert, broadcast on April 21 last. Mr. John is to be congratulated upon the training of these voices, as he is to be with the directing of the Concert on the whole.

His
Daddy's
Choice



His
Daddy's
Choice

The Latest in Radio

De Forest leads the field in 1926 with its new D-17. This new instrument has the great features that have made De Forest Radiophones famous alike with experts and the unskilled—plus refinements that simplify its operation, give increased selectivity, sensitivity, and distance range.

Note these points:—

1. A clear, natural tone common only to De Forest instruments—a tone so rich and pure that the living performer seems to be present.
2. No aerial—no ground wire.
3. Simplicity of operation—detector tube in place of crystal gives immediate results, eliminates all detector adjustments.
4. Disturbing squeals have been eliminated.
5. The D-17 can easily be moved from room to room on a tea waggon or carried by hand.
6. A handsome instrument that is a handsome piece of furniture.
7. Lee De Forest, the greatest name in radio, made present-day radio possible.

The D-17 has built-in loud speaker, valves, loop, and "A" and "B" batteries.

Write us direct for further information and name of nearest De Forest dealer.

Price of D-17 £75
with everything complete.

International Radio Co. Ltd.
200 CASTLEREAGH STREET, SYDNEY,
91-93 Courtenay Place, Wellington, N.Z.

RADIOPHONE IS A DE FOREST INVENTION

(AGENTS WANTED EVERYWHERE.)

The Association for Developing Wireless in Australia, New Zealand, and Fiji

President's Annual Report, 1926

We are in receipt of a very informative report forwarded by the abovenamed Association, the text of which we consider vital and interesting enough for publication.

It may be well to mention that this Association is doing excellent work in the South for the advancement of radio in Australia. Its officers and committee comprise, for the most part, prominent wireless dealers and amateurs, who are devoting no mean portion of their time to the splendid objects and ideals of their Association.

The report reads:—

"The development of wireless during the past twelve months has been very great, and particularly emphasises the necessity of an Association such as this to watch opportunities for the widest utility of the various improvements in Radio transmission and reception.

In Australia much success has been won in experimental work, one of our members, Mr. C. Maclure, successfully exchanging telephonic messages with Great Britain, Africa, and other parts of the world, whilst short-wave transmission between Australia, Great Britain, and America has been successfully achieved.

BROADCASTING.

The past year has seen considerable discussion regarding the different effects of long and short waves, and much public interest is being taken in the matter by some Australian Broadcasting Stations. 2BL (Sydney) is using two wave-lengths, one of 353 metres every evening; and from 11 p.m. till midnight on three evenings, and from 12 o'clock to 1 p.m. each day, a short wave (between 27 and 45 metres) is used.

Regarding the short-wave experiments of 2BL Station, the latter reports that during the transmission for the first 2000 miles the message is scarcely audible, but as the distance thereafter increases so the message increases in strength until it becomes perfect in reception.

The following are the "A" Class Broadcasting Stations in Australia:—

Length in Metres.	Station	Name	Power.
1250	6WF	W. Aust. Farmers Ltd. (Perth)	5 K.W.
1100	2FC	Farmers (Sydney) Ltd.	5 K.W.
484	3AR	Assoc. Radio Co. (Melbourne)	1500 watts
395	5CL	Gen. Broadcaster Ltd. (Adelaide)	5000 watts
390	7ZL	Assoc. Radio Co. (Hobart)	400 watts
385	4QG	Q'd. Radio Service (Brisbane)	5000 watts
371	3LO	Broadcasting Co. of Aust., Ltd. (Melbourne)	5 K.W.
357 (and short wave)	2BL	Broadcasters (Sydney) Ltd.	1500 watts

There are a number of "B" Class Stations operating, one in New South Wales (2KY) is controlled by Labour interests, and commenced operations from the Trades Hall, Sydney, on November 2, 1925. It was stated by the Postal Authorities that this station would not be used for regular communication between union centres and their branches, or for issuing instructions to organisations, as such would not

only be contrary to the Wireless Regulations, but a contravention of the Telegraph Act, which vested with the Postmaster-General the sole right of regulating and charging for communication between individuals.

The possibility of quick party changes in the policy of Australian Governments emphasises the necessity of an authority, independent of any political party, having the right of watching the development of wireless and the best interests of "listeners-in," as well as of transmitting stations.

THE FEDERAL CONFERENCE.

With the rapid development of radio many problems presented themselves, calling for earliest attention, such as the best way to help the Federal Government regarding license fees, what are equitable copyright charges, and patent royalties, which, with other problems arising could best be discussed at a Federal Conference by all parties interested; and as Australia, with its widespread area appeals for earliest attention regarding the best utilisation of wireless, a gift most applicable to our great continent of distances, the Postmaster-General was approached to request the Federal Government to call such a conference. He wrote to your President as follows: "I think that if you personally were to convene a conference on the lines you are advocating, it should be as far reaching as if it were convened by a Government body."

On September 11 last, at a general meeting of this Association, it was decided that a Federal Conference be called for the purpose of considering the vital problems that were affecting Australian Wireless Development; the following members being elected to a sub-committee to prepare the Conference programme for submission to the Association: Messrs. J. G. Pritchard, F. Basil Cooke, L. D. Rudolph, W. D. Scott, W. J. Maclure, and L. P. R. Bean. Messrs. S. E. Wilson, of Farmer's and A. W. Watt, of "Radio" and "Wireless Weekly," being given special invitations to join the Committee. Mr. Wilson, however, could not accept the invitation. The Committee, after two meetings, reported to the Executive, and it was decided to recommend that the Federal Conference should be held at Sydney on May 3rd, 1926, to consider the questions of copyright charges, patent royalties, the best method of collecting fees, and any other matters that such Conference shall consider should be discussed. Furthermore, that the Federal Government appoint a Royal Commission to enquire into the matters that the Conference shall place before it.

It is suggested that the new Council of this Association at an early date after the annual meeting, prepare a report for submission to the Association of a suggested list of institutions that will be invited to send delegates, which will include Governmental (including Postal, Educational, Defence, and Shipping); Broadcasting and Radio trading concerns, as well as Scientific Institutions, the Wireless Institute of Australia, the Australian Listeners' League, and others associated with wireless.

If the Conference will draw attention to any point that may not be in consonance with present regulations, I feel the Federal Government will alter same when it is in the best interests of the public and in keeping with fair dealing with others interested.

MEMBERSHIP.

During the year the Secretary was instructed to hand the Association's solicitor a decision by the Association that its memorandum and Articles of Association be altered to reduce the membership fee to £2/2/- per annum, and to admit Associate members at £1/1/-. This alteration has since been made and approved by the Governor in Council, and adopted by this Association. This step will mean a great strengthening of our Association as a wide-spread publicity campaign has been prepared and is ready for such purpose for our new year.

A GENERAL VIEW.

It is interesting to note in the general development of Australian wireless that the matter of the wider utilisation of wireless for commercial, as well as educational purposes, should always be kept in view. Every encouragement should be given to the proposal that Education Departments should utilise radio for disseminating information, particularly to homes distant from cities and towns.

The desire of this Association to spread the use of wireless has had excellent support from the Town Planning Association, which in its "Country Centre Development Section" is, arranging local Betterment Boards in the principal parts of the State of New South Wales.

The first of these Betterment Boards has been established at Newcastle, consisting of the Mayor as Chairman, with Presidents of the various Engineering, Architectural, Building Associations, the Chambers of Manufacturers and Commerce, and representatives of the various suburbs in the Newcastle metropolitan area, and including Mr. Swain, the President of the Newcastle Wireless Society, as it is recognised that one of the main features of country betterment is the best encouragement of the development of wireless in such localities, so as to bring city pleasures to those districts, and prevent the march to the capital cities.

The New South Wales Police Department is already considering having its own broadcasting station, whilst the Fire Brigades Board of New South Wales is also to arrange special broadcasting stations.

This development calls for the best encouragement of experimental work; for although your President for such has collected over £50 out of a sum of £100 to which the New South Wales Government is to give a £1 for £1 subsidy, the matter of encouraging experimental work should win widest support. Our Universities should be encouraged to take up the study of radio so that it will become an important factor in national education; in which respect it might be mentioned that an interesting demonstration of wireless was given at Melbourne University Engineering School last September, and created a considerable amount of public interest.

One of the happiest of the many happy developments of the past year is that the loneliness of the widespread areas of the north of Australia has been wonderfully overcome by the Federal Government placing a series of transmitting and receiving stations over the area. Wave Hill Wireless Station UJD (five hundred miles south-west from Darwin) is interlinked with many stations, so that it is possible for a private station in that widespread area to have its message sent to Darwin, and so on to the capital cities, getting replies in an hour or two, which formerly took many weeks.

The isolation of Australia's widely scattered stations is being minimised, by their enjoying music, song and story by radio, yet it is only two and a half years (August 1, 1923), since Australian Broadcasting was inaugurated by the President of this Association, with two of its members, Messrs. F. Basil Cooke and J. I. Carroll.

THE WORLD TO-DAY.

In looking round the world, one cannot but be impressed with the remarkable development of radio science. Television is developing from the experimental to the practical, and Broadcasting has developed, not only for concert and educational purposes, but also as a factor in transmitting scientific information from the North Polar regions by the MacMillan expedition, as well as from the depths of the ocean and the lowest of mines.

Hardly any part of the world has not been touched by wireless. Aeroplanes and airships are being directed by radio, whilst the target ship of the British Mediterranean Fleet, during recent naval manoeuvres, was controlled from a considerable distance by wireless waves, thus proving on a large scale what was demonstrated in the Lyceum Theatre, Sydney, with the invention of Captain Roberts, an Australian, in 1912.

The great value of Radio is being daily demonstrated by the reception all over the world of news from the fine British station at Rugby, which, within the past month has been transmitting news from England, so eliminating the news sheet issued on British ships at sea, news-matter that formerly came through the Nauen Station in Germany.

In this progressive step, as in others dealing with radio, congratulations should be conveyed to the British Postmaster-General's Department, which is taking every step to bring at earliest arrangement, unity of Radio communication throughout the British Empire.

This Association also holds a place in world achievement in radio, it being the first to successfully arrange for the broadcasting of the Peace Greeting to the world of the President of the League of Nations, which was transmitted from Geneva in September, 1924, and re-transmitted in 23 languages from as many stations in other nationalities. This is mentioned because it has been recently cabled that last year's transmission was not so successful.

I desire to thank our Executive and brother members, with the Secretary, for their cordial support given me during my term of office, and, in retiring, I desire to impress upon members and all connected

with wireless, that in these days of development, when misunderstanding often clogs sane reasoning, and self-interest sometimes unfairly endeavours to influence public opinion, it will be keenly understood how necessary it is for such a body as this to exist as the happy medium between the public and the supplier, a body that is independent in its opinions, only recognising the Development of Wireless for the best interests of humanity.

GEORGE A. TAYLOR.
President.

25th February, 1926.

MORE RADIO, MORE MILK.

From Strasbourg comes word that Rhineland dairy-men have discovered that music not only soothes the cow, but induces her to increase her milk supply. It is asserted that in recent tests when a phonograph was placed within hearing of the placid German cow, appreciation of the musical accompaniment to the absorption of bran mash resulted in increases of 6½ per cent. in the quantity of milk given by the animal. It has not yet been determined, however, whether repetition of a limited repertoire of numbers would result in the contempt for the musical aid induced by familiarity, but so as to take no chances it is now proposed to install radio loudspeakers in the barns that the cows may have a bit more of variety in their programmes.



"LI'L FELLER WID HIS DADDY'S EYES."

—and his daddy's habits, too, by the look of things. Anybody who knows Mr. H. F. Coffey, officer in charge of Pinkenba Radio, will see the likeness of his features vividly portrayed in this, his baby boy. Evidently, it is Mr. Coffey's intention to train the lad up "in the way he should go," and if one may take the expression of the little chap as an indication, he is going to prove a very apt pupil.

STEEL SERVICE

Over the telephone comes an order from Longreach for Steel Flood Boats. By wire is flashed the need of a Townsville storekeeper for Structural Steel Framework for a new building. In the city we are telephoned and interviewed for quick delivery of Big Cranes, Structural Steel Girders, and Cantilever Awnings.

These form a hundred odd orders of a single day. Some can be filled at once; in others, conditions spell delay. But in most instances when speed is essential, our large stocks of steel, our points of distribution and our system of delivery unite to make Harvey Steel Service an influence in the placing of orders.

HARVEY & SON

"Staunch Service"

Structural Steel Engineers

MARGARET ST., BRISBANE

S.A.S

Home Assembly, Complete Set of Parts for Home Construction of any Style of Sets

With Wiring Diagram and Full instructions for assembling

LIST OF PARTS FOR THE CONSTRUCTION OF A TWO VALVE SET.

	£	s.	d.
1 Panel	0	11	3
2 Valve Sockets	0	7	0
2 30 Ohm Rheostats	0	10	0
1 2-Coil Holder	0	10	0
1 .001 Variable Condenser	1	7	6
1 Grid Condenser	0	3	0
1 2Meg Grid Leak	0	2	6
1 Baseboard	0	1	6
12 Lengths Bus Bar Wire	0	2	0
1 Set Engraved Terminals	0	4	0
1 Soldering Set	0	2	6
1 Transformer	1	1	0

£5 2 3

2 Valves Dull Emitter or Bright Emitter	1	5	0
1 "B" Battery	0	12	6
1 Set Coils (3) Mounted	0	9	9
1 Pair Head Phones	1	2	6
Aerial Equipment	0	7	6
3 Dry Cells	0	8	3

Total £9 7 9

LIST OF PARTS FOR THE CONSTRUCTION OF A THREE VALVE SET.

	£	s.	d.
Panel 21in. x 9in. x 3-16in. Drilled	1	3	6
1 Baseboard	0	1	6
1 2 Way Coil Holder	0	10	6
2 30 Ohm Rheostats	0	10	0
3 Valve Sockets	0	10	6
2 Transformers	2	2	0
1 Grid Condenser and 1 Grid Leak	0	3	6
1 .001 Variable Condenser with Vernier	1	7	6
1 Single Circuit Jack	0	2	3
1 Set Engraved Terminals	0	4	0
1 Soldering Set	0	2	6
15 Lengths Bus Bar Wire	0	2	6
1 Terminal Strip	0	1	0

£7 1 3

3 Valves Dull or Bright Emitters	1	17	6
2 42 Volt "B" Batteries	1	5	0
1 Pair Headphones	1	2	6
3 Dry Cells	0	8	3
Aerial Equipment	0	7	6
Set of Coils (6)	1	1	9

Total £13 3 9

LIST OF PARTS FOR THE CONSTRUCTION OF A FOUR VALVE SET.

	£	s.	d.
1 Panel 21in. x 9in. x 3-16in.	1	3	6
1 Baseboard	0	1	6
2 .0005 Variable Condensers	1	10	0
1 2 Way Coil Holder	0	10	6
4 Valve Socket	0	14	0
3 30 Ohm Rheostats	0	15	0
1 400 Ohm Potentiometer	0	5	6
2 Transformers	2	2	0
1 Single Circuit Jack	0	2	3
1 1 Double Circuit Jack	0	3	0
1 Grid Condenser	0	2	0
1 Grid Leak	0	2	6
1 Pair Leak Clips	0	1	0
1 Phone Plug	0	2	6
1 Soldering Set	0	2	6
1 Battery Switch	0	2	9
1 Panel Plug	0	3	6
1 Set Terminals	0	4	0
21 Lengths Bus Bar Wire	0	3	6
2 Terminal Straps	0	2	0

£8 13 6

4 Valve Dull or Bright Emitters	2	10	0
2 42 Volt "B" Batteries	1	5	0
3 Dry Cells	0	8	3
1 Pair Headphones	1	2	6
1 Set Coils (7)	1	6	3
Aerial Equipment	0	7	6

Total £15 13 0

J. B. CHANDLER & CO.

"For Radio Service"

ADELAIDE STREET, BRISBANE

(Next Allan & Stark Limited)

S.A.S.

Will Radio Kill The Small Newspaper

A large group of American newspaper owners, publishers and editors have decided that radio is a serious menace to the newspaper world.

Similar antagonism has been caused by former innovations. When the first phonographs appeared, theatrical people forecast the death of opera and concerts. They were wrong; the phonographs helped musical productions. The first movies were denounced as an agent that would destroy the legitimate drama. Yet to-day the stage thrives as never before and the prosperity of the cinema is proverbial.

Now it is radio's turn to receive the attention of the gloom dispensers. Just as labor has objected to each new mechanical device, so the stage, the screen, the press are wailing over the "ruin" to be visited upon them by radio. Yet theatre managers who have had the nerve to broadcast plays or parts of plays report that the broadcasts increased the box office receipts. And certainly there have been no reports of bankruptcy or of loss of circulation from those newspapers that have erected broadcasting stations even though they put upon the air some of the same news that later appears in their columns.

There is one possibility that may be regarded as a danger. By the use of radio we may eventually metropolitanise the rural districts and smaller towns. Their interests may become identical with the interests of the big communities. This possibly will menace the life of the country newspaper.

It may be that the rural resident will, eventually, prefer to read the suburban edition of the big daily, as he will there get a wider scope of information about the events of which he heard by radio the night before.

But even this may prove less a matter of regret than we should at first think. After all, the individual is rapidly sinking into unimportance, and the community of the State is becoming the unit of human thought. As the world shrinks, as it is made smaller by rapid means of communication, by ships, trains, airplanes, telephones, telegraph and radio, the nation may also gradually become secondary and the world will be one great unit, recognised as such not only by the statesmen and the diplomats but also by the man in the street.

In that day the little local paper will be of such slight interest that it will die a natural death, unmourned even by its owner. Radio will have been more directly responsible for this change than any one other element of our complex civilisation. It is one possibility of the effect of radio on the publisher. The time may be coming when, because of radio, the big metropolitan dailies will have a greater rural influence and, as a corollary, some of the small local papers will be gradually killed off.—Senator Paul Dupuy.

Guaranteed for Twelve Months

"AENOLA" RADIO RECEIVERS

The Cheapest in Brisbane by far

Well built and remarkably cheap. Designed to give long range with clarity. Call and ask for a demonstration before purchasing high-price sets elsewhere.

NOTE THE PRICES:

Crystal	£3-0-0	3 Valve	£20-0-0
1 Valve	£9-0-0	4 Valve	£25-0-0
2 Valve	£14-0-0	5 Valve	£32-0-0

These prices include Dull Emitter Valves, Batteries, Headphones, Cabinet, Aerial Equipment and Coils.

Loud Speakers from £2 upwards extra.

Your Choice will be an "Aenola"

A. E. NEWNHAM
LOGAN RD. WOOLLOONGABBA

Phone J 4379

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MONEY



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For Wireless Sets and Accessories

Single Valve Set, £7/10/, complete.

Two Valve Sets, £14/10/., complete.

Three Valve Sets, with Loud Speaker,
£25, complete.

Crystal Sets, made specially for 4QG
Brisbane, from 35/., complete.

All Latest Records Stocked.

Talking Machines from £3/7/6.

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Stores and Bookstores.*

An Efficient Coil Winder

With the aid of two wooden discs, a carriage bolt and a sewing machine, the radio experimenter who winds his own coils can do an infinitely quicker and better job than he can do by the usual method of winding his coils by hand.

The device is attached to a portable electric sewing machine. The apparatus itself, consists primarily of two wooden discs between which is centered the tube or form upon which the wire is to be wound. These discs are connected together by a carriage bolt, which when tightened holds the tube securely in place.

The thicker of these two discs rests against the flywheel of the machine. It is held in place by two or three screw-eyes that pass between the spokes of the flywheel. These screw-eyes hold the disc securely in position. They may be easily unscrewed when the housewife wants to sew.

The winding form, usually a Bakelite tube, is placed between the discs and the bolt is tightened slightly. The machine is then spun slowly and the tube shifted to a central position so that it runs true. The bolt is then fully tightened and the winding started. In this way a coil may be wound in a few minutes that would ordinarily require an hour if done by hand. And when finished, the machine wound coil will not only look better but it may actually be a more efficient coil than one wound by hand.

The so-called "binocular" coil used in both the Grebe and Grimes radio sets may be easily and quickly wound on this machine. This type of coil has somewhat the same electrical characteristics as the toroidal or "doughnut" coils. Incidentally, the binocular coils are wound in pairs but the windings are in opposite directions. (Simply turning a coil, end for end will not reverse the direction of the winding.)

But with the help of this machine, the problem is easily solved.

First, one set of coils is wound with the motor rotating in one direction. The brushes on the motor are then shifted so as to reverse it. Finally, another set of coils may be wound corresponding to the first set but with the windings in the opposite direction so that the fields will be reversed.—H.G.B.

Special Concert from 4QG

Arranged for May 19th.

On Wednesday, May 19th, Station 4QG is to broadcast a Special Classical Concert arranged by Miss Lottie Richter, supported by leading artists and the Savoy Orchestra. The following are the artists who will be taking part:—

Lottie Richter (Soprano)
Mr. Eric Hayne (Violinist)
Ted England (Baritone)
W. Crisp (Tenor)
Mrs. Chas. Willey (Contralto)

A special concert is being arranged, and as it will be the first radio appearance of some of these well known artists many are looking forward to this date with pleasure.

A New Anti-Static Method

A method for reducing static interference in radio receiving by balancing signals received on a loop and capacitative antenna has been patented (No. 556,137), by Roy A. Weagant of New York.

Mr. Weagant has discovered that the most objectionable forms of static impulses seem to behave as though they are due to vertically propagated waves which are uniformly polarized. Knowing that signal waves are horizontally propagated and vertically polarized, he has devised a new method for minimizing static interference.

The present invention is based on discoveries made by Mr. Weagant before and also on certain additional facts he has discovered in regard to the properties of different types of aerials, when they are associated in a certain way.

Antennas of different forms draw energy from the static and signal waves in different ways. The phase and direction of currents produced in them are differently affected by the polarisation and direction of transmission of these waves. These differences, he finds, can be utilised to at least partially cancel static and retain signals from one half of the horizon.

It is well known that a vertical open antenna receives horizontally propagated vertically polarised signal waves equally well and with like effects, no matter from what direction they may arrive. It is also known that such an antenna, whether grounded directly or through a counterpoise, will also receive static waves.

On the other hand, a loop antenna or a system of loops is differently affected by the direction of arrival of signal waves, and on purely theoretical grounds Mr. Weagant believes it probable that it is also differently affected by the static waves when their direction of polarisation changes.

In applying these principles, the inventor also finds that if currents are set up in associated antenna which are largely indifferent to the polarisation of vertically propagated waves, so far as reception of energy is concerned, and which are differently affected by the azimuthal direction of horizontally propagated waves, he is enabled to geometrically combine the effects of the antenna currents on a common detector circuit. The result is that at least part of the static currents, and the signals from one half of the horizon are approximately neutralized, while currents due to signals from the other half of the horizon are retained and more or less effectively added. Thus a most useful method and apparatus is produced for reducing both static and interference effects.—
"Popular Wireless."



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NEW
Hinged Spider Former 1/9

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Easy to wind. Fits all standard sockets.
Cheapest and best Inductance Device in
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To ensure best results Comp the Ether
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For Neutrodyne Sets....

Set of
3 Adjusto Formers

24/6
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Head Phone
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Adapter

7/6
each

How to Avoid Mistakes in Drilling Panels

It has been my experience to spoil many good panels by carelessly laying out the drilling, or by making mistakes in measurements that disfigured the whole set.

In order to guard against these costly errors, I have developed an idea which seems so elementary and yet is so effective that I am passing it along to other radio builders for their benefit.

Most construction articles in good magazines include a detailed drawing of the panel layout. Because of the small amount of space available this cannot be given in full size. Get a sheet of drawing paper, or even thin drawing "skin," and lay out the panel as shown in the magazine illustration, but in full size. Check over everything carefully, and then secure the piece of insulating material that is to make up the panel proper.

This material should be secured cut exactly to size. Its best surface is selected, and a light coat of shellac is quickly applied. On top of this lay the full size drawing or a blue print, dimensions upwards, and press down firmly with a board padded with a cloth or newspapers. Guard against the drawing sheet from slipping. By comparing the edges of the paper with those of the panel, this can be carefully watched.

The shellac acts as an excellent glue and will hold the drawing on the surface tightly for the drilling.

This should not be attempted, of course, before every hole is properly center-punched. By marking on the drawing the size of drills needed for the various holes, the work can be quickly and efficiently done.

To remove the drawing, just moisten it and peel it off. The extra shellac on the panel surface can be quickly removed by means of a rag dipped in alcohol.

In this way, you will never make a mistake in panel drilling.—H.D.W.

4QG Heard in Alaska

Achievement by New Station

When listening to 4QG's concerts it is hard to imagine that people of North America—and those further afield can also tune in to this station.

On Thursday, April 29, Station 4QG received a report of the clear reception of the station's programmes in America.

The following is a letter received from Mr. Digby Cochrane, of Wrangell, Alaska, U.S.A.:—

"I enjoyed your programme very much on Wednesday, March 24, between 12 and 3 a.m., especially the following features: Lecture on farming, and songs by Mr. J. Caldwell. Reception was good and clear. Your orchestra was a treat, quite a change from so much jazz that we receive here."

Examination of the official log at Station 4QG confirms Mr. Cochrane's reports. On the night he mentions, a lecture on farming was given by Mr. R. Wight, of the Council of Agriculture, and the music referred to was played by the 4QG Studio Quartette.

Single Valve Sets

— R.E.G. —

Made completely in England. Highly finished of Best Parts. Mounted in Rosewood Cabinet.

4QG on small Reproducer. Southern Stations on Phones.

Complete with R.E.G. Headphones, Mullard Valve, Batteries and Aerial Equipment, ready to install.

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Wireless Institute Art Union Drawing

Drawn recently under the supervision and in the presence of the Police Department. The Winning Numbers are as follows:—

1st Prize	No. 9753
2nd Prize	No. 3246
3rd Prize	No. 9843
4th Prize	No. 1470
5th Prize	No. 2384
6th Prize	No. 7101
7th Prize	No. 4058
8th Prize	No. 8099
9th Prize	No. 466
10th Prize	No. 6312
11th Prize	No. 3926
12th Prize	No. 2826
13th Prize	No. 2187
14th Prize	No. 8689
15th Prize	No. 2619

POPULAR ITEM COMPETITION

Lack of Interest Displayed

The number of votes returned for our "Popular Item Competition" commenced in our last issue, has been very disappointing. Out of the thousands of our readers only 54 voted, and unless more interest in displayed this month we shall discontinue running the competition.

The artist who received the greatest number of votes was "The Sandman."

The name of the lucky reader picked from those who voted for him was O. Colyer, Enoggera. to whom a cheque for £2/2/- will be forwarded.

We append the Voting Form herewith. **VOTE THIS MONTH..** You have every chance of winning the £2/2/-, and it only costs you a 1½d. stamp.

"Queensland Radio News" Popular Item Competition.

VOTING FORM

I consider that the number entitled
 rendered by
 on
 was the best item broadcast by 4QG,
 between April 27 and May 26, 1926.

Name

Address

.....



Wireless Aerials

Supplied, Delivered and Erected.
 Good Timber, Solid Foundations.
 Enquiries Invited.

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Please send me Post Free, Illustrated Folder of Radio Sets.

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Questions Answered

C.F., Cooroy: Read in our next issue (June) the article describing how to construct a spark coil to give H.T. for transmitting circuit. Diagram explaining method of connecting loop aerial and C battery forwarded per post.

R.S., Mundubburra: (1) Yes, use your potentiometer. (2) Three rheostats would give better results. Use 10 or 6 ohm resistance. (3) Your set should function without a "C" battery. (4) We cannot say—remember we have not heard your set function. (5) Yes, use moving vane condensers. (6) One stage of transformer coupling would be sufficient. (7) Resistances and condensers for resistance amplifiers are sold in sets suitable for use in conjunction. (8) Keep "B" battery voltage same on audio amplifiers, and separate rheostats. Your blue print has been posted to you.

L.C., City: Suggest you read our article on Short Wave Transmission and Reception in this issue.

Election Results from 4QG

HALF HOURLY SERVICE FROM 8 P.M. TILL MIDNIGHT.

By courtesy of Mr. G. A. Carter, Under Secretary, Department of Justice, Station 4QG will broadcast the latest election figures on Saturday night, May 8, at half-hourly intervals, commencing at 8 p.m. and concluding at midnight.

Interspersed between these announcements will be musical numbers from the studio, also dance numbers from Lennon's Hotel, played by Miss Dobbyn's Vice Regal Orchestra.

The CONTINENTAL Typewriter

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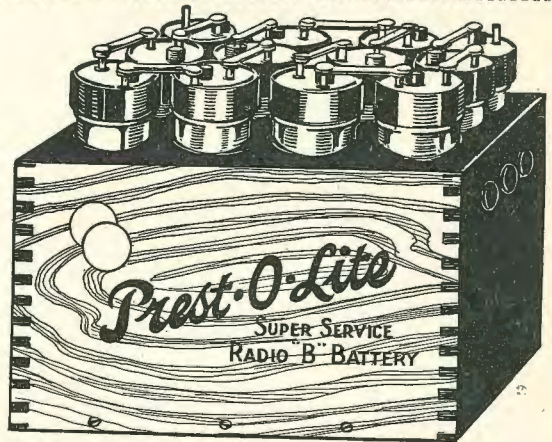
Strong, Silent POWER

Twenty years ago when the motor-car industry was in its infancy, PREST-O-LITE gave the automobile its first dependable headlights.

To-day, PREST-O-LITE Radio Batteries are giving wireless enthusiasts the world over, wonderful service and satisfaction.

Prest-o-Lite Batteries are the Rolls-Royces of the Battery Field. They outlive other makes by years, and give a steady and constant discharge under all conditions.

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BRISBANE

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Head Office:
ADELAIDE STREET

Correspondence

C/o Milrose Motories Ltd.,

Mackay.

April 7, 1926.

(To the Editor "Queensland Radio News.")
Dear Sir,—With reference to your article on distortion by J. G. Reed appearing in your issue of April, where he states distortion occurs in receivers that are distant between 100 and 200 miles of 4QG is attributable to the difference in time between the earth bound and deflected waves. Now this time would be approximately .0005 seconds which is, "and I think you will agree," too fast to ever cause an audible distortion. There is no comparison between 4QG and 3LO or 2BL, owing to the distortion on 4QG, very noticeable even at our distance, and it is only when static is bad that we tune into 4QG. Hoping for a speedy improvement.—Yours truly,

A. B. MILNE.

P.S.—I have not been able to raise 4QG in daylight, whereas 2FC is often heard in spite of the extra distance.—A.B.M.

We referred Mr. Milne's letter to Mr. Reed, who replied as follows:—

Mr. Milne has misunderstood the nature of the fading mentioned in the article. It is not due to the time difference between the arrival of the earth and reflected waves. He apparently thinks that the reflecting layer is like a piece of plate glass mirror. Actually the medium from which the combined reflection and refraction takes place is in a continuous state of movement, and the reflected component varies erratically in such a manner as to produce the misphasing mentioned. At a distance of 200 miles the time difference between the earth and reflected waves is approximately 0.001 not 0.0005 of a second. This time interval is equal to the half cycle of 500 cycles corresponding to an octave above middle C of the piano, which is very much within the audible range met with in broadcasting. The transmitters at 3LO, 5CL, and 2FC, and duplicates, and except for the tuning inductances at 2FC could be interchanged without the alteration of one wire at either station. The daylight difference with 2FC is due to the 1100 metre wave which carries better than the shorter ones at this time of the day.

No hard and fast rule can be laid down for the distance where this form of distortion begins and ends. It is not a personal opinion or excuse of the writer's, but a statement of scientific fact proved by Dr. Greenleaf W. Pickard at his laboratory at Seabrook Beach, New Hampshire, U.S.A.

Emerald, 13/4/26.

(Editor, "Queensland Radio News.")

Dear Sir,—I notice in this month's issue of your journal an article on a Stromberg super six, wherein it is stated that with a 20ft. aerial a broadcast programme had been received at speaker volume from 1500 miles. This is quoted to show capabilities of the set. It may interest you or your readers to hear of my own experience, with 3 sets each, 2 radio (tuned anode) and 2 audio which I have built all to the same circuit—spacing, etc., being almost identical with no aerial whatsoever—earth, of course, being still connected. I can tune in to 4QG, 3LO, 2BL, 5DN, and get very good speaker volume, 4QG and 3LO are much too loud for headphones, as the volume positively hurts the ears. 4QG can be heard, every word distinct easily 200 yards, and 3LO to 150 yards without missing a syllable. 2BL or 5CL are not quite as good, but would supply volume to carry to about 100 yards. If transmission happen to be from a dance hall or theatre, the talking of the audience between items is easily heard. Valves are UV 199 plate, 72v. Amplion, AR 19L.S. .0005 condenser (no vernier) is in series with 35 turn aerial coil (single). Same coil is used with aerial in use, and condenser is about 20deg. less enmeshed when no aerial is used. Of course, the Stromberg six may have had a much less powerful station—but these sets are one radio less, and Adelaide from here would be more than 1500 miles, I think if sufficiently interesting I can get authentic verification and measure, actual distances, at which the announcer can in each case be easily followed.

H. H. GROUNDWATER.

P.S.—With no aerial static still arrives about same ratio to volume. Circuit comes from Wireless House, but has tickler added. This, of course, is absolutely no use on such powerful stations, even sans aerial.

"Cranley," Commercial Road,
Bulimba, 9/4/26.

(The Editor, "Queensland Radio News.")

Dear Sir,—I and several of my friends interested in wireless conducted experiments down the Bay aboard my launch during the Easter holidays. The receiver used was a four valve, tuned anode set, employing one stage of radio amplification, one detector, and two stages of audio amplification. The aerial used was a four wire inverted L type, the spreaders being 9 feet. The aerial was 15ft. long and 12 to 14ft. high. The earth was attached to the engine. The results are as follows:—

AT THE WEST BEACON.

Friday, 2nd April.

Worked 4QG, 2BL, and 3LO on coils. 150 aerial, 50 anode, and 75 reaction. Very good speaker strength, and absolutely no distortion. On this occasion we pulled in 3LO over 4QG.

Saturday, 3rd April.

Worked 3LO about 7 p.m., good volume and no distortion, but 4QG came through with so much distortion that we could hardly understand anything.

Sunday, 4th April (Morning).

Worked 4QG with fair volume and a small amount of distortion.

During Sunday afternoon we made a change in the aerial coil, plugging in a 200 turn and found that the volume increased while the distortion decreased.

WORKING AT DOUGHBOY CREEK.

Sunday night, when working 4QG at Doughboy Creek, which is nearer town than the beacon we had to change the aerial coil to 150 turns. We found that the volume was only fair here, but there was no distortion.

2BL came through with almost as great a volume as 4QG. We had to alter the aerial coil again and use 200 turns. There was absolutely no distortion when working 2BL.

When working 3LO Sunday night we had again to alter the aerial coil to 35 turns. When working the Southern station we got good volume and no distortion, but on several occasions plenty of distortion was noticed when working 4QG. One thing we noticed was that the nearer town we were the volume of 4QG decreased, while the Southern stuff increased.

We also noticed that as we worked nearer town so we had to change the aerial coil to suit different stations, while outside we used the same coils for all stations. Wishing your journal every success,—Yours faithfully,

GEORGE A. BURROWS.

"Altassa," Waverley Street,
Teneriffe, Brisbane, 19/4/26.

(To the Editor of "Queensland Radio News.")

Dear Sir,—As my three valve set was not working, owing to battery being recharged, I was listening in to-night on my crystal set, which is a plain Tunafone set. After the first half of the programme I connected up the loud speaker to the crystal set, and we all got a surprise to hear the result. We could hear it in two rooms; one room 13½ x 16, the other 14 x 16. We could stand in any part of these two rooms and understand everything. The loud speaker is an Amplion AR14 Junior De Luxe. I was using Neutron xtal in the crystal set. As I thought that this was a bit out of the ordinary, I thought you would like to know of same.—I remain, reader of "Queensland Radio News,"

ALTON R. YATES.

Afternoon Tea and Supper at SYRMIS'



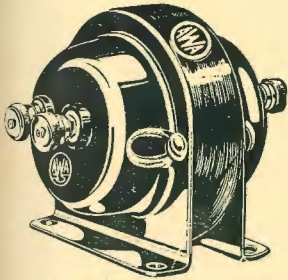
When in town of an evening call at Syrmis Cafe for refreshments, and be entertained by 4QG's Studio music broadcasted through our Super Six Receiver.

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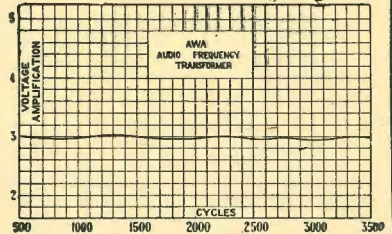
A.W.A. Audio Frequency Transformer

Ideal for Low Loss Work

A.W.A. have spared no effort to produce a thoroughly efficient Audio Transformer. Each Transformer is subject to 1000 volts insulation test between windings and casing, and between the windings themselves. Low self-capacity and the special

arrangement of primary and secondary coils give uniform amplification over the whole band of useful frequencies. Made in two standard ratios—5-1 and 3½-1

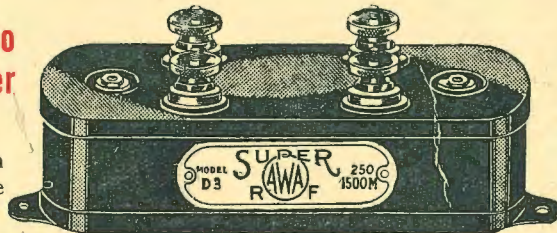
Price, with polished black finish - - - - 25/-
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The A.W.A. Super Radio Frequency Transformer

MODEL D 3

Gives constant amplification over a wide range of wave lengths without adjustment.



Wave length 250-1500 Metres

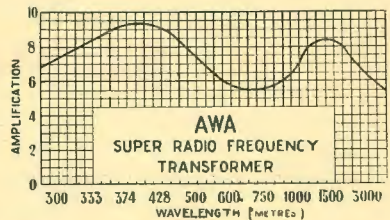
No switching or other mechanical device is used in the A.W.A. Super Radio Frequency Transformer.

In other makes of Radio Frequency Transformers designed for short and long wave use, parts of the windings must be short circuited or isolated to obtain efficient operation on particular wave-bands.

To "tune in" to interstate stations satisfactorily it is essential that a stage of Radio Frequency be used, and the Receiver must be sufficiently selective to eliminate local interference.

A two condenser control receiver having a direct coupled aerial and tuned plate is very popular, but this type of receiver is not sufficiently selective for interstate reception. By use of the A.W.A. Super R. F. Transformer for the radio frequency coupling, the aerial can be inductively coupled, giving the desired selectivity without decrease in sensitivity or increase in the number of controls.

Efficient electrostatic and magnetic screening has been provided for in the container, and the aim has been to reach perfection in the mechanical and electrical construction. Price 30/-



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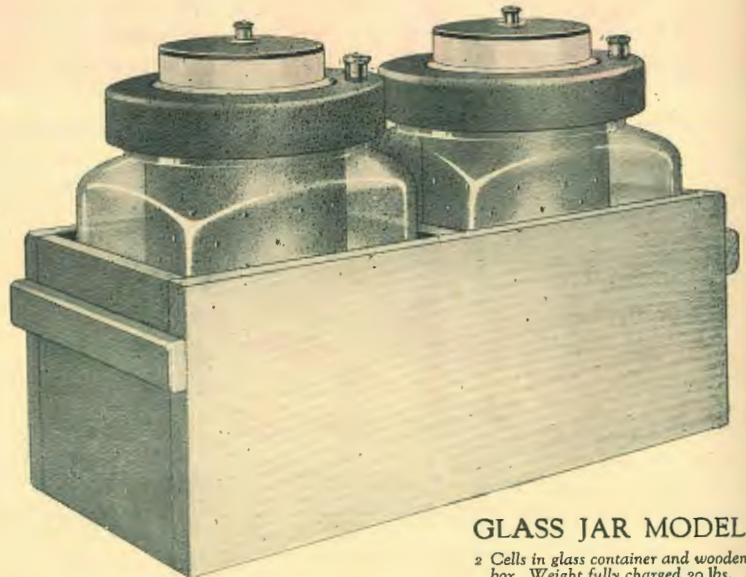
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Price with 6 Single Charges in Packets, Carefully Packed,

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Full directions accompany each Battery.

Fully charged in one minute by adding water to powders and solutions supplied. No other electrical apparatus required. Voltage of 2 cells in series, 5.5. Capacity approx., 50 ampere hours.

Don't worry any more about accumulators, but make up your own electricity! ANYWHERE! NO WAITING—NO DELAY. It is the ideal battery for radio reception owing to its simplicity and constancy.

These batteries are now available. All orders must be accompanied by remittance. If your Radio Dealer is unable to supply write us direct.

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