

The Queensland Radio News

"Your Own Wireless Journal"

6

Monday, 1st AUGUST, 1927

No 7

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**RICO-DYNE
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A 5-Valve Receiver, world-famed for its tone and range. The set is housed in a handsome two-tone Walnut Cabinet with battery accommodation and built-in loud-speaker. This set uses the Celuweld process of coil mounting that reduces losses to a minimum. Guaranteed to eliminate 4QG at 5 miles. A wonderful distance-getter.

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 CONSOLE**

A Magnificent Receiver—a masterpiece of set design and period cabinet building. Standing 3ft. 6in. high, 2ft. 9in. across, and 16 inches deep, with drop leaf over panel, forming a convenient writing desk; 2 roomy battery compartments below the receiver; handsomely inlaid in two-tone of walnut. A set that would grace the finest of homes. The receiver is a five-valve R'ico-dyne De Luxe with built-in loud-speaker.

LIST PRICE £55

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NOTE.

These prices only apply to present stocks. No discount whatever can be allowed on these prices, and all orders must be accompanied by remittance. Accessories may be selected at usual retail prices.

Home Radio Service Ltd.

Wholesale Distributors of Quality Radio Lines

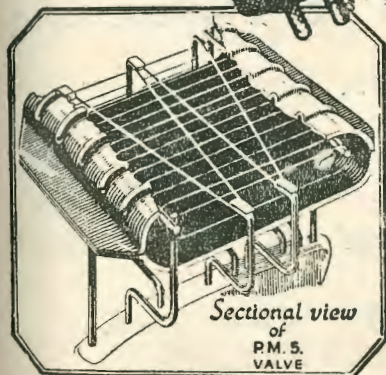
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SAY P.M. AND YOU SAY PERFECT MUSIC

Yes! and more, you get the most economical radio reception. The pyrometer cannot get down to the operating temperature of P.M. Filament, it works at too low a temperature. Your set is for pleasure and does not form a part of the house heating system.

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- P.M.1 L.F. 0.1 amp 13/6
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For 6-Volt Accumulator or 4 Dry Cells

- P.M.5 (General Purpose) 0.1 amp 13/6
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- Super Power Valves for Last L.F. Stage
- P.M.254 4 volts, 0.25 amp 15/-
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THE MASTER VALVE

A.K.S.A.

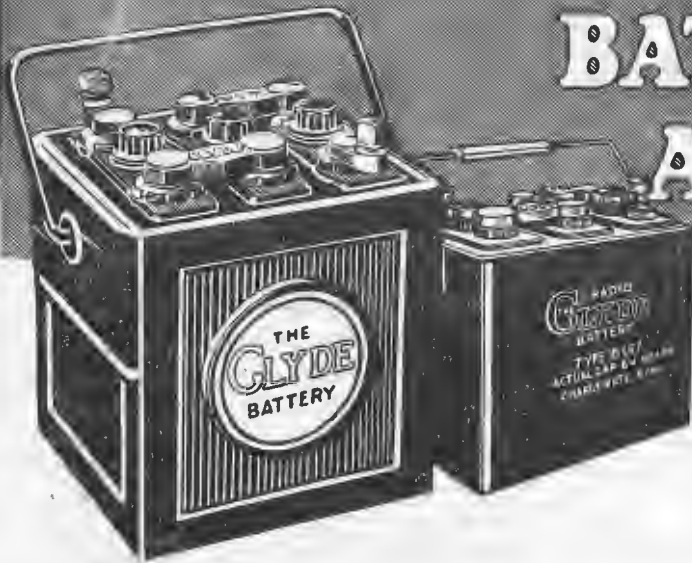
All Mullard Valves are manufactured at Mullard Works, London, England
 Advertisement of the MULLARD WIRELESS SERVICE CO. LTD, "MULLARD HOUSE," Denmark Street, London W.C.2 England.

Mullard P.M. Valves are British Made

Clyde is Making more than

10000

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A WEEK**



Australia's Largest Engineering Shops working overtime

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CLYDE

**RADIO and CAR
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THIS is more than double the number Clyde was producing last year. Everywhere the Clyde Battery is jumping into popularity.

Why? Here are just a few of the reasons

Unbreakable leak-proof hard rubber container with double thickness partitions from cell to cell.

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Purity of material—oxides lead and acid.

Made in Australia, consequently no deterioration due to long storage.

Advt. of the Clyde Engineering Co., Ltd., Granville, N.S.W.



FERRANTI

British-Made
AUDIO FREQUENCY

TRANSFORMER

TYPE AF.3 42/6

TYPE AF.4 32/-

MR. C. E. AMES, founder of the South Australian Division of the Wireless Institute of Australia, and for seven years Secretary to same, also one of the oldest Wireless Experimenters in South Australia, volunteers the following evidence of the satisfactoriness Ferranti Transformers—

May 22, 1927.

Dear Sirs:

I have thoroughly tested the Ferranti A.F.3 Transformer which you forwarded to me, and am pleased to say that in every way it fulfils all that its makers claim for it. I have tested it along with other makes of transformers which cost more, but I find the Ferranti in every way superior, both in quality of reproduction and in volume.

When coupled to a crystal set, I could find no trace of distortion in the reproduction, although the music was amplified to a wonderful degree, and the bass notes came through with wonderful clarity, and different instruments in an orchestra could easily be picked out. The music, though greatly amplified, still remains crystal clear.

The Ferranti A.F.3 is absolutely the best amplifying transformer that I have had the pleasure to handle, and I shall make it my duty to recommend them to my many radio friends and to all who desire to obtain good music from their receivers.

I may say that the Ferranti Transformer compares very favourably with resistance coupling, which I have been using for some time.

Trusting that this information may be of interest to you.

Yours faithfully,

Obtainable at all Radio Dealers in Australia

DEALERS PLEASE COMMUNICATE WITH

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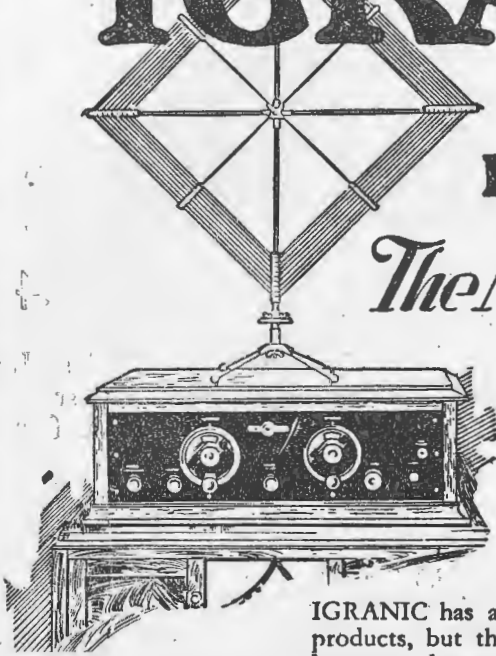
WEDMA LIMITED, ADELAIDE

EDGAR V. HUDSON, BRISBANE

The New IGRANIC

SUPER HETERODYNE

The Most Perfect Set Yet Produced



*There is no finer performance than
Super-Heterodyne performance and no
finer Super-Heterodyne than Igranic*

I have recently completed one of your "Igranic" Super-Heterodyne Kits and wish to inform you that I am exceedingly pleased with it in every way.

I have not heard any set to give such volume on the same number of valves and I was able to tune-in all the Australian stations on the loop with considerable strength. The New Zealand station 1YA was very nearly as loud as Melbourne.

The selectivity is all that could be desired and no trouble was experienced from interference between 2BL and 3LO.

The original of this letter from a leading Sydney expert may be seen on request.

IGRANIC has always set an exceedingly high standard in all its products, but the latest product of this famous British Factory has created a tremendous interest that is world-wide.

The advantages possessed by a well-designed Super-Heterodyne Radio Receiver are Range, Volume, Sensitivity, Selectivity, Stability, Purity and Ease of Operation. The Igranic Super-Heterodyne Receiver offers all these. For instance, it is capable of receiving from all interstate stations (with the possible exception of Perth), and from Auckland, 1YA, on a frame or indoor aerial at full loud speaker strength.

It is exceedingly selective, no trouble being experienced in tuning-out any station not required. 2BL, 2FC and 3LO might be a thousand or only ten metres apart for all it matters to the Igranic Super-Heterodyne. It is pleasingly free from all extraneous noises, and the purity of tone and absence of distortion are a revelation even to the most exacting critic.

Price (including everything) from £75, according to cabinet work.

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- J. R. W. GARDAM, PERTH

BALKITE Trickle Chargers

Keep your "A" Batteries always fully charged

Works direct from the light socket and supplies a steady, noiseless trickle charge to your "A" battery, as it is being drained away during operation. You may thus avoid the trouble and expense caused through "run-down" "A" batteries. The working cost is negligible, costing only

23/4d. Per Month to Operate
£4 - 7 - 6

BALKITE

"B" Battery Eliminators

Now make "B" Batteries obsolete

The Balkite "B" Eliminators now replace "B" batteries as the source of power supply. They also work direct from the light socket, supplying continuous "B" power while the set is operating. They need no attention, and once set to the requirements of your receiver, need no adjustment.

MODEL "W"	MODEL "X"
for Sets of 5-Valves and less	for Sets of 8 Valves and up to 135 volts
£ 11 - 10 - 0	£ 16 - 15 - 0

Queensland Distributor **W. E. PETERMAN** 160 Edward St. BRISBANE



Ask your dealer for Diamond

DIAMOND Radio Batteries

Ask your dealer for 'Diamond

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.

SUPPLIED TO ALL GOVERNMENT DEPARTMENTS



- RETAIL PRICE LIST**
- "A" Buzzer Cells, 1.5 volt 2/9 each.
 - "B" 60 volt Super B. Battery, 27/6 each.
 - 45 volt Super B. Battery, 22/6 each.

Wholesale only from:—
JOHN REID & NEPHEWS,
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- 60 volt Standard B. Battery, 18/ each.
- 45 volt Standard B. Battery, 15/ each.
- "C" 4.5 volt "Biaison" C. Battery, 3/3 each.

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



Put a Power Audion in Every Socket

Radio's sensational development has seen nothing more startling than the new de Forest Audions the latest development of Dr. Lee de Forest.

Now for the first time an American Audion can be purchased to suit the circuit.

Replace your older type with the DL4. Don't take our word for it, try them yourself. The decided improvements you will get will fully justify for same.



DL9, DL4, DL5
DL15, DL7, DL14,
DL3.

Dealers! we require agents everywhere

INTERNATIONAL RADIO CO. LTD.

200 CASTLEREAGH STREET, SYDNEY.



Government Control of Broadcasting

ONE of the objections raised by witnesses who appeared before the recent Royal Commission of Wireless, opposing Government control of broadcasting stations, was that there is a tendency for the Government in power to utilise the station, directly or indirectly, for purposes of political propaganda.

If this be true—which literally means that the ether is to be dominated by politicians—then Radio must sing its Swan Song.

A broadcasting station does not serve any one creed or any one party. It serves all sections of the community—and its policy must of necessity be a universal one.

It is gratifying to know that to date, Station 4QG—although under Government control—has not suffered the interference or domination of politicians. The policy declared by the station at the outset has been rigorously adhered to, with the result that no political propaganda of any nature leaves the station.

With the State elections looming but a few months ahead, it will be interesting to observe if the same policy will hold good during the electioneering campaign. If the station does not deviate from the fair and broadminded policy it has up to the present displayed, it should effectively silence for all time those who claim that a broadcasting station which is owned and operated by a State Government is merely a mouthpiece for politicians.

Melba's Historic Broadcast

4QG's Great Coup

PERHAPS the most historic—and certainly the most perfect—piece of broadcasting that has yet been transmitted from any Australian broadcasting station, was hurled into the ether from the lofty towers of Station 4QG on the night of Thursday, July 7, 1927, when the complete concert by Dame Nellie Melba and her company of artists was broadcast.

As is well known, the great diva, in common with other world-renowned artists, have not associated themselves with broadcasting to any great extent. Melba's voice has not been heard by radio more than three or four occasions, and even then her numbers have been of very brief duration.

Perhaps on account of the fact that this is her final farewell tour, Melba made two great concessions to the public. One was the holding of two cheap concerts for the public, and the other was the granting of 4QG's request to broadcast one of these concerts.

Naturally, the officials at the station were elated at the wonderful coup they had secured, and although arrangements were not finalised with Melba until two or three days before the concert, practically every listener in the Commonwealth knew of the event in time to tune their sets to 4QG's wave-length.

Radio dealers in the city made the most of the opportunity to boost their sales of crystal sets. Radio windows were plastered with posters announcing the coming broadcast and urging the public to "take home a crystal set to hear the concert."

Special precautions were taken at the station to ensure flawless reproduction, and great credit is due to the engineer at 4QG for the perfect modulation, clarity, and quality of tone that characterised the whole transmission.

The tumultuous applause that greeted Melba and her assisting artists as they made their appearance upon the stage, gave the listeners a very real idea of the enthusiasm that prevailed within the great Exhibition hall.

Melba gave of her best. It seemed as though the great artist could visualise her vast audience which must have numbered three millions. She sang to the sick, to the aged, to the poor, to the lonely—and she thrilled them all with her wonderful and remarkable voice that has lost none of its charm right throughout her long career.

Midway through the concert, Dame Nellie approached the microphone and addressed listeners. She said that during the day she had received many letters from the sick and from little children. She was deeply touched by the receipt of these, and many of the writers had asked her to sing "Comin' thro' the Rye" and "Home Sweet Home." She was pleased to agree to these requests, and could only say that she hoped her dear friends, the listeners, would derive as much pleasure from hearing her sing as it had given her to perform. Dame Nellie then added to her programme the two numbers which she had been asked to sing by listeners.

Station 4QG is to be congratulated on setting up a world's record. Some years ago Dame Nellie permitted an experimental relay of a performance in England, but that was in the days when wireless listeners even in the United Kingdom could, figuratively speaking, be counted on one hand. Some three years ago, when grand opera was broadcast in Sydney, Dame Nellie Melba was unfortunately indisposed, and listeners were therefore not able to hear her voice. A few months ago 3LO broadcast her for a short period from Williamstown. Never before in the history of the world had Melba allowed a complete concert to be broadcast, and it was, therefore, a distinct honour to 4QG to become the first station to relay a complete programme by the world's most famous singer.

Every precaution was taken by Station 4QG to ensure perfect reproduction. The lines to the Exhibition Hall were carefully tested, and two complete sets of portable apparatus were placed in the hall under the care of two operators. Three senior officers of 4QG, and officers of the P.M. Department, co-operated



PROGRAMME FOR ERICH JOHN'S PIANOFORTE RECITAL, MONDAY, 15th AUGUST, 1927.

Erich John, "Romance" (in A-flat major—Mozart),
"Pastoral With Variations" (Mozart).

Geo. Williamson (tenor)—"When One Dear Emotion" (from Mozart's opera "Così fan tutti").

Erich John—"Three Impromptus": Opus 142 No. 2,

Opus 142 No. 3, Opus 90 No. 4 (Schubert).

Geo. Williamson—"The Cheated World" (Mozart).

Erich John—"Mazurka" (in A minor—Chopin);

"Prelude," Opus 28 No. 13 (F-sharp major—Chopin);

"Waltz," Opus 18 (Chopin).

NOTES FROM 4QG.

Descriptive broadcasting, provided the description is given by a man who can hold his listeners, appeals to many. Incidental noises associated with the description, the exhaust of the motor bike, the band in the distance, the cheering of the crowd or the umpire's whistle, all help to carry to the imaginative listener the "spirit" of the entertainment.

Since 4QG commenced operations descriptive items have been a regular feature on the programmes, and it was in response to numerous requests that a description of the second half of the Toowoomba-Brisbane Rugby football match on the Exhibition Ground, Brisbane, was broadcast by Station 4QG.

On a recent Wednesday evening "Little Miss Brisbane" told her listeners about a letter which she had received from a little girl in the Diamantina Hospital, who has undergone no less than twenty nine operations and who quite recently had her right leg amputated.

The following morning a letter arrived at 4QG from a gentleman who signed himself "Uncle K", and enclosed in the letter was a postal note for the brave little pal in the Diamantina Hospital.

The gentleman's heart was touched for he himself was to go to the hospital the following day.

What wonderful power has wireless which not only comes to the ears of its listeners, but touches their hearts as well.

A WELL-KNOWN RADIO WAREHOUSE

Mr. W. E. Peterman, of 160 Edward Street, carries large and varied stocks of radio goods, and radio dealers requiring quality parts would do well to visit this up-to-date establishment.

Mr. Peterman is Queensland distributor for many well-known lines, included in which are:—Toroid Coil Kits, All-American Super-Het. Kits, All-American Audio transformers, including the famous Rauland-Lyric, Push-pull-radio-frequency filter, radio-frequency coupler, also the Rauland Lyric Trio, comprising R500-Lyric and impedance for the three stages of audio-frequency amplification.

Other lines include Balkite Dilecto in sheets, rods and tubes—the most popular panel material known. Fansteel Balkite goods, including trickle chargers, car battery, and "A" battery chargers, and "B" eliminators. Bull phones, Philips loud-speakers, Case-assembly Kits for constructing four valve set, Beiden Litz and loop aerial wire, resincore solder.

Mr. Peterman, owing to pressure of business, has recently removed from Perry House into larger premises in Edward Street, where one may purchase anything in electrical goods. Large stocks are always on hand.

MR. H. HUMPHREYS.

Who has been relieving announcer at Station 4QG during the recent absence of Mr. C. V. Woodland on holidays.

Mr. Humphreys is an elocutionist, monologist, and 4QG's Dickens reader. He is a professional actor, having played drama, comedy, pantomime and revue. He studied for some time at a London academy of elocution, besides being associated with southern teachers.

Of all Mr. Humphreys' work at 4QG, his Dickens



readings are best appreciated. The realistic and forceful manner with which he reads brings such characters as Fagan and Bill Sykes from the pages of "Oliver Twist" to life. His voice is excellent for broadcasting, which is the biggest of all assets a radio elocutionist can possess.

Talking to Mr. Humphreys, he said:—"Put into a good library and I am happy. The more one reads the more he finds out how little he really does know."

In the lesson of life he has found that books are the only friends he never falls out with. His favourite novelist is Charles Dickens. He never tires of talking, reading, writing or explaining about Dickens characters.

"At times," he says, "I really think I pall people with him. There are traits of Dickens' characters in us all, and I enjoy picking them out in people I come in contact with."

Of all Australian poets possibly Henry Lawson claims first place with him. He reads and re-reads his works because he feels that if he were gifted as a poet, his thoughts would be expressed in Lawson style.

"In mentioning Australian poets, I would be sadly neglecting my old friend Zora Cross," says he, "whose poems were a treat in the 'Sydney Bulletin,' and who is now a noted Australian poetess and authoress. In my early career I worked for a long time with Zora Cross, and played opposite to her in Shakespearean and other stage works. I owe quite a lot to her for my success as an elocutionist."

Mr. Humphreys is a returned soldier, having served in the A.I.F. artillery. He states that he finds the word at 4QG most interesting, and is quite at home before the microphone.

Q.R.N. Short-wave Receiver

Pole to Pole on Two Valves

To be a REAL "wireless crank" nowadays you simply MUST own a short-wave set in addition to your broadcast receiver.

There is much to be heard on the short-wave bands. Concerts from Holland, Siberia, America, and other far-off countries can be regularly heard during this time of the year, just so long as you can summon sufficient courage to leave a cosy bed in the "wee sma' hours."

With the little two-valver described hereunder, all foreign stations broadcasting on low waves will be heard. Easy to build, and inexpensive to acquire, it should make a ready appeal to those who are looking around for a reliable S.W. set.

Scientists in various parts of the world have, during the past two years, been concentrating on short wave transmission and reception, and amazing distances on extremely low power have been covered.

Concerts from America and Europe are now being regularly received in Australia at good strength, the type of receivers used being similar to the one about to be described.

Constructional Details.

For the sake of efficiency we have decided upon an interchangeable coil system, the entire range of wave-lengths (12½ to 200 metres) being covered by four plug-in coils.

The primary winding is adjustable; that is to say, it is possible to obtain the correct relation between

the secondary and primary windings, which is, of course, important on such short wave-lengths.

A rheostat is utilised to control the filament of the detector valve, whilst a 1B (.25 type) Brachstat takes care of the A.F. amplifier.

The circuit is of the familiar fixed reaction, capacity controlled type; which has proved the most suitable for the higher frequencies (short wave-lengths).

Two variable condensers are provided, one for tuning and the other for regeneration control.

A grid leak of 7 to 8 megs. should give best results when used with a 201A type of valve, though it is advisable to find the best value by trial. This also applies to the grid condenser, which may be anything from a .00015 to .0003 M.F. capacity.

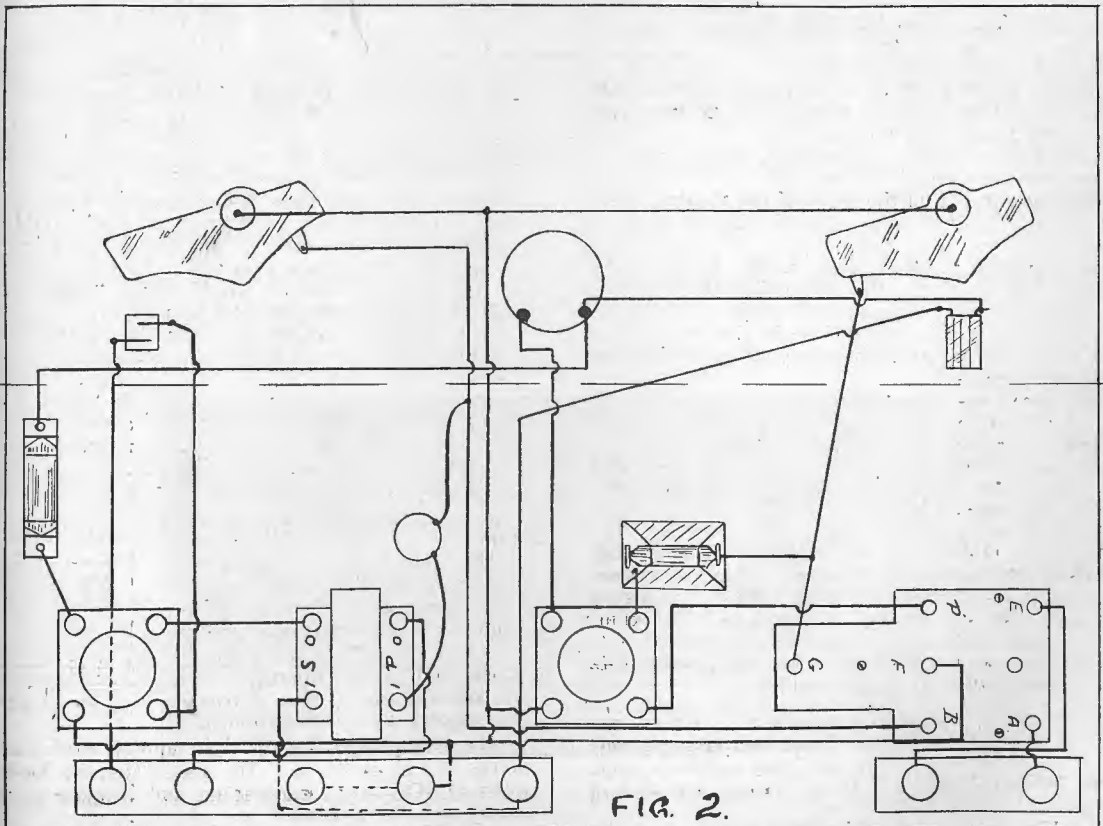


FIG. 2.

+ B + B - + A -

Semi-Pictorial Diagram.

E A

(Continued on Page 12.)

World's First Successful Telepathic Broadcast

Station 4QG and "Argus the Prophet"

Telepathy is no longer a myth. The fact that thought waves can be transmitted from one mind to another has been proved by scientists and by public demonstration in all parts of the world.

The science—which is even more wonderful than radio—has unfortunately attracted the attentions of fakirs and fraudulent individuals who attempt to gull the public by falsely representing themselves to be gifted with the powers of telepathy. As a result of this practise, a tremendous amount of scepticism has been created, and it is not until one has had the opportunity of witnessing a genuine demonstration of telepathy or mind-reading that one can become converted to the wonders of the science.

One of the world's cleverest exponents of the science of telepathy is "Argus"—a 17-year-old Australian boy whose powers are truly wonderful. This boy has withstood the severest tests prepared for him by police authorities, lawyers, doctors and the clergy ever since he made his sensational appearance upon a Melbourne stage at the tender age of 6 years.

"Argus" is accompanied on all his tours and in all his performances by his father, Mr. C. L. Copeland, who demonstrates from the body of the theatre, asking questions of "Argus," who sits blindfolded upon the stage.

Recently arrangements were made between Mr. Copeland and Station 4QG for testing the telepathic powers of his son through the radio. Telepathic tests have been carried out before in England, and recently in Melbourne, but without any measure of success.

Two strong committees were selected by Station 4QG to supervise the test and to ensure that there could be no connection between Station 4QG and the Lyceum Theatre, save the microphone, which was switched on and off before and after each test by the Chief Engineer and Director of 4QG.

The committees stationed at each point were as follows:—



"Argus" and His Father (Mr. C. L. Copeland) before the Microphone at 4QG.



"Argus" surrounded by the Committee upon the Stage of the Lyceum Theatre.

In the Studio of 4QG:

The Hon. M. J. Kirwan (Minister for Works)
The Hon. T. J. O'Shea
The Rev. Father Kelly
The Rev. Father O'Callaghan
Mr. Luney (Chief Sub-Editor of "The Telegraph")

A representative of the Police Department

Mr. S. A. Best (S. A. Best Ltd.)
Mr. Farleigh (Motor Supplies Ltd.)

Mr. L. L. Read (Read Press Ltd.)
Representatives of the "Daily Mail"

Director of 4QG (Mr. J. W. Robinson)

Chief Engineer of 4QG (Mr. F. W. Stevens)

On the Lyceum Theatre Stage.
Mr. R. D. Kennedy (Accountant and Auditor)

Mr. H. O. Muddle (Advertising Manager, "Daily Mail")

Dr. Weedon, M.D.

Mr. Guy B. McCutcheon

Mr. A. T. Bartlett (Editor "Qld. Radio News")

Mr. Roy Cricke (Gaiety Theatre)

Mr. Hanlon (Editor "Worker")

Representatives of "Courier" and "Telegraph."

The process of the test was as follows:—

With the microphone switched off and "Argus" sitting blindfolded upon the stage of the Lyceum Theatre, the committee in the Studio of 4QG would decide upon some article, card or number. The microphone would then be switched on and the loud speaker fitted in the Lyceum Theatre would advise "Argus" by the sounding of a gong that all was ready.

Mr. Copeland would then ask the simple question "What have I here?" or "Please read this gentleman's mind," and instantly "Argus" would answer into the microphone upon the stage the correct answer.

As the test progressed and the boy's mind went into a deeper state, no word of mouth was spoken from 4QG whatever. The microphone would be switched on, the gong sounded, and instantly "Argus" would describe the article that was held before the

J.O.L.

microphone at 4QG. One thing was clear. It was utterly impossible for "Argus" to have received any hints or previous knowledge of what was to take place. Every member of the committee was a citizen whose honour is unquestioned, and many of the gentlemen did not disclose their questions until the moment they were before the microphone.

Station 4QG and "Argus" are both to be complimented in accomplishing the most successful telepathic broadcast on record.

AN INTERVIEW WITH "ARGUS."

In view of the wide interest that has been created by this test, we felt that many of our readers would like to know something of this "wonder boy"—and accordingly an interview between Mr. Copeland, his "Argus," and a representative of this paper, was arranged.

"Tell us something of 'Argus' and how he acquired his wonderful gift of mind-reading," we asked Mr. Copeland.

"Well, to answer that, I will have to go back to the days of the war. I have always taken a deep interest in the sciences relating to the mind, such as hypnotism, telepathy, and the like, and have carried out much research work relating to them. In my younger days I practised hypnotism and obtained a mastery of the science. The war came along and I enlisted, leaving my wife and baby boy at home.

"I was stationed in Egypt for many weary months, and had plenty of time for thought. I had often wondered that, seeing that a man's actions could be willed, why should not his thoughts be also controlled? The idea possessed me. The more I thought of it the more confident I felt that it could be done.

"The authorities, hearing of my hypnotic powers, transferred me to Luna Park Hospital, where hypnotism was used on many patients to help effect cures.

"Upon my return to Australia my boy was five years of age, and had just started to attend school. One day I tried out some simple experiments with him, and before long he was repeating small numbers as I thought of them. The boy's brain showed remarkable aptitude for telepathic work, and at the age of 6 was capable of giving really wonderful demonstrations.

"Most of your readers will have heard of Major Condor (now managing director of Station 3LO Melbourne). Before 'Argus' was 6 years of age, he gave a demonstration before the Major and a huge assemblage of men at Langwarren Camp, Victoria, where he came through every test of thought-reading successfully.

"Sir Ben. J. Fuller, of Fuller's Circuit, got to hear of this wonderful demonstration, and he immediately booked 'Argus' for an Australian tour. Packed houses greeted our every performance. Everybody was mystified and amazed at the accuracy and intelligence of the 6-year-old boy.

"Since then we have been touring Australia, and now we are upon our world tour.

"I suppose you are very proud of your boy?" we remarked.

"I am indeed. People are sceptical. They suggest that telepathy is nothing more than a cleverly worked code, that every audience is 'dummied,' but there is no need for me to assure you that 'Argus' is genuine, and although he has been arrested on the charge of obtaining money under fraudulent pretences, he has never been convicted, because he has con-

vinced magistrates and lawyers by actual demonstration that he is genuine."

Turning to "Argus" we asked: "How best can you describe telepathy?"

"Argus" thought for a minute and replied: "I think the best definition I can give you is two minds operating in resonance with each other."

"How are the thought waves received?" we asked.

"The process of reproduction may be likened to television," he replied. "When I am in a telepathic state, my mind becomes a mirror, upon which are flashed the concentrated thoughts of those who question me."

"You reference to television suggests that you know something about wireless," we remarked.

"I am very interested in wireless," "Argus" smiled.

"I should say he is!" his father remarked. "He always has been. He had an experimental license when he was about 12 years of age—before broadcasting became known in Australia. In Townsville about four years ago, he rigged up a crystal set from some odd pieces of wire, etc., and a piece of crystal, and astonished the guests at our hotel with morse reception."

"V.I.T. Townsville Radio?" we remarked.

"Yes, that's it," said "Argus." "I do very little experimental work now, because I am always travelling; but I manage to find time to build a few sets occasionally."

"Have you any other hobbies?" we asked.

"Oh, yes," said 'Argus.' "I play Beethoven and Bach a little; I am fond of stamp collecting, and I take a few photographs now and again."

"Mr. Robinson has given me permission to go on the roof of 4QG to take some photographs," he continued, "and I'm hoping to get some good pictures of Brisbane before I leave."

Time was approaching for "Argus" to appear at the matinee, so with an invitation to wait and once again witness their turn, "Argus" and his father left for their dressing room.

A REMARKABLE OFFER OF RADIO SETS

It isn't every day in the week that the radio public is given the unique opportunity of buying modern broadcast receivers at the huge discount of 70 per cent.

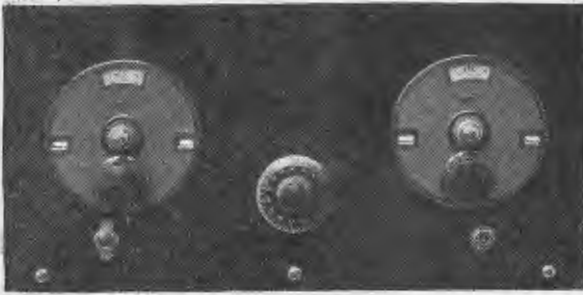
Yet such is the case with a limited number of receivers that are being offered by Messrs. Home Radio Service Ltd., of Ewing House, Adelaide Street, Brisbane, wholesale radio distributors.

Desirous of making room for new stocks shortly arriving, this company is clearing a number of DeForest and Ricodyne receivers greatly below landed cost. These sets are brand new and fully guaranteed. They are not old models, but are 1927 productions of famous American radio manufacturers.

The sets are quoted without accessories, and Messrs Home Radio Service Ltd. advise that the prices are strictly nett cash.

Full details of the various models are given in the announcement appearing upon the inside front cover of this issue, and as these special prices apply only to present stocks, which are confined to a few of each model, anybody desirous of securing a receiver at a huge saving should not lose any time in ordering, as the receivers are bound to be snapped up quickly at the special prices offered.

(Continued from Page 9.)



Front Panel of Receiver.

Antiphonic sockets are used, as short wave receivers are very often subject to microphonic noises from the valves.

Construction.

First procure a genuine bakelite panel of the size shown in Fig. 1, then carefully mark and drill this panel according to the panel layout diagram.

Having done this, screw the panel to a well-seasoned baseboard of correct dimensions, and proceed to mount the panel and baseboard components.

Care should be exercised when marking the variable condenser screw and shaft holes, for if these holes are out of line the condenser will be strained, and trouble will soon develop.

If Igranic condensers and Emmco vernier dials are used it will be necessary to shorten the condenser shafts, in order to allow the dials to fit flush against the panel. This job may be done with a metal saw; any burr after cutting should be removed by means of a smooth file.

Wiring.

The wiring is clearly shown in the photographs and back of panel wiring diagrams, and is carried out with 16g. round tinned copper wire, spaghetti being used where there is a chance of the leads touching.

Particular care should be taken as regards the soldering, a point which we have stressed in previous articles, as many of the faults which develop in valve receivers may be traced to badly soldered joints.

Allow the iron to thoroughly heat the joint, then apply the solder stick to the junction—the solder should run in nicely, provided the joint is clean and at the right temperature. Do not attempt to solder in awkward places; remove a component rather than take the risk of a bad joint.

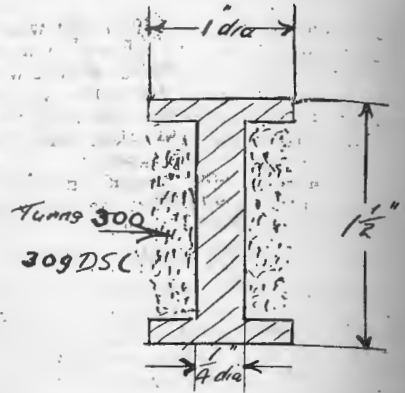
The R.F. Choke.

It has been found that a radio-frequency choke is necessary; its purpose being to prevent the high frequency component of the plate current passing into the audio stage, and so passing to earth without going through the reaction condenser and coil.

Suitable choke coils may be purchased, but for those constructors who wish to make their own we publish the following details:

Number of turns, 300; size of wire 30g.

The wire should be wound on the bobbin jumble fashion, in order to reduce the self-capacity of the winding.



Testing.

Having arrived at this stage, carefully check over the wiring and correct any mistakes if any have been made.

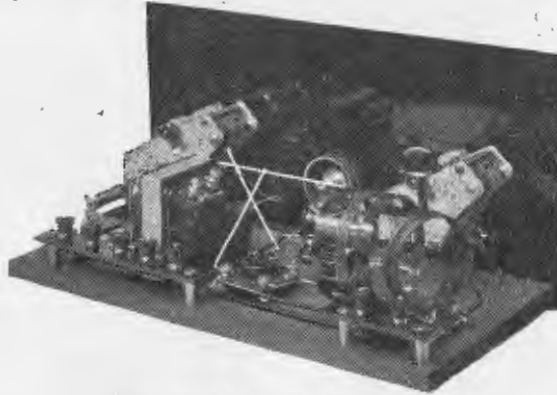
Next, connect up the batteries and insert one of the "plug-in" coils, and the phones; and note how the set goes into oscillation.

Try various combinations of grid leaks and condensers, the right values being found when the set goes into oscillation smoothly and with a slight hiss.

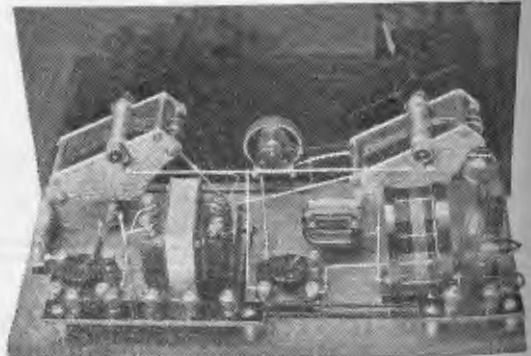
A .00015 mfd. condenser and 8-meg. leak will probably give best results, but if howling is encountered the capacity should be increased and the resistance lowered.

The aerial should not be larger than 50ft., including the lead-in, as too long an aerial will prevent the set oscillating.

For the reception of C.W. signals the receiver will need to be kept oscillating gently, but for telephony it should be kept just below the oscillating point.



View showing Tuning Unit.



Another Photograph depicting Arrangement of Components.

List of Parts for Short-Wave Circuit.

- 1 Bakelite Panel, 15 x 7 1/2 x 3/4
- 1 Baseboard, 14 1/2 x 7 x 3/4
- 1 Ceramic .00015 variable condenser
- 1 Ceramic .0003 variable condenser
- 1 H. & H. 20-ohm rheostat
- 1 Bremer-Tully Short-wave kit.
- 1 .00015 grid condenser
- 1 Megohm grid leak
- 1 R.F. choke
- 1 B.M.S. S.C. jack
- 1 Telsen Grand 5-1 transformer
- 2 Benjamin U.X. sockets
- 1 Box engraved terminals
- 1 Terminal strip, 6 x 1 x 1/2
- 1 Terminal strip 3 1/2 x 1 x 1/2
- 4 Terminal strip supports
- 8 Lengths Busbar wire
- 2 Lengths spaghetti
- 1 Box assorted screws

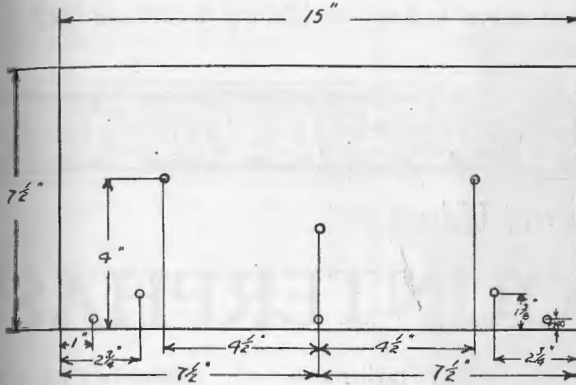
		Germany.		
POF	Nauen	...	...	13.5
POF	Nauen	...	...	16
POF	Nauen	...	...	18
POY	Nauen	...	...	20
AGA	Nauen	...	...	25
POW	Nauen	...	...	26
POX	Nauen	...	...	28
POX	Nauen	...	...	70
POF	Nauen	...	...	100

		France.		
FW	Saint Assise	...	...	25
FW	Saint Assise	...	...	42
SFR	Paris	...	...	75
SFR	Paris	...	...	85
FL	Paris	...	...	115

		Holland.		
PCJJ	...	...	...	30.2
PCMM	Kootwijk	...	...	36
PCUU	Kootwijk	...	...	38
PCLL	Kootwijk	...	...	46

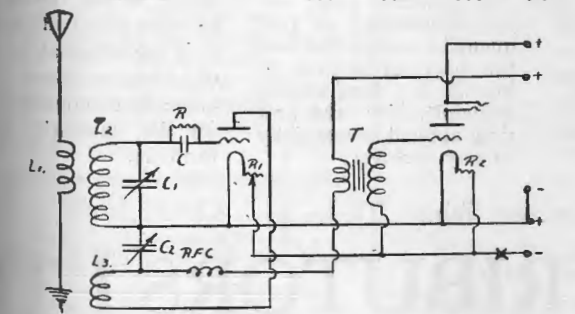
		Sweden.		
SAJ	Karlsborg	...	...	50

		United States of America.		
2XS	Rocky Point, N.Y.	...	...	14.93
2XAW	Schenectady, N.Y.	...	...	15
NKF	Anascostia, D.C.	...	...	16
2XAD	Schenectady, N.Y.	...	...	20
NAL	Washington, D.C.	...	...	20
NKF	Anascostia, D.C.	...	...	20.8
WIK	New Brunswick, N.J.	...	...	22
NKF	Anascostia, D.C.	...	...	25.5
2XI	Schenectady, N.Y.	...	...	30
NAL	Washington, D.C.	...	...	30.6
NAJ	Great Lakes, Ill.	...	...	34
WQO	Rocky Point, N.Y.	...	...	35.03
NAS	Pensacola, Fla.	...	...	40
NAJ	Great Lakes, Ill.	...	...	40
NPG	San Francisco, Calif.	...	...	40
NRRL	USS Seattle	...	...	40
2XAC	Schenectady, N.Y.	...	...	40
NKF	Anascostia, D.C.	...	...	41.3
2XAF	WGY—Schenectady	...	...	41.88
5XH	New Orleans, La.	...	...	42
WIZ	New Brunswick, N.J.	...	...	43.02
WQO	Rocky Point, N.Y.	...	...	44
KZA	Los Angeles, Calif.	...	...	44
KZB	Los Angeles, Calif.	...	...	44
2XAD	Schenectady, N.Y.	...	...	50
WQN	Rock Point, N.Y.	...	...	51.5
NBA	Canal Zone, Balboa	...	...	54
NKF	Anascostia, D.C.	...	...	54.4
KFKX	Hastings, Neb.	...	...	56
1XAO	Belfast, Me.	...	...	56
KDKA	East Pittsburgh, Pa.	...	...	58.79
KDKA	East Pittsburgh, Pa.	...	...	63
8XS	East Pittsburgh, Pa.	...	...	67
2XAO	Belfast, Me.	...	...	70
NERM	USS Los Angeles	...	...	70
NKF	Anascostia, D.C.	...	...	71.3
WIR	New Brunswick, N.J.	...	...	74
2XK	Schenectady, N.Y.	...	...	80
NKF	Anascostia, D.C.	...	...	81.5
NKF	Anascostia, D.C.	...	...	84
NERM	USS Los Angeles	...	...	84.5
KIO	Kahuku, Hawaii	...	...	90
WHU	SS Big Bill	...	...	105
2XK	Schenectady, N.Y.	...	...	109
1XAO	Belfast, Me.	...	...	112



List of the short-wave stations of the world, many of which may be heard on the Q.R.N. short-wave receiver.

Call Sign	England.	Wavelength
2YT	Chelmsford	17
2YT	Poldhu	25
2YT	Poldhu	32
2YT	Poldhu	60
2BR	Poldhu	94



- Primary Coil
- Secondary Coil
- Reaction Coil
- (3-Coil Tuner)
- .00015 MF. Variable Condenser.
- .0003 MF. Variable Condenser.
- C—.00015 MF. Fixed Condenser
- R—4, 6 or 8 Meg, Grid Leak
- R1—20-Ohm Rheostat
- R2—1B (.25 Type) Brachstat
- T—5 to 1 Ratio L.F. Transform
- or R.F.C.—Radio Frequency Choke

The Most Advanced Receiver in Australia and the Simplest

THE programme of your choice, in an instant, made possible by the wonderful B. T. Counterphase Six, built by Udisco Engineers to the design of Bremer-Tully scientists. Tuning is mere child's play, for the two dials are calibrated in meters, simply necessitating the turning of the dial to the desired wavelength. Supreme selectivity, surpassing fidelity of tone, handsome appearance, and sound construction appeal to keen enthusiasts the instant they see and hear the B. T. Counterphase Six.

HERE, in the B. T. Counterphase Six is represented all that you've ever dreamed a real radio set might be. No distortion; no questionable noises. With a B. T. Counterphase Six you can identify each instrument in an orchestra. Pure clear notes, almost defying detection from the living artist. The B. T. Counterphase Six is an even more wonderful instrument than the Udisco Five.

A Product of Udisco

The B. T. COUNTERPHASE SIX

Calibrated Dials

Think how simple tuning must be with this set. No searching for "carrier waves." The pointer is simply set to the wavelength of the required station — and the programme bursts through.

—And the calibrations are accurate to a hair's breadth. Each set is calibrated separately by senior engineers and rigorously tested before being passed as "O.K."

Flawless Reproduction

Due to the high quality of the amplification stages, reproduction is amazingly life-like. In fact, of all the big claims put forward for this instrument, faithful reproduction is the greatest.

There's a mellowness, a roundness, a depth of tone that is different to anything you have yet heard. It is the actual re-creation of the artist's performance.

All Stations—No Interference

In the very shadow of 400's aerial, any Australian station may be heard on the loud speaker without any trace of interference.

This supreme selectivity is due to the automatic rejector stage—an exclusive B.T. feature. This rejector stage rejects (grounds) all frequencies except the one the operator desires to hear. A long-known principle, for the first time applied successfully to any receiver.

Simple Control

Whether your aerial be an elaborate outdoor affair or a short wire stretched across your room, you'll hear every Australian station on speaker — WE GUARANTEE THIS.

The instrument's ability to cover enormous distance is not governed by mere aerial efficiency. It is the inherent ability of the receiver that alone is responsible for the masterly performance.

Beautiful Cabinet Work

The handsome Cabinet Stand of Queensland Maple polished to piano finish, not only houses the batteries and hides all unsightly wires, but forms a most artistic piece of furniture.

Here again are Udisco's thorough methods demonstrated. There is no skimping of the timber or the workmanship. Solid, heavy Maple is used throughout, while the fittings and finish are of the very best.



UDISCO
B.T.
COUNTERPHASE
SIX

The Perfect Receiver

If you are interested in this Master Receiver, write to us for further particulars. If there is a Udisco Dealer in your district, ask him to demonstrate.

DEALERS!!

We would be pleased to have you visit us while in Brisbane for the Show. UDISCO is now in a position to offer a full range of the finest Broadcast Receivers ever placed upon the market. Our proposition cannot fail to interest you.

UNITED DISTRIBUTORS LTD

343 QUEEN STREET, BRISBANE

And at Sydney, Melbourne, Adelaide, Perth, Launceston (Tas.), and Wellington (N.Z.).

Notes from 4QG.

RADIO "PUDDINGS."

On a recent Wednesday night "Little Miss Brisbane" provided her little listeners with another attractive "Pudding." The recipe, as usual, was a good one, and the children taking part as the "ingredients" were certainly very clever.

The short half-hour at the disposal of bedtime story tellers at 4QG is always well filled, and "Little Miss Brisbane's" "puddings" have always proved very popular, for children just love listening to what other children can say or do.

MELBA BROADCASTS.

From far and near reports regarding excellent reception of the concert by Dame Nellie Melba, which was relayed by 4QG, have reached the management of the station. The night was an excellent one for reception and this, together with the fact that almost all local enthusiasts were satisfied with their own station and did not desire to reach out for distance, resulted in there being a minimum amount of interference. Without an exception, local listeners to 4QG have all reported a most satisfactory reception.

THE GOLDEN CASKET.

Since its inception, station 4QG has regularly broadcast the names of the winners of the first three prizes in the Golden Casket conducted in Brisbane. Quite a number of country residents who do not receive their newspapers for a few days anxiously await the results which are relayed by 4QG. The inclusion of these results was made owing to requests which reached the station from all parts of Australia.

TALK ON GOLF.

During the visit of the New Zealand Golfers to Queensland, Mr. Seiferr, one of the professionals with the team, addressed listeners on two occasions per medium of station 4QG. On the first occasion the station broadcast a few preliminary remarks by the Acting Premier, Mr. Forgan Smith, who is a keen golfer, and who took the opportunity to welcome the New Zealanders. Mr. Seiferr was, during his stay in Brisbane, greatly taken by the advantages which Queensland offers the tourist and has expressed his intention of doing his utmost on his return to induce more New Zealanders to pay a visit to Brisbane.

A COUNTRY LISTENER-IN AND MELBA'S CONCERT.

Among numerous communications received from all parts of Australia, the following letter is typical of the views expressed by country listeners:—
Manager, 4QG,

"I am not much of a hand at writing but before the feeling wears off, I must drop these few lines to congratulate your station for the fine way Melba's concert came through last night. We are about 300

miles air line from Brisbane and we received the whole programme perfectly. It put the family in whole programme perfectly. It put the family in great heart, for this morning in the milking yard, every usually gives a lot of trouble (by the way it can kick the eye out of a needle) let her milk down without as much as a swish of the tail. Since wireless came to our house, Brisbane seems just over the slip rails. We are very interested in the market reports, weather news and of course, the good wife and family take good care that the work is finished in time to listen to the bedtime stories. Before we had wireless it was only at week-ends that visitors came along, but now hardly a night goes by without some calling. I suppose you are so busy that you won't have much time to read letters, but the wife said I must write and thank 4QG for making our lonely lives happier. Good luck to you all".

A MIRACLE OF RADIO.

To be almost completely deaf for thirty-seven years and then to regain the hearing has been the experience of Mr. Craig, of Myrtle Street, Thompson Estate. Mr. Craig, who is 78 years of age, lives with his daughter and son-in-law, who have a two-valve wireless receiving set. One Saturday night as "Uncle Ben" commenced the children's session, the headphones were adjusted on Mr. Craig, merely as an experiment, when, as if by magic, the veil of deafness was lifted and hearing restored. Imagine the rejoicing of the household at this remarkable occurrence. At first it was felt that the restoration of hearing was only temporary and due to amplification, but contrary to expectations, Mr. Craig could this week hear clearly without the aid of any mechanical instrument.

Mr. Craig has been blind as well as deaf for 37 years, due to an accident (surely two terrible afflictions), and it is to be hoped that the restoration of hearing will be permanent, so that in the autumn of his life he may enjoy the wonders of modern radio broadcasting.

All at 4QG are much interested in the phenomenon and hope that their efforts to provide joy for the listeners will result in many more such happenings as in the case above related.

"COME BACK TO GYMPIE."

An interesting feature will shortly be included in one of the programmes from 4QG. Gympie, a Queensland town famed for its gold mining activities in the early days, and now a prosperous agricultural centre, is holding a reunion week in September. A "Come Back to Gympie" movement has been started, the object being to persuade many of the old mining identities to revisit the scenes of their youth, and to participate in a big carnival week. Many and varied are the entertainments which will be provided, and included among them is a nigger minstrel evening.

At the time of going to Press Station 4QG is negotiating with the committee with a view to broadcasting this entertainment.

The Father of Radio is Heard by Millions in Several Countries

Dr. De Forest Broadcasts Speech from Spain

Edison said some years ago: "In the audion, De Forest has invented a device which amplifies sound so much that, if a fly were to walk across the transmitter, the noise at the receiver would shatter your ear drums."

Little did people think that this little magic lamp, called the audion, would, amongst other things, make it possible for your voice to span continents, for your ear to listen to nightly entertainments or for millions to hear the spoken words of our President.

The audion, which has fundamentally made possible radio, transcontinental and transoceanic telegraphy and telephony, the transmission of photographs by wire, the "talking pictures" and a host of other scientific and industrial marvels, has eliminated the distance between nations and made us all one big human family.

When one thinks back to the memorable night in September 1900 during which the then unknown youth-inventor, working in a \$2 a week room, first discovered the phenomenon which formed the entire ground work of many present day marvels, it is a most happy fact that a number of prophecies which young Lee De Forest made about that time and since have actually materialized during his life time. Perhaps the most spectacular of these materializations have been the talking movies, the transmission of photographs by wire and radio, and more recently the trans-Atlantic radio telephone service.

One of the most gratifying marks of appreciation which could be shown him is the deluge of letters and telegrams in Spanish, Portuguese, French, Italian, English, and German congratulating Dr. De Forest on the speech which he broadcast on February 17th, from "Union Radio" broadcasting station in Madrid, Spain. The speech was delivered in English and then repeated in Spanish.

The occasion was of such epoch making importance that our readers will be interested in the verbatim report which follows:—

"I esteem it a great privilege to thus speak by radio broadcast from Madrid, whence my voice may be heard in so many different countries throughout Europe.

"I am broadcasting through two antennas simultaneously, but at different wave-lengths, the Union Radio (375 metres), and the Castilla transmitter (344 metres). I am happy indeed to broadcast through the station of Castilla, because this station is the work of my old friend and dear pupil the Spanish radio engineer, Mr. Antonio Castilla, the pioneer in wireless telephony in Spain and the first to make practical commercial radio telephony and to build audion tubes in this country.

"I must contrast to-night with my first attempt to speak by radio telephone from Eiffel Tower, Paris, in

March, 1908, just 19 years ago. At that time I was introducing into France, Germany and Italy for the first time the three-electrode vacuum tube, which I named the "Audion." At that time there were not in existence in the entire world more than 80 such tubes.

"Now, in America alone, we are manufacturing merely 80,000 each day—a striking commentary on the almost incredible popularity of radio, all of which has been made possible and brought about by this little vacuum tube, through which you are listening to-night.

"But in 1908 I did not realise that this lamp could be made to amplify high-frequency and audio-frequency electric currents to an unlimited extent.

"And it was not until four years afterwards, in 1912, that I made the discovery that this same detector and amplifier valve could also be made to generate high-frequency currents, and thus could be employed as a transmitter of radio as well as in the receiver apparatus.

"This property of the three-electrode tube to oscillate has alone made possible the radio broadcast as we know it to-day.

"And yet it required the urgent necessities of the great war to arouse the radio engineers of the world to the unlimited possibilities of the Audions as detector, amplifier, and oscillator.

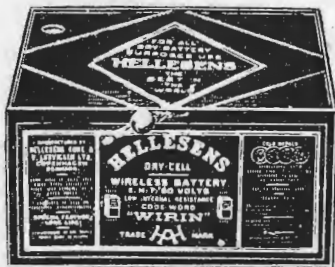
"In 1915 it first made possible the trans-continental telephone service in America, just as last month it brought about the opening of commercial trans-Atlantic radio telephone service between London and New York.

"Similarly the three-electrode oscillator has enabled Marconi to develop the early dreams of us wireless pioneers, and to generate sufficient energy in the short-wave transmitters to actually obtain directive radio communication over great distances.

"The Audion, in short, has completely revolutionised the entire art of electrical communication by wire and wireless, has created the new universal industry of the radio broadcast, and is thereby working a change in our civilisation, in our methods of thought, and in our modes of life, as profound as that which was introduced six centuries ago by the art of printing. Only, this little Alladin's lamp, as it has well been called, is working these changes in one generation—our generation—the same generation which has witnessed the advent of the telephone and the incandescent lamp.

"But the very fact that to-night a voice in Madrid is being heard simultaneously in London, Berlin, Vienna, Rome, and possibly in capitals of nations situated at much greater distances, augurs, I maintain, that radio broadcast has the benign power to bring to a common feeling of kinship and understanding the

Everybody Knows
the Wonderful Quality of
HELLESEN'S
WIRELESS BATTERIES



**NOW—Helleesen Introduces
The Remarkable
No.7 Recuperating
Agent**

The 1927 High Tension Types are supplied in two standards, standard and triple capacity. All types now incorporate the new and exclusive Helleesen No. 7 Recuperating Agent, giving longer life and wonderful power of recuperation when not in use.

Foolproof seals are fitted and customers should see each battery tested at time of purchase. A further improved form of quadruple insulation is now standard. With all these exclusive refinements Helleesen Radio Batteries are now better than their previous best.

Standard Capacity, 45v.	14/
60v.	18/6
Triple Capacity, ... 45v.	21/-
60v.	27/6

AT ALL GOOD RADIO DEALERS

or Direct from the Distributors

BRISBANE ELECTRICAL CO.

(T. Tonks)

**ELIZABETH STREET (Next to 4QC),
BRISBANE.**

varied peoples of this earth! Something which the art of printing has never accomplished.

"Let the nations listen nightly to each other's music, and the hour when they shall speak a universal language, and cease from war is brought materially nearer to realisation. And that is the thought which I wish to leave with you all to-night:

"To my many friends, radio engineers and experimenters in various cities in Europe, and to all who use and love the three-electrode tube, I send my greetings, and good night!"

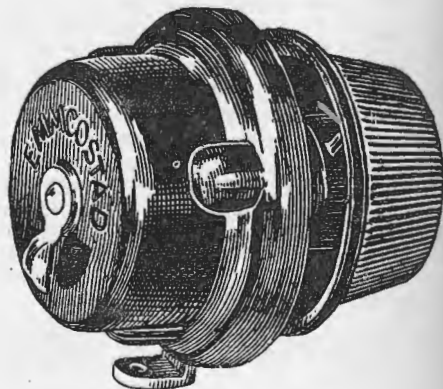
LEE DE FOREST.

Dr. De Forest is now on his way home from Spain, where he went personally to make a phonofilm (talking movie) of the Spanish Royal family.

The Emmcostad

The Emmcostad may be best summed up as a universal radio resistance. It is designed in a number of different resistances for controlling the filament tone for all types of valves, for use in resistance coupled amplification, and also for "B" battery eliminator.

No. 1 Emmcostad has a resistance range from $\frac{1}{2}$ to 100 ohms. No. 2 is a direct variable resistor from 10,000 to 100,000 ohms, and is of especial use for controlling the tone of audio transformers and in resistance coupled amplification. No. 3 functions much the same



as No. 2, except that the capacity is from 2,500 to 25,000 ohms. No. 4 Emmcostad acts similarly, but has a capacity from 50,000 to 500,000 ohms.

No. 5 has a capacity from 0 to 5 megs., and is of especial use in "B" battery eliminators, although it is adaptable to any purpose requiring a universal variable radio resistance. It stabilises tuned radio frequency receivers, controls the volume where coupled audio frequency amplification is used, and controls regenerative circuits and regenerative resistance amplified circuits. No. 6, with a capacity of $\frac{1}{2}$ to 10 meg-ohms, is particularly useful as a valuable grid resistance

The Emmcostad has an attractive appearance. Bakelite knob and casing and a one-hole mounting. It is unaffected by heat or moisture.


 4WN

WOOLOOWIN RADIO CLUB

Birthday Section

THIS month the Woolloowin Radio Club celebrates the third anniversary of its inauguration, and following upon the practise adopted in our August issue of 1926, we publish herewith The 4WN Birthday Section, compiled by the members of this progressive club.

Remembering that the majority of our readers are not technically inclined, we suggested to the club that they should make the articles a little less technical than those of last year.

This they have done, and we leave it to our readers to judge for themselves the high calibre and all-round interest featured in each subject.

In extending "Many Happy Returns" to what is without question the most solid and enthusiastic Radio Club in Australia, the Editor and Staff of "The Queensland Radio News" feel convinced that they are expressing the sentiments of the radio public at large.

Chief Radio Inspector's Message

In July last year it was a great pleasure to accept an invitation of your Honorary Secretary to send a message of greeting to the Woolloowin Radio Club on the occasion of its second anniversary.

I am again favoured with a similar invitation and will gladly comply with the request. I regret that circumstances render it impossible for me to be present at the club meeting on the third anniversary. I was looking forward to that as a pleasant possibility, but now find it cannot be arranged.

It is unfortunate that many of the radio clubs in different States have either definitely retired from the game or are merely existing with the nucleus of the energetic executives that inaugurated the club. To find the Woolloowin Radio Club keeping up its enthusiasm and its activity is, therefore, very gratifying, and I congratulate the officers and members on their third club birthday and wish them every possible success in the ensuing year. Yours faithfully,

J. MALONE,

Chief Inspector Telegraphs and
Wireless.
Melbourne.

Presidential Message

Again we pass another milestone in the club's progress. On the fourth day of this month the club is three years old—years in which there has been no looking back, but a steady march forward to the proud position it now occupies among radio clubs.

My thoughts go back to the inauguration of the club when 13 or 14 members were assembled, none of whom knew much about wireless.

Now, we have 15 members who possess the Amateur Operator's Proficiency Certificate, the majority passing this examination while members of the club.

Perhaps the greatest asset of the club is the wonderful spirit of comradeship and enthusiasm which is shown by every member, and without which the club could never have been so successful.

I am gratified to know that another forward move is now under consideration—the radio education of all broadcast listeners in the Woolloowin district. This is entirely a new departure, and will, I feel sure, be appreciated by every radio set owner in this district.

I sincerely thank the club members for their loyalty and enthusiasm in the past, and hope that in the coming year they will continue to march forward in complete unity, for therein lies their strength.

HUBERT KINGTON,
President.

Queensland Radio Inspector's Message

I feel that I cannot let this opportunity pass of extending to the President and members of the Woolloowin Radio Club, my hearty congratulations on the attainment of the third anniversary of the club's inauguration. I feel sure that the success of the club is due in a great measure to the spirit of comradeship, which is reflected by every member and which is so vital to the existence of any radio club.

The thoughtful consideration and co-operation with broadcast listeners in and around the club's district, which has been in evidence during the last year, must surely meet with approbation, and which in turn will engender that feeling of contentment common to every radio enthusiast who reaches the stage when he is enabled to give freely to others the benefits of his experience.

I wish the club every measure of success in the coming year, and feel sure the efforts of the club will do much to further the development of radio in Queensland.

T. ARMSTRONG,
Radio Inspector, Queensland.

From the Director of 4QG

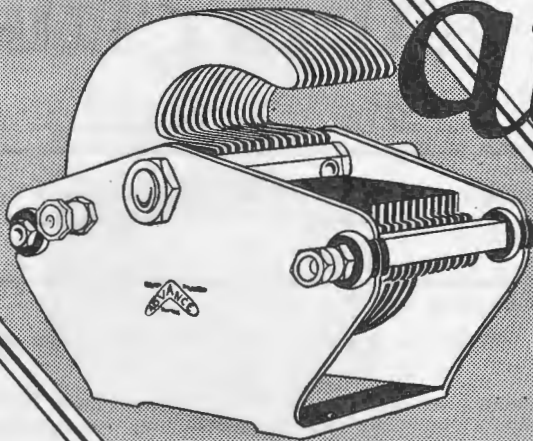
The Woolloowin Radio Club is celebrating its third birthday during the month of August.

It gives me the greatest of pleasure to extend to the Woolloowin Club my heartiest congratulations upon its success, and also to express the hope that its future operations may be even more profitable and more pleasurable than its past activities.

Radio clubs are undoubtedly an asset to the great broadcasting movement in general, and a real live institution such as the Woolloowin Club is of inestimable advantage to the whole of the radio community.

May good luck attend the club's future efforts. — J. W. ROBINSON, Director, Station 4QG, Brisbane.

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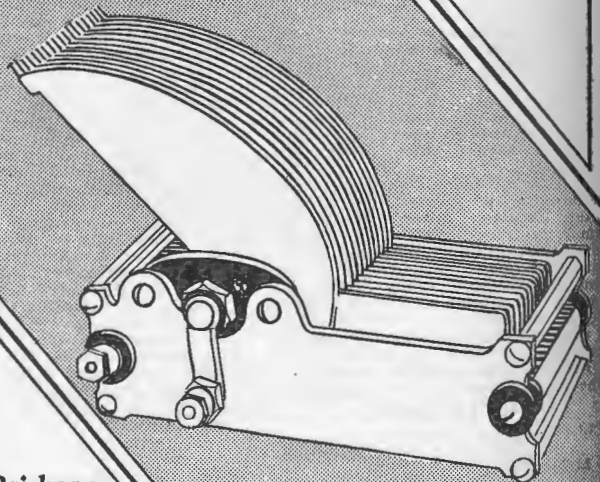
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The Woolloowin Radio Club

Activities for the Year 1926-1927

Since the last "Birthday Issue" of the Queensland Radio News in August, 1926, the Woolloowin Radio Club has passed a year of satisfactory progress.

The third annual meeting will be held in the club-room on Thursday, 4th August, and the hon. secretary and hon. treasurer will submit their reports for the approval of members.

In the meanwhile, to make this, our second birthday number, complete, it is desirable that an account be given of some of the club activities for the year past.

The membership remains steady, and the personnel of the club has not changed to any marked degree. New members present themselves for approval with satisfying frequency. As shown by the list of members published herewith, the club has now a strength of 27. Attendances at the meetings have generally been very satisfactory. It is gratifying to note the manner in which the "old brigade" turn up to lend a hand night after night.

Club finances are flourishing, and a very considerable amount has passed through the treasurer's hands. It has not been found necessary to resort to any entertainments, dances or the like to augment the funds, and the treasurer considers that the amount now on hand, together with the subscriptions falling due in August, will be quite ample to cover any normal expenditure during the ensuing period.

It is noteworthy that members of this club are more and more taking a prominent part in amateur radio activities in Queensland.

At the time of last annual report it was mentioned that one member, Mr. Charles Stephenson, now Chief Operator of the Club Transmitting Station, had been successful in qualifying for the Amateur Operator's Proficiency Certificate. During the year fourteen other members have secured licenses to transmit. On a membership of 27 these 15 licenses represent 55 per cent., which is probably a record for Australia.

The chief operator has had the club station—4WN—on the air on the 30 metre and 80 metre bands with fair regularity, and good reports of reception have been received from Southern States and New Zealand. The Woolloowin Radio Club, due to the consistent work of the Technical Committee, ranked second in the Interstate tests carried out last year under the auspices of the Wireless Institute. The second test arranged was a failure throughout Australia, due to

some misunderstandings in the ranks of the Institute. This was to be regretted, since very complete arrangements had been made by the chief operator to keep a daily 6-hour watch with the club gear.

Most of the club members holding transmitting licenses are on the air, others building their stations. During the year very consistent signals have been heard from the stations operated by Messrs Feenaghty Kenna, Stephenson, Sharpe and Walsh, under the respective calls of 4LJ, 4FK, 4RG, 4FV and 4HW, and all these operators have had reports from North America, and especially in the case of Mr. Sharpe, from Europe.

The equipment at the club station is fairly complete, and works satisfactorily. However, the low-power in use—5 watts—precludes any serious distance being worked. It is not at present intended to increase the power because the station is intended for demonstration purposes only, and club members seeking long distance communication will ordinarily use their own apparatus. During the year the Technical Committee, with willing helpers, erected a new aerial system for the transmitter, and have constructed a very serviceable transmitting bench and lockers to house the power installation.

Also, at the beginning of the year, the club was well represented in entries at the Radio Exhibition. All of the nine sections open to amateurs were attempted, and seventeen prizes were won of an aggregate value of £22. Practically half of the amateur exhibits in the exhibition were entered by the Woolloowin Radio Club. Later in the same month the club, for the third consecutive year, gave a display and demonstration at the Windsor Show which, judging by the interest shown, was appreciated by the visitors.

During the year an attractive syllabus of lectures, debates, demonstrations, etc., has been carried out, and the club is indebted to those members who have assisted in this respect. It is pleasing to be able to say that with such a large number of members holding technical qualifications it is not now necessary to seek outside the ranks for an efficient and instructive lecturer. Members have also lectured to the Eastern Suburbs and Graceville clubs.

The spirit shown by the office-bearers in carrying on the routine business of the club is commendable, and so long as this spirit of willing service is evinced the prosperity of the Woolloowin Radio Club is assured.

The Woolloowin Radio Club

YEAR 1926-27

Patron:

James Love, Esq.

President:

Hubert Kington.

Hon. Secretary:

H. A. Jear; C. J. Grant (Acting).

Hon. Treasurer:

J. P. Love.

Hon. Technical Adviser:

H. F. Coffey (Officer in Charge, Brisbane Radiotelegraph Station)

Chief Operator (Club Station): C. Stephenson.

Members:

E. N. Anderson	H. F. Coffey	C. George
W. R. Blaikie	L. J. Feenaghty	P. Kelly
R. F. Connolly	F. W. Hoddinott	J. P. Love
C. J. Grant	H. A. Jear	B. W. Munro
V. F. Kenna	H. Kington	F. V. Sharpe
W. Meadley	E. G. Meek	G. Shearer
C. W. Stephenson	W. Rohde	K. A. Taylor
H. Oldham	H. J. Stephenson	A. J. Thomas
F. E. Thomas.	H. D. Walsh	D. C. Winterford
J. Birkbeck	V. J. R. Bouchard	

The "Hot Stuff" Two Valver

(By "Toroid"—Wooloowin Radio Club.)

There has been so much talk lately in Brisbane of wave-traps and such gadgets for cutting out 4QG, that I make no excuse in introducing a set which dispenses with these. It is not a difficult set to construct, nor are the parts expensive; but it is selective enough to bring in 3LO—at Clayfield—without the slightest background of 4QG.

The circuit consists of a neutralised stage of radio frequency amplification, followed by a regenerative detector which employs a particularly smooth method of reaction control. The radio stage is neutralised by a method which lacks the drawback familiar in the neutrodyne and Browning-Drake; that of over-neutralisation on the high waves and under-neutralisation on the short waves.

The whole secret is in the construction of the R.F. transformers. Being wound in the form of toroids, which are inherently selective, and having no outside field, they do not pick up any energy directly from the locals. The aerial coupler consists of three coils, two small ones and a larger one. One of the smaller

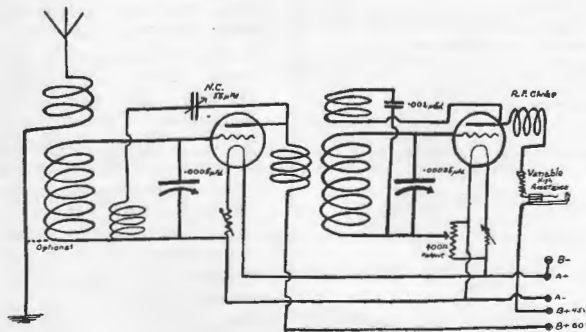
ed to the most sensitive spot and left alone, so it may be mounted at the back of the panel.

If a good high resistance potentiometer is used (400 ohms at least) the drain on the "A" battery is negligible—10 milliamps in the case of a 4-volt battery.

I have given no instructions for the construction of the R.F. transformers, as they are not of the easiest to make, and they may be obtained for a reasonable sum. I used "Unlimitex" transformers—they are the only job I know of that has the necessary three windings. A ballast resistor may be used in the R.F. stage if desired.

I think the diagram gives all the information necessary for wiring.

This set is ideal for the man who only wants head-phone strength, but the usual two stages of audio may be added if desired. I would advise 199 or 201A type valves throughout, as they stand variations of plate voltage well.



ones is to couple the aerial to the grid coil. The other one is for neutralisation. The experimenter will, when he has studied the circuit, notice a certain likeness between this and Reinartz reaction.

In the detector stage plate rectification is employed in preference to the usual grid condenser and leak because of the superior selectivity and quality which it affords. Some writers state that plate rectification is inferior in sensitivity, but I am not disposed to admit this. The "floating point" can be much more closely approached with the latter than with "leaky grid" detection. The method of reaction control is very smooth, and gives a minimum disturbance of the tuning of the grid circuit. But a good anode resistance must be obtained, otherwise there is liable to be a certain amount of noise when making adjustments.

The choke used is of 250 turns on a small former in my own set, but a honeycomb of the same value would be as good. The potentiometer may be adjust-

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Our Nautical Hams

(By "Barnacle"—Wooloowin Radio Club.)

There is a small section of 4WN's members of whose activities very little is known.

They are officially described in the club records as the "C6 Section," of which 4FK is the chief op.

In their nautical sphere the members referred to occupy the positions of for'ard hand and engineer on board the good ship "Sweetheart," which is well known in all parts of the Bay.

Strange as it may seem, it was a gramophone which was responsible for the installation of the floating radio station which, as a B.C.L., gave its first howl of delight when listening to old 4CM in "ther good ole times" (apologies) before 4QG was thought of. The gramophone always required someone to QRX (to change records and wind up), so with a view to overcoming the difficulty, the "lascars" (for'ard hands) decided to knock together a valve receiver.

The first set tried was a home-made two-valve, 3 coil affair with one stage audio employing Mullard "Ora" B.E. valves. This gave fair headphone results on 4CM, but due to the small aerial available, was no good on the only southern station of the time—2BL.

The next set made was a four-valve with one stage R.F. tuned anode with reaction, two stages of audio employing U.V.201A's throughout. This set was found to be highly satisfactory, and is still used as the B.C.L. receiver. Under present conditions the set is sufficiently selective to cut out 4QG down the Bay, because of the small aerial employed.

This set was first put into use when 4CM was acting as a temporary broadcast station, while little 4QG was in course of erection.

Late as it is in the day, we wish to congratulate 4CM on the excellent way in which his transmissions came through.

Well all was peaceful, as has just been told, until 4FK brought down his short-wave set. Good-bye B.C.L.

It was found that the Bay was an ideal place for short wave reception there being no QRN from Fords, A.C., and many other noises which go to make up "man-made static" in town and suburban areas.

After one or two trips with the S.W. receiver we were tempted to try a transmitter, so arrangements were made to have 4FK's licence transferred to the "Sweetheart." The night was dark, wet and stormy on the eve of our departure for the Christmas trip, 1926, when the transmitter was installed. The power supply, which consisted of 3 100-volt Ediswan H.T. accumulators, had been standing in the rain and was considerably lively to touch, and much to the delight of all present, 4FK received several "bites" while charging the batteries in their locker.

The transmitter was then tried out at the moorings in the river at Hamilton, connected to an old 3/20 single wire aerial having many kinks, dirty joints,

and barnacles. On a wave-length of approx. 80 metres an indication of about 200 mils. was obtained on the R.F. meter when using 200 volts on the plate. This transmission brought back a QSL by landline phone reporting "sigs. R4 QSSS slite" at West End. The transmitter was arranged on a vertical "bread-board" screwed to the cabin wall. The power supply consisted of the three 100-volt Ediswan H.T. batteries which stood up to the work splendidly. The filament supply was obtained from the ship's batteries by means of a flex lead through the bulkhead into the engine-room.

The short-wave receiver and the four-valve B.C. receiver derived their filament juice from a separate "A" battery, and their plate supply from a section of the transmitting batteries.

On the second day of the trip, after a little coaxing, the X-mitter was induced to pump 300 mils. into the aerial, despite the bad joints, and very shortly 4FK QSO'd 4NW. Quite a long rag chew was held, and 4NW closed down 4RG, one of the 4WN gang came back and a "sked" was arranged for that night to try out the new aerial.

An aerial identical in length with the one that had been previously used (a 3/20 ga. single copper wire about 40ft. overall, including lead-in) was rigged up. When the key was pressed (Oh! the birds began to sing), the radiation jumped to 400 mils., that is, with 200 volts on the plate. 4RG reported sigs. R6 es stedi; try fone om's." In a few minutes an absorption coil, mike and condenser were rigged up near the helix, and after some tuning, good modulation was obtained. The report 4RG gave was "fone R5 F.B." (Fine biz.)

Then 4FK grew bolder and, telling "Charlie" (4RG) about the extra 100 volts up his sleeve, asked him to QRX while he increased power. We were rather doubtful as to whether the plate blocking condenser would stand the load, for it had been literally "soaked in seaweed," having once been dropped into the bilge water of the dinghy and remained there for quite a considerable time. The condenser was well dried out and, hoping for the best, 4FK switched on the full 300 volts.

Result: Plate current 40 mils., and aerial current 575 !! 4RG reported "fone R6 es stedi and morse R8."

It was then decided to try and emulate 4QG's stunt of broadcasting from the bottom of the Bay. Our chief engineer donned his diving suit and commenced on his submarine wanderings. To obtain the desired effect, an old car pump was used to supply the noise of the air being pumped into the diving suit.

After several conversations with the oysters, mermaids, etc., our chief rose hurried to the surface, pursued very ORQ by a hungry-looking shark who seemed very likely to QSO. 4FK (stout fella) seized a

rifle, fired it off in front of the microphone and hit the imaginary shark fair in the boiler room, at the same time nearly deafening one of our crew who was listening in to the transmission on the short-wave receiver with the fones clamped over his head. When the session was finished—it lasted about half-an-hour—4RG came back and reported that the sigs were sufficiently strong on his two valver to operate a loud speaker, and that our transmission had been FB with many hi-hi.

Later, transmission was tried with the boat under weigh, and although very little difference was noticed in the transmitter sigs., reception was almost impossible. This was found to be due to the vibration of the receiver coils and also QRM from the magneto and sparking plugs of the engine, which were picked up. The vibration trouble was overcome by tying the receiver coils tightly together. After this several successful QSO's were obtained, the most notable being with 4AW, who was on holidays at Woody Point with a low-powered portable transmitter. At the time of the QSO 4AW was using an input of about 1.4 watts, and his sigs came in with good readable strength through QRM from the engine, etc. The distance was about 30 miles to Woody Point, and it was daylight when we worked 4AW. We also worked with 4WN, whose sigs. we received R5. Later we were surprised to QSO Mr. Reading at Bangalow, New South Wales. Telephone was also tried, but Mr. Reading complained of QRM from a local power leak which prevented him getting our fone. This was the best DX worked during the Christmas trip.

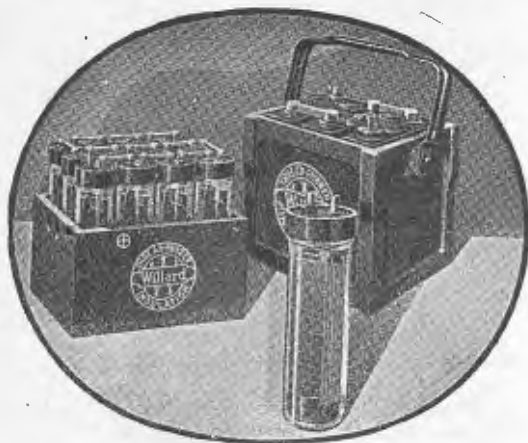
It was found during the Christmas that the most reliable working could be obtained during the mornings when QRN was practically nil. These conditions usually held till about 3 p.m., when QRN strength gradually increased, until after dark it was frequently impossible to work. On one occasion the QRN was so intense that it was impossible to read 4RG, on 80 metres, who usually came in R8 under reasonable conditions.

On the Easter trip, 1927, a transmitter using the same circuit, but with a slightly different layout, was tried. This set was adapted to work on the 30 band as well as 80 metres. Unfortunately, owing to a hurried departure, there was no time to arrange a "sked" with any of the local "fours," so we just took a chance. Our luck with the "fours" was out. After a night's desperate and futile CQ-ing on 30 somebody said, "let's try 80." We did, and lo and behold! back came 2DY (Sydney), who gave us "morse R max; tri fone." Told him to QRX and rigged up the mike striking on the very setting for good modulation. When we asked for a report he said, "fone R7." Save the lizards!

2DY was the only QSO at Easter, but the gang were quite satisfied, as he was the biggest DX fish landed yet.

Conditions at Easter time were splendid, and it was a pity that there were not more stations on the air.

Christmas, 1927, is now something to look forward to, and the new transmitter promises to be something "out of the oyster."



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A Radio Operator on the Amazon

(By 4KY—Woolloowin Radio Club.)

(Officer in charge of Brisbane Radiotelegraph Station.)

One bitterly cold morning away back in 1911, while ship-fitting in the Huskison Dock, Liverpool, the packet next to us was ready to proceed to sea minus a wireless operator. Being imbued at this time with the spirit of adventure, and realising the seriousness of the situation, the writer stepped aboard for duty, clad in a suit of overalls with a few shillings pocket-money. What our next port of call was I did not care one iota. At all events, I subsequently discovered that we were bound for Havre.

Until we reached this port I was simply like a stow-away, not being shewn on the ship's articles. At Havre the genial skipper made all arrangements for signing on before the British Consul.

Our next port of call was Hamburg. This was my first taste of a North Sea fog; what a dark, bleak, murky atmosphere it was. The little packet was fitted with submarine phones, and we were pleased to pick up the submarine bell from the Stellingen Light-house. Early the following morning we passed through two divisions of the German High Seas Fleet. Little did we think then that some of those majestic engines of war would be resting beneath the waves of Scapa Flow. There were no radio beacons then, neither were there any radiotelegraphists' union; hours on watch were generally determined by local conditions obtaining, and very frequently the headset was worn for 16 hours out of twenty-four. This was particularly the case on the North Atlantic run, owing to the prevalence of icebergs.

Being in the depth of winter, we were unable to proceed up the Elbe without the assistance of an ice-breaker. One can quite imagine how the writer longed for his old bridge coat, stored somewhere away back in Liverpool. During our stay in Hamburg we enjoyed ourselves thoroughly, the famous Hagenbach Zoo and ice yachting on the Ulster Lake being points of exceptional interest.

During our stay in Hamburg we established communication one afternoon with Cullercoats Radio, using a one and a half kilowatt Marconi outfit, the converter being driven from sixty volts supplied by an old Manchester type dynamo which, apparently, was as old as the little packet itself. Reception was carried on the magnetic detector. I spent a few merry evenings as guest of the Telefunken Wireless Club, Frankfurter Hof., Hamburg.

What strikes a visitor very forcibly while in Hamburg is the magnificent ferry service, noted for its speed, more especially in connection with the transport of marine folk around Altona.

Our trip back to Gravesend was accomplished in scheduled time in clear, cold weather, and after a couple of days in sleepy Gravesend we weighed anchor for Lisbon, after learning that our final destination was Iquitos, Peru (some 2000 miles up the Amazon River). Unfortunately, we were unable to see Lisbon's beauty spots at this period, owing to the seasonal solution. While anchored in the Tagus, the writer amused himself by copying Poldhu press, which, by the way, was more appreciated than anything else, as

the ship's company were all sportsmen. Poldhu's press routine was well worth listening to; it contained all the cream of the New York "Herald," London "Times," Paris "Matin," and Kolenische "Keitung," etc. It was (and perhaps still is) one of the finest press services in the world.

Before leaving Lisbon, our chronometers were checked with Eiffel Tower's time signals. Our next port of call was St. Vincent, Cape Verde Islands. What an inhospitable place it appeared to be, viewed from the bridge of the incoming steamer, but how different it seemed when, in port, one partook of the unbounded hospitality extended by members of the Cable Station there, more especially by one gentleman who was a very ardent "ham," being the proud possessor of a simple tuning coil with a silicon detector.

We next reached Para, some 4000 miles from Liverpool. The voyage across the South Atlantic was calm and uninteresting, with nothing to break the monotony except a Spanish fandangle at night and musical and vocal items which were rendered in fine style by a few Spanish passengers who joined the steamer at Lisbon.

Nearing the Brazilian coast the position of the Amazon is easily discovered by the rapid decrease in water salinity, owing to the enormous wall of fresh water meeting the ocean. One can drink the seawater from a billy passed over the ship's side. Para is the chief port on the Amazon estuary, and its chief export is, of course, rubber, though immense quantities of tobacco and cigarettes are also exported to Europe and U.S.A.

At Para steamers take the Brazilian pilots aboard. They are heralded by a tug full of sea chests containing numerous suits of tussore-silk and panama hats. These Amazon pilots are splendid fellows; they take charge of the ship immediately after leaving Para and very seldom run her aground, although the bed of this mighty river changes with each wet season. Their expert knowledge is due to their method of training during seven years apprenticeship. Shortly after leaving Para one comes into the region of the mighty forests and dense foliage which surmount the river bank. In places, the banks are high and steep, very often higher than the mainmast of the steamer. A few hours steam against a heavy current brought us abeam of Fort de Bana, a little village mostly composed of native huts, and three hours further on we passed Mosqueiro Village, the tropical vegetation hereabouts being simply wonderful. A little later on we passed Centejuba light, and Ville de Conde. All these little places are welcome milestones to the navigator, who shortly encounters the "Narrows," justly styled, because the river divides itself into a series of "paranas." The Narrows are 123 miles from Para, and only one degree forty-eight and a half minutes off the line, longitude fifty degrees fourteen minutes west. The Narrows extend for a distance of 90 miles, but in many places, of course, the river expands like an inland lake. It is quite impossible to adequately describe the scenic beauty of the river at this point. One thing is certain—it does not lend itself to reliable wire-

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less communication; tests revealed that two ships were out of communication in a very short time while steaming through the Narrows, whereas fairly reliable communication could be obtained on the straight section of river approaching Manaus. This excessive screening was, doubtless, due to the erratic outline of the river bank and the density of the tropical foliage thereon.

At noon on the following day we were off Urucuricaia River. The confluence of the waters at this point is truly unsurpassable in point of beauty and tranquility—there is nothing to indicate life save a native canoe proceeding down stream at an alarming rate, hugging the ins and outs of the shore to avoid disaster in the five or six knot current which prevails.

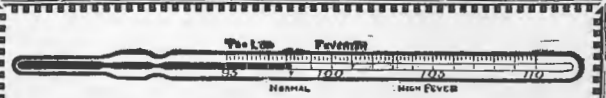
The latitude at this point is only one degree 29 minutes off the line, and mosquitoes and sand flies are here in countless millions. At noon on the following day we pass a pretty place called Coccolande, which place is within three hours' steam of Santa Rem. The latter is quite a modern village—the second radio station in the Amazon chain was erected here (a modern Telefunken outfit). It was the repeating centre between Para and Manaus. About noon on the following day we were somewhere off the coast of Jurutahy, in latitude two degrees 70 minutes south of the line; consequently, the weather was still rather warm. I might mention here that the normal temperature is something about 119 degrees in the shade; there is very little decrease in the temperature at night during the wet season, whereas the stillness prevailing gives one the feeling of being enclosed in a vacuum. Nevertheless, everyone felt well and happy, all looking forward to a night ashore on reaching Manaus.

At noon on the following day we had passed through Pacoval Parana, and on the following afternoon we reached Manaus, anchoring in twenty-four fathoms of water. Thus it will be readily realised that this mighty river is navigable for the first 1000 miles, steamers with a tonnage of 7000 plying between Liverpool and Manaus, and between Hamburg and Manaus, steaming to schedule with clocklike precision.

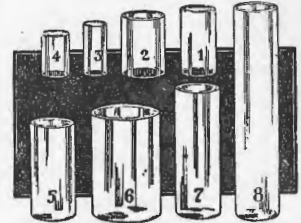
The city of Manaus itself is modern in every way. Ships charge and discharge by the aid of electric elevators, and the progress of this inland city, situated as it is amidst the great primeval forests of the Amazon can be realised by the very extensive use of electricity.

Manaos can boast of two splendid radio stations, one station erected by the Marconi Company years ago. This station works to another station at Porto Velho, the terminus of the Madeira Mamore Railway. The second station was installed by the Telefunken Company, as part of the Amazon wireless chain, and communicated on the one hand with Santa Rem, and on the other hand with Iquitos in Peru.

The confluence of the river Negro with the Amazon is strikingly beautiful. The Negro is cleared about one hour after leaving Manaus, and about noon the next day a very pretty place called Boa Vista de Encicacas is right on our beam. The river expands a little hereabouts, and the foliage is not so large as further down the river, but the colour blending is far superior; wild banana trees are to be seen everywhere. One fine morning the writer accompanied the second mate and fourth engineer on the ship's steam launch for a trip ashore to procure bananas and turtles from a small native village. We received a boat load for



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MOTO METERS.

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

Illustrated catalogue posted free on request~

Wilson Nafis & Co., Ltd.

99 Wharf Street, Brisbane

(next Fire Station)

a bag of sugar, and a few odds and ends. The natives hereabouts are very primitive, nevertheless very generous and friendly.

At noon on the following day a beautiful little island is encountered; it is called Anori Island. The river is still quite majestic at this point, which is roughly about 1400 miles inland—no bottom at nine fathoms. There is a very pretty village near here called Cadajos, the centre of a flourishing rubber district. During the terrific thunderstorms which prevail here during the wet season it is quite impossible to proceed at times, more particularly after dark; therefore it is necessary to anchor, sometimes close to the bank in a safe position free from currents. This is the time one realises the majestic wilderness of the giant tropical forests, the howling of animals and the chirping of countless millions of tropical insects, besides the intense viciousness of malarial mosquitoes, all tend to create a feeling which is never forgotten. The malarial mosquito out here is quite a little fellow, fitted with "top boots." Malaria is very prevalent on the higher reaches of the river, yet with ordinary precaution, a Britisher can live here quite well, though the latitude is still only two and a half degrees south of the Equator.

As the higher reaches of the river are gained it becomes more and more picturesque, various points and little islands assisting navigation. On certain stretches of the river hereabouts the steamer hugs the bank so closely that the huge tropical foliage can be touched by hand.

The next real point of interest is the large stretch of sparsely wooded country on the northern bank of the river, which is literally alive with monkeys all ages and sizes. They take little notice of the passing steamer until the mate sounds the siren; then you should see the scatter. Besides monkeys, there are numerous alligators around here; in fact, they can be found on any quiet stretch of the river.

At the frontier we stop and dip the ensign to salute the Peruvian flag, for we have passed through the mighty forests of Brazil. The fort is quite an imposing place where military routine is carried out with the utmost precision. At the time Peru was at war with Colombia on the higher tributaries of the many inland rivers which abound here. Small launches were bringing back the sick and wounded, mostly sick, for the dreaded "Black Jack" was taking its toll of human life.

Some time later we reach our goal—Iquitos—some 2000 miles from the ocean with tons of water to spare. In fact, very fine launches proceed some hundreds of miles beyond this point, owned by prosperous British and German rubber planters.

Iquitos itself is a pretty little town; it is a garrison town or fortified point at the eastern side of the Andes. There is a beautiful plaza in the centre of the little town, surrounded by numerous rustic seats, and excellent pavements, and the military band entertains the residents almost every evening in the year.

Money flows freely, and prices of foodstuffs are most extraordinary, due, doubtless, to its great distance from the big centres of civilisation. Iquitos could boast of an electric lighting plant, a steam driven unit about seven kilowatts, owned and operated by a French engineer—a most genial and contented man.

The gigantic radio station here was under the Peruvian Ministry of Communications, handling all the traffic over the Andes, through a chain of smaller

stations. In the prevalence of intense static, owing to the virtual capacity of the large aerials used, wavelengths below two thousand metres were never put into operation.

Only British vessels steam through the upper reaches of the Amazon into Peru, the German South American Line of steamers proceeding no further than Manaos. While we were in port the little town was the centre of great excitement and gaiety, football matches on the Sunday afternoon (with a shade temperature of 100 degrees!), dancing at night, and free passes to the picture theatre which, by the way, was really excellent, artistically decorated and well roofed by the blue canopy of heaven.

The Peruvians are a sturdy race, very fond of enjoyment, and only too pleased to make the foreigners just as happy. The entire ship's company was always sorry to leave this gay little town so far removed from the great cities of Europe and America. Most of the people here are in a very prosperous way, as it is the centre of a big rubber belt, launches bringing the material from distant points. The imports and exports are viced by Peruvian Customs officials just the same as in the cities of London and New York; in fact, the writer was under the impression that the Customs officer here considered himself an omniscient person.

The voyage down stream can well be realised, with the extreme difficulties of navigation while steaming with a six-knot current, laden with a splendid cargo of rubber. In spite of all these difficulties the ships reach Para in almost all cases without a mishap, due, as I said before, to the untiring vigilance, skill, and alertness of the Amazon pilots.

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To reduce Stocks we offer you genuine C.A.V. (British) "A" Batteries at prices far below the usual. The 6 volt usually sells for 65/., the 4 volt 45/.

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As a draught horse recovers its brute strength while resting after a long, strong pull, so do YALE "B" Batteries *rebuild their depleted power* when your set is switched off for the night. That is why YALE Batteries deliver more power in the long run—why, in the end, they cost *less per radio hour!* Connect with YALE!

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45 ADELAIDE ST. (Next to Allan & Stark's) BRISBANE



R.C.A. MODEL 20 is a five-valve balanced tuned radio-frequency receiver with the additional feature of variable regeneration in the detector circuit. A Radiotron U.X.-120 is used in the last audio stage, and gives great undistorted volume. A very short indoor or outdoor aerial can be used with this Set. The uni-control drum at the left of the sloping panel tunes in most stations. The drum control at the right is for regeneration, adding both sensitivity and selectivity.

PRICE: Complete with all Accessories, including Heavy Duty B. Batteries, Accumulator, B.T.H. C2 Loud-speaker:

£50-0-0

PRICE: Set with Valves:

£36-0-0



The World's Greatest Line of Broadcast Receivers

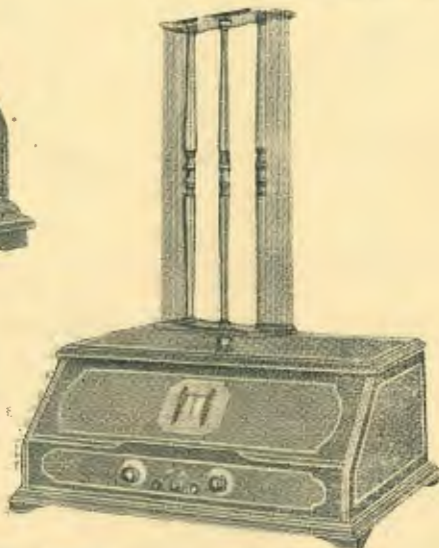
Call or Write for Further Details of Any of the Sets Shown on This Page.

R.C.A. MODEL 28 (8 Valves) is a desk model super-heterodyne, and gives wonderful volume of reception over great distances, using its attached loop. Its selectivity is extraordinary. No other circuit gives such ease of receiving distant stations without interference from nearer stations.

PRICE: Set with Valves and Loop: **£86-19-6**

PRICE: Complete with Model 100 R.C.A. Loud-Speaker **£103-10-0**

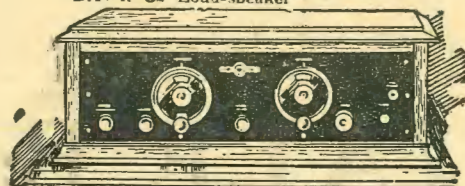
MODERN



R.C.A. MODEL 25 (Six Valves) features the second harmonic six-valve super-heterodyne circuit. In selectivity, distance-getting capabilities, and freedom from distortion it is second only to the eight-valve super-heterodyne circuit. Equipped with the new Radiotron U.X.-120, dry battery amplifier, it gives exceptional undistorted volume. An outdoor aerial is not needed with this Set, which is supplied complete with loop.

PRICE: Set with Valves: **£63-9-6**

PRICE: Complete with B.T.H. C2 Loud-speaker **£75-0-0**



The IGRANIC 6-VALVE SUPER-HETERODYNE

SET is constructed of the highest grade English manufactured components. It is highly selective and, without making any exaggerating claims, this set will work 3LO Melbourne whilst 4QG is in operation within a few hundred yards of the latter station. It is designed to bring in long distance stations on the loop, and gives splendid daylight reception from southern stations in many parts of Queensland.

Complete with all Accessories, including Loop Aerial, Brown H.1 Speaker, 6-volt Accumulator, Heavy Duty Batteries **£75**
Home Assembly Kit and Accessories **£41/10/-**

First in
1922
Foremost in
1927

We plan to have in Queensland what was five years ago, in the face of modern competition, we still retain leadership. THERE'S NO DOUBT!

IMPORTANT

Do not confuse these Radio Receivers with cheap and inferior articles offered elsewhere. These Sets are built to give long satisfaction; cheap Sets are the most expensive in the long run.

Have You Yours?

Since we introduced our new Radio Catalogue and Handbook in the "Queensland Radio News" last issue we have been deluged daily with enquiries from people in the country requiring for them. The first issue is being exhausted. Send for YOUR copy right away, enclosing 1d. in stamps to get it.

Send 1d. in stamps

RECEIVERS

DULCEPHONE BROWNING-DRAKE.

As a Four-Valve Receiver the Browning-Drake undoubtedly is the most popular four-valve circuit in use to-day. It ensures reasonable selectivity; ease of operation, and provided that components are of good quality, excellent reproduction.

PRICE Complete: **£27-10-0**
Standard Equipment.

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DULCEPHONE FIVE VALVE.

Simplicity and efficiency are the only words necessary to fully describe this wonderful Receiver. Distant stations tune in with ease. A Receiver that will strongly appeal to the lover of good music, as its tonal qualities are beyond reproach.

Dulcephone Standard Five, complete

£48-0-0

Dulcephone De Luxe Five, complete

£50-0-0

Dulcephone Standard Six complete

£50-0-0

Dulcephone De Luxe Six complete

£55-0-0



Two Valve Dulcephone

A simple, but very efficient little Set. 4QG on speaker, southern stations on phones. In polished cabinet.
PRICE: Without Accessories **£8/10/-**
Price Complete **£13/10/-**

One Valve Dulcephone

A modest little Set, but very sensitive and delivering good ear-phone strength from Brisbane and the big southern stations. In polished cabinet.
PRICE: Without Accessories **£4/15/-**
Price complete **£7/10/-**



DULCEPHONE THREE VALVE.

This Model employs two stages of audio-frequency amplification, and is capable of operating any type of loud-speaker with full volume. As an all-round Receiver it leaves little to be desired, and is especially suitable for the country, where the use of dry cells is essential. In polished Rosewood Cabinet.

PRICE: Without Accessories **£11-10-0**

PRICE: With all Accessories except Loud-speaker **£17-15-0**

PRICE: Complete with Heavy Duty B. Batteries, Accumulator, and B.T.H.C2 Speaker. **£24-10-0**

WIRELESS HOUSE LTD.

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City Buildings, Edward St.
BRISBANE

DEMONSTRATIONS

If you live in or around Brisbane we shall be pleased to arrange a demonstration IN YOUR HOME any evening to suit your convenience. This does not obligate you in any way.

**A 609
B 605
&
A 630**



Introduce

**NEW ECONOMY
6 VOLT VALVES**



£6/10/-
At all Dealers.

These amazing 6-Volt Economy Valves save up to 75% of your Battery Current—a saving you cannot afford to miss. So take out your present old type 6-volt valves and slip in these new "Miniwatts," with their *power-plus* filaments. Your batteries will actually last *four times longer*, and in addition you will get greater distance, volume and improved tonal qualities.

At all
Dealers

13/6

**This and PERFECT REPRODUCTION by
the New "PCJJ" Model Loud Speaker**

The Philips "PCJJ" new Model Loud Speaker is the result of long and careful laboratory research and embodies every refinement conceivable — absolute purity of tone, reproduction that is amazing, beauty of color, design, and finish.

The new "triple tapping" enables the Philips "PCJJ Model" to give ideal results with any radio set.

PHILIPS NATURAL TONE
LOUDSPEAKER

Co-products of Philips Lamps, "B" Eliminators and Battery Chargers

Aerial Systems

(By OA-4LJ.)

WOOLOOWIN RADIO CLUB.

To judge by the various and varied types of aerials one sees around our city and suburban areas, one would think that the aim of the set-owner was merely to use up good 7/20 wire. Of what utility is it to purchase or build one of the latest "dynes," and then to nullify the work of the constructor by putting up an inefficient "collector." Perhaps a few words as to the functions of an aerial would not be out of place. Most people know, and those who don't should know, that an aerial is placed in the air to "collect" the wireless waves from the ether and convey them to the set. The amount of energy so collected is so minute that if the conveyor is not of the very best construction then portions of that energy are dissipated and do not arrive at your aerial inductance. When so little is available under the best of conditions, one cannot afford to waste even a small fraction of it.

There are various types of aerials, the most popular being the single wire inverted L. The T type and multiple wires are not so often seen, and still less the vertical and vertex. The best aerial is undoubtedly the one which gives the best results in one's particular locality on one's particular set.

Now for some details. First and foremost, insulation is of paramount importance. Faulty or insufficient insulation is probably the most prolific source of energy loss. Therefore, at the free end of your aerial, that is, the other end to the lead-in, place at least three good insulators spaced about 12 inches apart. It is recognised that this represents 3ft. at least of length lost, and it may not be possible to give this much away. If not, then space the insulators closer rather than reduce their number. Pyrex is the best insulating material for this job, but it is expensive, so the cheaper glazed porcelain egg-type insulator may be used. Place the wires through the holes in such a way that they come back along the side grooves of the insulator. By this means greatest strength is obtained, and should the egg break, then the aerial will not fall, as the two wires will hold each other.

When connecting the aerial wire (7/20 copper for preference), make sure you have a good joint strongly applied. The length of the aerial is not arbitrary for broadcast reception—a total length from free end to set of from 80 to 100 feet is satisfactory. Don't make joints! When you reach the end of the horizontal portion bring the lead-in down as straight as possible in one piece—the continuation of the aerial. To ensure that the insulator through which the lead-in turns down does not slip, bridge across it from an inch along the aerial to an inch down the lead-in with a piece of 7/20 spliced at each end. A soldered joint here would improve matters, provided it is a good, clean resin-less joint. From this turning point insulator run a holding wire to the poll broken by two more eggs or pyrex insulators in a similar manner to that at the free end.

Make your lead-in short and direct. Keep it

away as far as possible from trees, spouting or other objects in contact with the ground. To ensure this a strainer (properly insulated, of course) may be brought from the lead-in to a fence, tree, etc., to draw it away from surrounding objects.

Now we come to a very important part of the job.—the entry to the house. The ideal way is to insert a pyrex pie-dish in the wall and bring the lead-in through a hole drilled in this. This, of course, necessitates a hole about 12 x 8 inches in the wall, and after all, even landlords can hardly be expected to look with favour upon such liberties taken with their property! The next best thing is a glazed porcelain tube. I prefer the bent-end type for, by turning the opening downwards, no water can run down the lead-in and enter the house. Make sure that the tube is free of the house walls at each end.

The very worst possible lead-in "tube" is to rest the wire on a window sill and "ring down the curtain" on it.

Since the Fire Underwriters' Regulations require the provision of a suitable lightning arrester, don't forget this when purchasing your gear. There are two terminals. The top (usually marked "Aerial") takes the lead-in, and it then is continued on through the tube to the set. The other terminal (marked "Ground") takes a heavy (3/20 V.I.R.) wire, straight as possible, to a good earth. It is not advisable, although it is a common practice, to bring the set earth lead on to this point, and if possible a separate earth should be provided. Don't use a gas or water pipe for your lightning arrester earth! Solder very carefully your connections to the arrester and make the wire from the free end to the set (or earthing switch if one is used) continuous—breaks mean losses.

The same remarks apply to the T type or multiple wire aerials, except that soldering the lead-in is necessary in such cases, continuous wires being impracticable.

The height of the aerial is its clear height above surrounding objects. So an 80 foot aerial over a 40ft. tree is only 40ft. high; keep it clear up and out in the open.

One type of aerial which is popular here, but which is unknown in other parts of the Commonwealth, is the vertex hoop. The idea originated in England, where, covered with a silk shade, it served the dual purpose of indoor aerial and light shade. It only requires one pole and consists of two copper tubing hoops about 3ft. to 3ft. 6in. in diameter, 12 inches apart, one above the other, separated by copper tubing in about five or six places. All joints must be securely soldered, and the wire is spiralled round the frame made by the hoops, about 80 feet being used. The beginning and end of the spiral come together in a soldered joint, and then the wire is continued down as the lead-in. Such an aerial has been in use

at the writer's station for about two years, and has given excellent trouble-free service for broadcast and short-wave reception, and even for low-power transmission.

The guys, of which three should be used on each pole, should be broken by egg insulators in two places at equal heights, so as to make a neat-looking job.

Each year, lower the aerial and clean it. You'll be surprised at the amount of dirt which has accumulated upon it. To render this "spring cleaning" and inspection easy, make your end strain wires (the ones first mentioned, broken with three insulators) join to an endless halyard run through a good metal, rustless pulley. Then the work is one of seconds only.

If you prefer a twin-wire job, make your spreaders strong, and in all cases, tighten the aerial periodically to prevent its swaying in the "gentle zephyr." This applies also to the guys.

The above aerials are all receiving type, and no mention has been made of the various types of transmitting antennas—Hertz current and voltage feed, zeppelin, cage, umbrella, etc.

Finally, do not expect to hear 1YA, New Zealand, or KTAB if your "skywire" is a piece of clothesline hanging from a tree top and sagging and swaying—possibly it could be done, but before believing it, hear it done! Anyway, your aerial is seen by everyone—your set by few. So make it a good introduction to your installation and give your "dyne" a fair chance.

Noughts and Crosses by Radio

(By 4HW, Woolloowin Radio Club.)

A few hours of listening on short waves will reveal the painful slackness at present existing amongst the amateur transmitters of Australia. The chief reason perhaps is the lack of interest owing to there being nothing in particular to transmit, the handling of messages being prohibited by regulations.

Numerous relay tests have been inaugurated from time to time, but owing to bad organisation and other reasons, interest in the test usually wanes considerably before it is completed. A number of amateurs are experimenting with telephony, but the continual grinding of gramophone records soon wearies the amateur and also, probably, the listening public.

Here is a scheme, which will enable transmitting amateurs to spend many an interesting evening, and which should go a long way towards re-waking interest in amateur transmission. We have all, doubtless, at some time or other, indulged in the game of noughts and crosses, so it is quite unnecessary to explain the details of the game here. However, if any reader cannot play, he can learn in a few minutes from a friend.

This game can be played in a very interesting manner by two amateurs each equipped with a radio transmitter, and of course the necessary receiver. Either telephony or morse may be used, but, unless the two stations are located quite close together, morse will be found the more satisfactory method.

1	2	3
4	5	6
7	8	9

Each square of the figure used in the game is numbered, and of course the same system of numbering must be used at each station. The accompanying figure is suggested as the standard system.

Each player-operator draws the usual figure; the one who is commencing the game places an O in whatever square he wishes, and signals its number. His opponent marks this in his own figure, places an X in the square he desires, then signals an acknowledgment and the number of the square used by him. Thus the game goes on until either player wins. Needless to say, to make such a game interesting, the operating and procedure should be as clear and snappy as possible. The following rules and procedure are used by Mr. Walsh and suggested by him as suitable.

The station which suggests a game, has the right to commence.

The actual signal sent consists of the call letters of both stations, separated by the intermediate, then an acknowledgment if necessary, number of square, and the switch is over sign, e.g., 4NW OA 4HW R 4 K.

If signal is not clearly understood, the repeat sign (IMI) is used, e.g., 4HW OA 4NW IMI K. On either player running, he signals H1 immediately after the number which completes his line, followed by the numbers of the three squares forming such line. A quick change over from send to receive is a very useful adjunct, and of course a break-in system is still better. An occasional hour or so of work like this helps considerably towards improving operating practice, and it is hoped that a number of amateurs will make use of the suggestions, so making the ether much livelier than it is at present.

CLEARING UP A MYSTERY.

A schoolboy's "howler" from "Popular Wireless" London:—

"Negative is the opposite to affirmative and is therefore positive. Batteries have both of these and are marked in algebra to show which is which and which is not, to avoid confusion."

* * * *

"Why do you use such a low aerial?"

"So I can get the low-wave stations better."

* * * *

Artist: "Whenever I'm working on a painting I turn on my radio. It inspires me to do my best work."

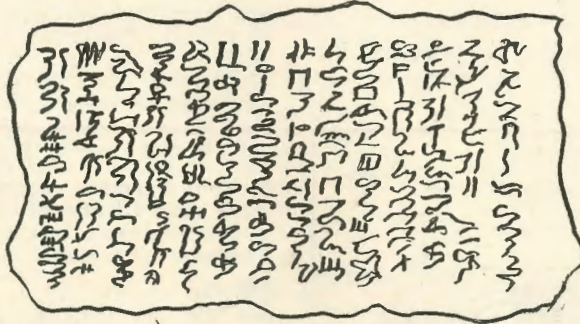
Visitor: "The static must have been terrible the day you did this one!"

Sensational Archaeological Discovery

The Aminotrite Stone ~ ~ Startling Coincidences

(Translated by Professor Prescorres, of the Wooloowin Radio Club.)

Keen interest has been aroused by the sensational discovery of an ancient stone tablet in the Valley of Xmphq. An accurate translation of the prehistoric hieroglyphics has been made by Professor Prescorres, and our readers will be startled by the uncanny coincidence shown with current Brisbane affairs. Indeed the ancient names Wulwynk Lub and Tum Bhulk Lub may well represent the modern Wooloowin Radio Club and Toombul Radio Club, and the names on the tablet, HK, FK, LJ and JG of the Wulwynk Lub are strikingly like the



transmitting calls of certain Wooloowin Club men, while the same may be said of AW, NW, and WE as regards the Toombul Club.

The Aminotrite (pronounced Am-i-not-rite) Stone leads one to believe that the ancients had a wonderful sense of prophecy. It is still more remarkable that the tablet should have been discovered at a time following so closely upon the facetious

allegations made of the Wooloowin Club in the Toombul Club Report published last month.

(Extract from Toombul Radio Club Report, July.)

"But it is understood there was a shortage of technically-proficient men in 4WN's team."

The Story of the Three Wise and the Three Unwise Hams

¶13 A mighty race in knowledge. ¶19 HK speaks to LJ and FK and JG. ¶32 The Tum Bhulk Lub receives no writings. ¶ The Tum Bhulk Lub comes not to debate with the Wulwynk Lub.

¶13. As it had been foretold, so it did come to pass that in the land of the City of Bris there arose a mighty race and in the City of Bris was much wonder.

14. And their name was the name of the Wulwynk Lub and they waxed strong in knowledge; yea, by their knowledge were they known in divers places.

15. And it was so for a while.

16. Yet in the third year the reign of Pres who was set in authority over the Wulwynk Lub were turmoils and disorders whereat Pres was angered.

17 So he spake to them who were with him saying, "Summon hither LJ and FK and JG who are of the Wulwynk Lub that I may make known unto them the intentions of my mind!"

18. And they summoned LJ and FK and JG—yea, even LJ and FK and JG who were of the Wulwynk Lub and they came unto Pres saying, "Lo, Pres, here are we, even LJ and FK and JG whom thou hast summoned."

¶19. Then he who was Pres, even HK, spake to LJ and FK and JG saying, "It has come to pass that they who dwell in the outskirts of the City of Bris even those who dwell in the caves of the hills have caused to be uttered malicious utterances and speeches whereby ye and all who are of the Wulwynk Lub are like to be humbled among the people of the City of

Bris; and their name is the name of the Tum Bhulk Lub.

20. Saying, "Hearken, hearken ye that the Wulwynk Lub may be humbled amongst the people of the City of Bris—hearken to the words of the Tum Bhulk Lub!"

21. And he who was in authority over the Tum Bhulk Lub spake, saying, "Send unto me NW and AW and WE that I may instruct them and teach them the symbols and utterances of my foolishness"; and when they were come unto him he spake, saying, "O NW and AW and WE, ye shall go unto the ways and the byways of the City of Bris and make known therein certain facetious statements concerning the Wulwynk Lub."

22. "But ye shall not yourselves believe these utterances which ye shall say for ye know their falsity yet by chance may some who dwell in the ways and the byways hear and hearing believe."

23. So NW and AW and WE did go even as he who was in authority over the Tum Bhulk Lub did bid them but their wisdom was in their feet.

24. And their feet were tired.

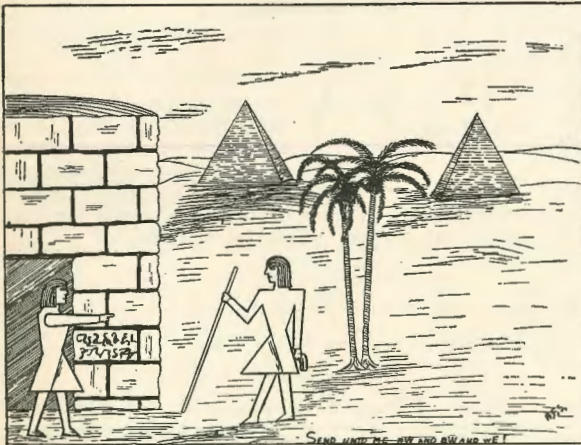
25. Wherefore they went not diligently unto the ways and byways as they had been so instructed neither AW nor NW nor WE nor any of them.

26. But NW and AW and WE who were of the Tum

Bhulk Lub did publish in the words of the Radinevs which was of the City of Bris certain things and it was the month of July even the eleventh month of the third year of HK who was Pres.

27. Saying, "Lo, we of the Tum Bhulk Lub did upon a time challenge HK and FK and LJ and JG who were of the Wulwynk Lub, saying 'Come HK and FK—come LJ and JG, come and deebait with the Tum Bhulk Lub., but they came not."

28. Wherefore know ye that in the Wulwynk Lub is none learned in the knowledge of the science.



"Send unto Me AW, NW and WE.

29. These things and others did the Tum Bhulk Lub publish in the book of the Radinevs believing them not yet uttering them that by chance one or even two might believe so that the name of the Wulwynk Lub might be humbled among the people of the City of Bris.

30 Concerning which things did Pres, even HK, who was in authority over the Wulwynk Lub speak unto LJ and to FK and to JG who were with him showing them the ways whereby NW and AW and WE who were of the Tum Bhulk Lub which dwelt in the caves of the hills of the City of Bris did seek so to do that the name of the Wulwynk Lub might thereby be abased.

31. And Pres was angered, saying It is not meet that AW and NW and WE who are of the Tum Bhulk Lub should say that in the Wulwynk Lub are none learned in the science for verily in the Wulwynk Lub are many, yea twelve and more than twelve to whom have been given writing from him who is in authority over the whole land, even the Yinspektr, in this wise that whosoever should look upon those writings should know of the knowledge of the Wulwynk Lub, for each of them is learned in knowledge for that he is a Brar-Spounder, yea, who poundeth his brass from the setting of the sun even during the sitting of the sun.

¶32. But to the Tum Bhulk Lub were given no writings save only four.

33. So that the greater knowledge of HK and FK and LJ and JG and of those who were of the Wulwynk Lub was known in divers places whereat the Tum Bhulk Lub and AW and NW and WE who were of the Tum Bhulk Lub were angered.

34. And Pres spake again saying Go LJ even with FK and JG, unto NW and AW and WE and say unto them, Lo, NW and AW and WE, LJ and FK and JG who are of the Wulwynk Lub have come unto ye that ye deebait with them.

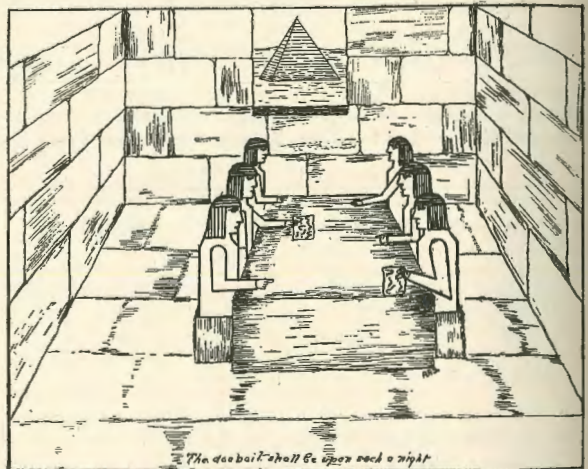
35. And AW and NW and WE spake saying, The deebait shall be upon such a night and the Yinspektr shall be in authority over the deebait and LJ and FK and JG spake saying, It shall be as ye have said.

36. Thus it came to pass that upon the night appointed there came LJ and FK and JG and those who were of the Wulwynk Lub, and Pres, even HK and the Yinspektr who was in authority over the deebait.

¶37. But the Tum Bhulk Lub came not, neither AW nor NW nor WE nor any of them.

38. For the night was dark whereat AW was sore afraid.

39. And the air was cold whereby NW was troubled in spirit.



The Deebait Shall be upon Such a Night.

40 And the way was rough whereat WE was filled with fear.

41. And the damsels who are nigh to the Tum Bhulk Lub did say unto AW and to NW and to WE, Go not but tarry yet awhile with us.

42. So they tarried and there was no deebait.

43 And when this was made known unto him, he who was in authority over the Wulwynk Lub, even HK said unto LJ and to FK and JG, Henceforth shall ye be called 4LJ and 4FK and 4JG for that ye each are greater than four of the Tum Bhulk Lub, and it was even so.

The 4WN Choice

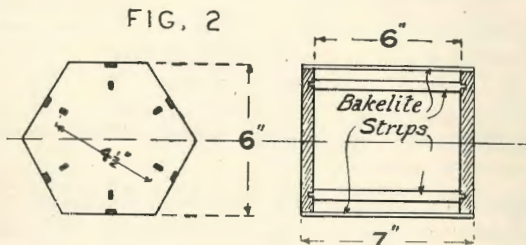
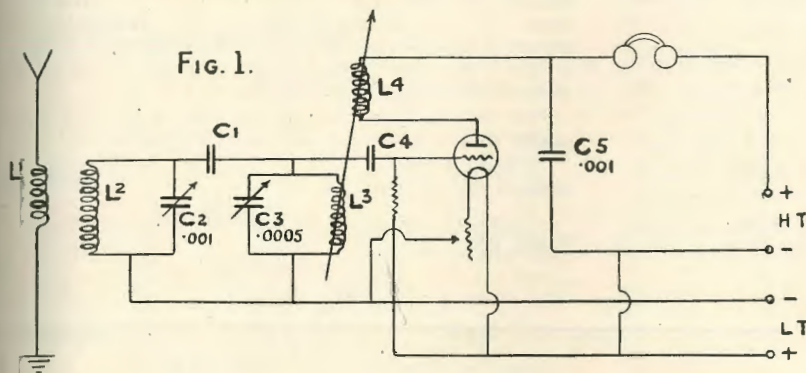
A Selective One Valve Broadcast Receiver

(By H.O., Woolloowin Radio Club.)

The one-valve circuit described below has been selected by 4WN after a trial of numerous designs as the one giving the highest degree of selectivity with simplicity in tuning, the cost of parts being not more than other single valve circuits with much less claim to selectivity.

The circuit in question has been featured in several magazines, but has not hitherto made its appearance in a Queensland journal.

The circuit is shown on the diagram, Fig. 1.



being required spaced about three to the inch. The exact number of turns in the primary or aerial coil will depend on the dimensions of the aerial, and can best be found by experiment.

The whole coil may be mounted on two wooden supports screwed to the wood ends and high enough to clear the base board.

From the fixed plates of variable condenser C2 the connection to grid through fixed condensers C1 and C4 should be made.

L1, L2 is the loose coupler, L1 being the aerial coil, which is aperiodic or untuned. The secondary L2 is tuned by a variable condenser C2, which can be of .0005 or .001 mf., the latter being perhaps the more suitable to enable the higher wave-lengths to be tuned in. The loose coupler L1, L2 requires careful making to get results. The two coils are wound on a squirrel cage former made as follows: The ends of the former are made from well-seasoned wood, hexagon in shape, six inches across the flat sides and about half-an-inch thick. These, when thoroughly dry, should be soaked in hot paraffin wax. From the centre of each of these ends describe a circle four and a half inches diameter, and mark off six equidistant points on the radii bisecting the equal sides of the hexagon.

Drill a hole at each of these points to take the ends of strips of bakelite panel about six inches long between shouldered ends made to fit in holes in wood ends. The secondary coil is wound on these six strips; commencing $\frac{3}{4}$ " from one end wind on 35 turns of No. 18 enamelled wire, pitched at eight per inch, kept in place by shallow saw cuts in the bakelite strips. A terminal should be fixed in a hole in end of strip where winding commences and finishes to enable easy connection to circuit. A further six strips of bakelite about seven inches long should be screwed one in centre of each side of hexagon ends directly over those already in place forming a second cage outside the first.

On these the primary winding is wound in shallow saw cuts, about ten turns of 18 gauge enamelled wire

Condenser C1 is required of very small capacity and may be made by twisting the ends of two short pieces of 16 gauge DCC wire together for about four complete turns which will take up about two inches of the wire, the wire then being dipped in hot paraffin wax. One long end of each wire is then used as a connection, the short ends cut off close but avoiding any connection with adjoining wire.

Condenser C4, which is of .00025 mf. capacity, should be a good mica-insulated job.

Between C1 and C4 is connected one side of the rejector circuit L3, C3. Variably coupled with L3 is the regenerative coil L4 which feeds back energy from the plate circuit to the grid circuit.

Coil L3 should be constructed on the basket principal, four inches diameter, and consist of forty turns of No. 16 D.C.C. wire.

C3 should be a good quality 23 plate (.0005) variable condenser. Both C2 and C3 should be fitted with good vernier dials, as the tuning is critical and a station will be passed over if condensers are moved too quickly.

The reaction coil L4 should be also of basket type, four inches diameter, wound with twenty turns of No. 20 D.C.C.

L4 should be mounted on the moving portion of a vernier two-coil holder with L3 on the fixed part.

For U.V.201-A valves the grid leak should be about 2 meg., and connected to filament positive, with other

valves in use other connections should be experimented with. C5 is a fixed condenser .001 mf.

The layout of panel and baseboard may be left to the builder, but the aerial tuner and the rejector should be as far apart as possible, with the axes at right angles; and they should also be a few inches away from the condensers.

Tuning is effected by simultaneous movement of C2 and C3 in the same direction, varying the coupling of L3, L4 to keep the set on the point of oscillation when searching. When a note or whistle is heard oscillation is stopped by gently moving L4 away from L3 until transmission is clear.

This set is stated to feed back very little energy to aerial when oscillating, and is not therefore likely to interfere with nearby listeners.

All Australian broadcasting stations between 250 and 500 metres should be picked up if the set is well constructed, particularly if one stage of audio frequency is added, and with two stages ample loud speaker strength is available. On the writer's set, in Woolloowin, no difficulty is usually experienced in bringing in 3LO at any time of the night and, of course, 2BL and 2FC are received with even greater ease.

"CORRESPONDENCE!"

Possum Flats, 22/7/27.

dere ser,

whats this ere klub u wus torkin about in ther broadkast billytin thother weak woolewin er sunthin, er other

they run sum sort of a klub I spose my missus she ses shell neva let me jine a club korse they do nuthin but smoke and tell stories at klubs

Enyway sumbodie sed to me that as this ere Woolewin klub wun nite a chap they corled ken ar wuz making them orl jump orf there seets and e ad kulered lites an sparks all over the joint my pal e sese es a dancherus man but e ses orl the uther blokes thort it a grate joak

the missus ses she dont no wot peepel want ter lern about wireles fer she ses they should be at ome mindin the kids Wen i asks er wot if they avent got none she throse me fones orf me kristel set at me an its me on me pole so I dont think Ill ever go to the klub korse I wont be let Enyway wot dus eny wun want to no about wireles fer

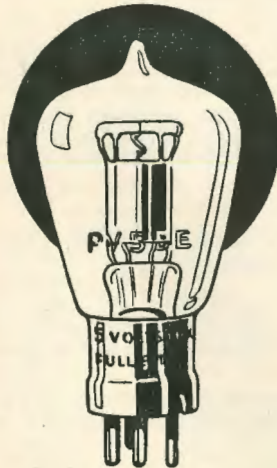
yer jest put yer fones on yer hed an jab at a bit er stone they kalls a kristel an ye ere musick

a mans a fool ter wanter go to a klub enyway ther mussus wont let me

U tell that woolewin klub Id like ter cum an se them tho

Yours fer ever

Me



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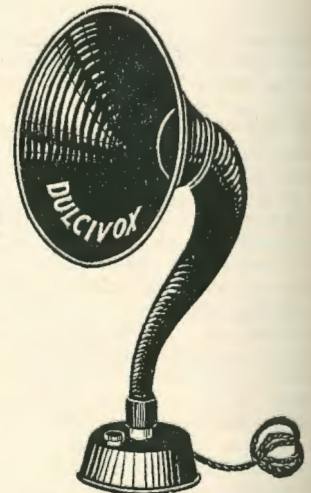
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Converting Your Broadcast Receiver for Short Wave Reception

(By 4FK—Wooloowin Radio Club.)

On reading the amateur columns of this paper one usually notes the reception of either an American telephony station or Philip's station (PCJJ) in Holland. Many listeners who do not possess a short-wave receiver have expressed their desire to tune in these stations, but, due to the restricted wave-band available on their receivers, are unable to do so.

First let us see if your receiver is suitable for short-wave work. Neutrodynes or any receiver employing radio-frequency amplifying valves may not be converted easily, and are therefore unsuitable. The most suitable sets for this work are those using the P.1 circuit, i.e., using either two or three coil tuning and a detector valve followed by one or two stages of audio-frequency amplification. Plug-in coils will be used, and the receiver must be also fitted with a standard coil holder, and lastly, a good high-ratio vernier dial—this is absolutely essential.

When first I became interested in short waves, I decided to try the old broadcast receiver while the new receiver was being built. This set which, by the way, was built on that extremely high-loss principle—the unit system—included a standard P.1 circuit, followed by two stages of audio. The tuning apparatus consisted of a three-coil holder, two condensers, and numerous switches which gave either series or parallel tuning in the aerial circuit and either loose or auto-coupled aerial coil. I have just mentioned this in order to show how "hi-loss" the gear was. The first item was, of course, to construct a set of coils suitable for the short wave-length. A quarter of a pound of No. 16 D.C.C. wire was all required for these. One end of the wire was fastened to the back fence, and the whole length strained in order to straighten it.

A tin can about 3in. in diameter was now borrowed from the kitchen, and the wire carefully rolled around it. We wound on about four turns for a start, and cut the wire, leaving about 3in. over for connecting purposes. When released the wire sprang out nicely and allowed the coil to drop off the former. The four turns were now firmly bound together with waxed linen thread to prevent them "coming un-put," and finally mounted on a standard coil plug. A six-turn coil was now made in exactly the same manner (if your set uses a three-coil circuit a third coil of 3 turns must also be manufactured). Don't forget to keep all your coils wound in the same direction and attach them to the coil plugs so that the beginning of each goes to the pin of the plug or vice versa—this is important.

Now, supposing the coils have been constructed as described, you will probably be ready to use them, so proceed as follows:—First plug the six-turn coil into the reaction socket of the receiver. This socket will have a lead from it to the plate terminal of the first valve socket. In the next socket, plug the four-turn coil, and if your set is a three-coil one, plug the three-turn coil into the remaining holder. However, if your

receiver is a two-coil one it will not be necessary to use the third coil, but a slight alteration in the external connection will be necessary. This is simply to disconnect the aerial lead from the terminal, and either connect it to a very small micro condenser which, in turn, is connected to the aerial terminal or to a short length of about 24 D.C.C., wrapping about six turns of this around the aerial terminal. Care must be taken to prevent the copper of the wire from making contact with the terminal. This may seem strange, but the idea is to form a very small series condenser in the aerial circuit, without which the set will not oscillate on this wave-length. Don't forget, however, that in the three-coil receiver this last is not necessary.

Now switch on the filaments, turning the detector filament a little brighter, if anything, than usual, and with the aerial coil, if used, as far away from the others as possible. On bringing the reaction coil up to the secondary, the set should now oscillate readily. If it does not, try increasing the plate voltage on the detector and twisting the reaction coil around so that the other side faces the secondary coil, although this must be done without altering the connections on the coil plug.

If you are using the separate antenna coil, move it up until it is about 1½in. away from the secondary, and set the aerial tuning condenser at zero, leaving it set thus permanently. On rotating the tuning condenser very, very slowly you should be able to hear short-wave morse stations working. If telephony stations are working they are tuned in just the same manner as on the longer wave-length, but very much greater care must be exercised. Just one point! Don't think you can move the condenser dial too slowly, as a station may be tuned in and out on a movement equal to the thickness of a graduation on the dial. When using this arrangement first we were unable to hear anything for a time, as the tuning was so sharp that we passed over a dozen or so stations without knowing it. The wave-length range of the coils was found to be from about 30 metres to very nearly 80 with a .0005 microfarad condenser which usually has about 23 plates, so the 'phone stations will be on the lower portions of the dial.

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Conducted by Auntie Prescorres

Wooloowin Radio Club.)

(With apologies to our Wireless Uncles and Aunties at 4QG.)

Hello My Dear Little Sweethearts !

Do you know, dears, its **so** long since I have written to you that I believe you've all forgotten me. But I **do** hope you haven't, because that would be just **too** sad. Wouldn't, darlings? I've had such nice letters from you all and I do love you so.

Now, sweethearts, I've got **such** a lot to tell you that I'm afraid the nice Editor man won't have room.

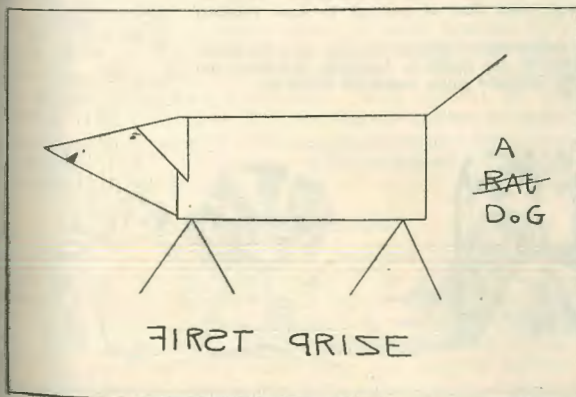
First of all, I've got birthday love and such a **big** hug for two of my little sweethearts. Raspie—you know Rasputin was a horrid man who went round telling tales about people, and that's why I call my wireless bird Raspie (he's really a chook)—well, Raspie told me that Estelle of Wheresit had a birthday last year. Now **isn't** that wonderful? Fancy a real live birthday all of one's own! And if Estelle does everything she's told and chops the wood and doesn't break her little brother's toys she might some day have **another** birthday.

And then Grannie of Granada (no, not Canada, darlings!) has just turned ninety-nine. Good old Grannie, I do hope you'll reach your century. (That's a big word, sweethearts—that means a hundred.)

Do you know, little ones, how I found out Grannie was ninety-nine? You'll **never** guess! No, Raspie didn't tell me—he can only count up to six. Well, I'll tell you—when I went to visit Grannie I took a—now, what do you think?—a thermometer. Sweethearts, will you **ever** believe that as soon as the thermometer got near Grannie's house it let go my hand and ran inside shouting, "She's ninety-nine!"—just like that—"She's ninety-nine!" and that's how I knew.

Thank you, darlings, for sending in all of those entries for our drawing competition. It was just wonderful, and it was **so** hard to find out the winner.

This picture won the first prize in the senior class.



Tommy of Toombul sent it in—and just as soon as I saw it I knew what it was. I've never in all my life seen anything look more like a dog than this does, and Tommy must be **awfully** clever to be able to draw like that. He wrote and told me he only used **one** ruler and **one** pencil, too—now, **isn't** he marvellous?

The junior prize was won by Sid of Ipswich for his a drawing of a subject from still life. I didn't quite know, sweethearts, what still life meant, but I think I do now after seeing Sid's drawing. It's on the next page.

I'm sure that Tommy and Sid will just love the prizes I've forgotten to send them.

Since I last wrote to you, dears, I've been to such a **lovely** party. You remember Uncle Pat, don't you, who was something with the Wynnum Radio Club? I don't mean that he works there. Well, Uncle Pat asked a lot of nice boys and girls to a party at his house. My word! Uncle Pat **is** clever, darlings. Do you know he had an awful lot of lights all round his house—red lights, blue lights, green lights, just lights, and all the other colours you could think of, and he connected them up on the wrong side of the meter, so that the meter wouldn't show how much he used. But, what do think, darlings? Auntie Patricia asked the electricity inspector man to the party, too, so Uncle Pat had to pay. Wasn't he unlucky?

And who do you think I saw at the party? Some one we all love **ever** so much, sweethearts. It was little Sabel Munshine, who tells us all those lovely stories from 4QG. Well, Sabel was there, and Oh! little ones! she did look sweet. She wore a lovely red gadget trimmed with purple whatsits, and she was so viv—you know the word—acious.

Some of those boys from the Wooloowin Radio Club came down, sweethearts, and spoiled a lovely dance I was having with Uncle Pat. They were late, of course, and made **such** a row with their motor horn that nearly everyone knew they had come.

We had such a lovely game of Postman's Knock. Do you all know how to play? There were about 60 guests, and such a funny man did an **awful** lot of talking, but no really minded. Uncle Pat saw him kiss Auntie Patricia, and Oh, sweethearts! I **did** think he was going to be annoyed. I'm quite sure Auntie Patricia must love all little boys, especially some little chaps who were there wearing 4WN in their button-holes.

Anyway, little ones, the funny man used to send a boy out on the verandah and the boy would call a girl out, and I think the girls who went out were kissed. Mind you, sweethearts, I'm not **sure**, but I **think** they were. The Wooloowin Radio Club boys were awfully keen on playing, and one of them went out on the verandah four times. Wasn't he **awful**? The last time he went out I saw Sabel Munshine go out to scold him. At least, I think she must have scolded

him because when she came in about ten minutes later I distinctly heard her say something in Chinese, so she must have been awfully scoldy, mustn't she have, darlings? She said, "BN QSO YM VY ES WN I SED QRX I GOT QTA-ed. UM, FB!" Now, children, don't you think she was **terribly** angry? I must ask one of those boys who transmit wireless messages what it means. They all talk Chinese, you know. Uncle Pat does, too, so I might ask him.

Well, sweethearts, its nearly time to end my letter. I've got two puzzles for you to do. Here's the first:—

These three sentences each have a boy's name hidden in it, and I wonder who can find them. I'll give you the answers at the end of the letter, but you **mustn't** look. These are the sentences, pets:—

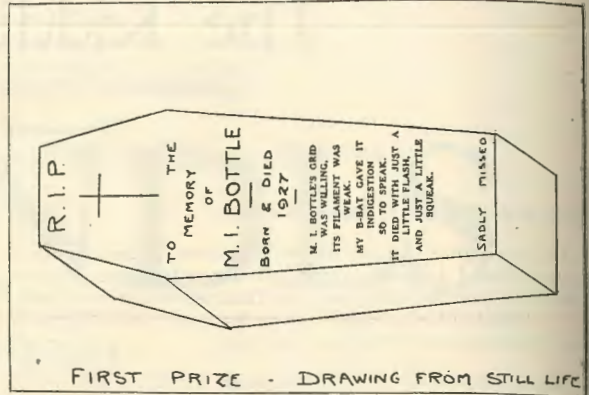
- (1) I went to Uncle Pat's party.
- (2) So did Tommy.
- (3) And Leo went, too.

Whoever sends me answers that agree with mine will get a brand new blown out five-watter for keeps.

The next competition is a harder one.

- My first is the masculine of Tab,
- My second is the first possessive pronoun,
- My third is a part of the body,
- My fourth is over-proof,
- My whole is a bird.

Now, darlings, try hard to find the answer, and



FIRST PRIZE - DRAWING FROM STILL LIFE

post it in to the Radio Inspector, who will be awfully pleased.

The winner will get a nicely-framed A.O.P. Certificate without having to sit for an examination. Isn't that fine?

I must close now, darlings, so be good as you can. With lots of love and kisses, sweethearts. I hate you all, you little brats.

Good-bye. Good-bye-e-e-e.

From your obnoxious

AUNTLE PRESSY.

Answers to hidden name competition—(1) Pat; (2) Tommy; (3) Leo.

Now—we can enjoy Pure Clear Music

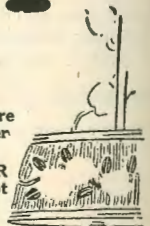
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Mr. Arthur Sharman, L.A.B.

Official Accompanist and "Music Man" at Station 4QG.

Although quite a young man, Mr. Arthur Sharman is one of Queensland's finest pianists. Station 4QG is indeed fortunate in securing the services of such an artist.

As a boy Mr. Sharman was intensely fond of music. He taught himself the rudiments of music, and at the age of 7 could play simple tunes. It was not until he was 14 years of age, however, that he commenced his studies under Mr. George Sampson, F.R.C.O.—that veteran master who has trained so many of our successful musicians.

The young pupil's aptitude and ambition to progress very rapidly culminated in his winning the Pianoforte Solo Championship in the Queensland Eisteddfod at Maryborough in 1922.

Nineteen-twenty-two seems to have been the young musician's big year, for it was during this year that



he gained the coveted L.A.B. degree, and it was also during this year that he gave his first public recital—a huge success.

Mr. Sharman has been connected with Station 4QG right from its inception. He says he finds the work very interesting, but not always easy. "The work of an accompanist," he continued, "may consist in the playing of a difficult work from famous operas to mere lead-pencil manuscript (frequently minus the bass) for a comedy turn. You've got to be prepared for almost anything," he smiled.

"THE MUSIC MAN."

One of the most educative sessions broadcast by 4QG is the children's session by "The Music Man"—who is really Mr. Sharman. In the fifteen minutes of this session Mr. Sharman endeavours to instil into his youthful musicians-to-be a love and an appreciation for good music by explaining and playing lighter compositions by famous masters.

PIANOFORTE RECITALS.

Practically every month Mr. Arthur Sharman gives a pianoforte recital from Station 4QG, when a programme rich in quality and variety is invariably provided. In these recitals Mr. Sharman proves that his ability lies not in accompanying alone, but also in solo work.

HOBBIES.

Unlike most musicians, Mr. Sharman has several hobbies, chief among which are tennis, golf and motor-ing. Doubtless, he finds the open life a complete change to the "black and white"—we refer to music—of business hours.

Rather a humorous incident occurred recently. Mr. Sharman's car (a blue Chevrolet) is not unlike the director's car, and both are usually parked in the vicinity of Station 4QG. One day Mr. Sharman came down from the studio to find that his car had vanished. He was on the point of visiting the C.I. Branch (whose office is just opposite) when he noticed the car parked a little further down the road. Thinking that some of the workmen had simply pushed it down out of their way, he worried no more about it. It was not until a week or two later, when Mr. Robinson apologised for taking his car one day in mistake for his own, that the mystery was cleared up.

THE FIRST WIRELESS SET AT BUNGALOO.

Edith Delehanty,

The first time that we listened-in, we will not soon forget, 'Twas when Clancy's came from Brisbane and they brought a wireless set. They said that night—and I can very well believe it, too— That all the folk who could were there who lived in Bungalow.

The set was in an oaken case, with speaker all complete— It was a Radiola Four, and my! it did look neat!! Then Johnny Clancy something turned, but what I could not see, And there comes these words so sudden: "This is Station 4QG."

Well, how we laughed and shouted, for we all were kids again, When we listened to the stories by a chap called "Uncle Ben"; After that they did some talking—then the concert came along, My goodness! it was "snifter"!! and it came through good and strong.

So if this way you visit, well, you won't take long to see The fun we have by listening-in to Station 4QG; And you will find if you stay long—now, what I say true— Not one, but a score of sets, they have in Bungalow.

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Broadcast

reception is at its best when "CONDORS" are components of your set

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P.R.41--Filament tension 3.4-4 V. Filament consumption 0.1 A.

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No. 4—ALWAYS burn your filaments at the lowest possible temperature. You will get four times the life from your valves by burning at minimum—not maximum.

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VALVES

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Serve Him Right!

(By W. S. Hogg.)

Mr. Tite arrived home looking the picture of complacency. Tossing his lunch bag into a corner of the kitchen, he proceeded to clear a space on the tea-table, beaming with extraordinary benignity on Mrs. Tite as he placed an untidy looking parcel thereon and began to fumble with the strings. Mrs. Tite became mildly interested, but at the remembrance of previous wash-outs she merely raised her eyebrows and sniffed.

"There! What do you think that cost me?" enquired Mr. Tite.

"Why!" said his wife, suddenly losing her frosty air, "it's a wireless set. What a lovely box! And what a pretty little what-do-you-call-it that you have to tickle with the thing-a-me-jig! Do you think it'll work?"

"Course it will work! Old George has had it on his aerial, and says he could hear the announcer sucking a throat lozenge; but how much do you think it's worth?"

Mrs. Tite screwed up her mouth, gave the set an appraising glance, and announced that in her opinion it was worth about seventeen and eleven pence.

"Seventeen and eleven!" remarked Mr. Tite sarcastically; "you've forgotten the halfpenny, haven't you? Why, that set's worth four pounds, and," he added triumphantly, "all it cost me was a bob."

Knowing Mr. Tite's little ways, his wife expressed no surprise.

"Yes," he continued, "I won it in a raffle, and old George has been explaining the whole works to me. It has two condensers which gives it great 'respectability.' Some of them have only one—they are not so respectable. Now this isn't a 'what-do-you-call-it'" (looking seriously at his wife), "it's the crystal, and that is the whisker. You see when the 'ossulations' get this far they set up vibrations in the whisker—which come out at the earphones; the consequence is that you get what you call 'reproduction.'"

"Goodness! you know a lot about it already," admiringly.

"Of course, I don't know it all yet," said Mr. Tite modestly, "but I'm not too slow to pick things up—er—learn, I should say."

That evening, during tea, Mr. Tite showed that if he did not know it all, he was well up on one point at least. His wife was saying how nice it would be to 'listen-in' in the afternoon—if she ever had time, of course—when an awful thought struck her. "I say, Jim, you have to take out a license for these things, don't you?"

"Yes, twenty-seven and six," said Jim bitterly. "They'll make you pay for the very air you breathe soon. Now, I ask you, who would give me twenty-seven and six for nothing? Why, no one, unless they had 'bats in their belfry.' I don't hold with it," he continued rather vaguely; "it's like holding a man with both hands while you stick your other hand in his pocket and steal his wages; but I wasn't born yesterday," he treated his wife to a cunning leer. "You have a clothes' line, haven't you? Well, you'll soon have another. Struth! it isn't against the law to have two clothes lines, is it?" So much against her will Mrs. Tite became the possessor of an extra line.

Station 4QG had good reason to congratulate themselves. They had just put over one of the "stunt" transmissions for which they are so justly famous. A concert had been relayed from the Dogs' Home. The Canine Chorus had come through remarkably well; and Bluey's rendering of the operatic number, "The Bone" (or "Buried But Not Forgotten") by Mongrel-osky, left nothing to be desired.

Mr. and Mrs. Tite enjoyed the evening immensely. Never since the days when they had sampled "Love's Young Dream" had they sat so close together for



three solid hours. Radio had worked another marvel in linking this man and woman closer together. Mr. Tite held one earphone to his right ear, whilst Mrs. Tite held the other to her left.

"That was lovely!" she remarked. "I don't know how we ever managed without the radio. I really think, Jim, you ought to pay for a license—it's worth it—look how nicely the radio man says 'Goodnight'; but it does make your arm ache holding up this earphone. Young Horace was round to-day, and he said 'Why doesn't Uncle buy a couple of "volts" and run a loud speaker?' 'Horace,' I said, 'you don't know your Uncle Jim as well as I do.'"

"Perhaps," remarked Jim acidly, "you mean 'valves,' and perhaps you think loud-speakers can be picked up on a bargain counter for one-and-eleven-pence halfpenny. You tell 'Horis' to mind his own business. As it happens, I've been talking to old George about an amplifier—"

"Ah! talking," interrupted his wife, with a sniff. "Hero—or somebody—played the fiddle while what's-the-name burned, and you talk to George while I get the arm ache. You're a pretty pair, all three of you."

Mrs. Tite's remarks may have helped a little; but his own growing interest in radio was the deciding factor in the earphone versus loud speaker question. He assembled the parts himself under the guidance of the ingenious George, and felt quite satisfied that a better amplifier did not exist. "No one could want

anything better than that," he remarked to his wife. "Nothing could be clearer, and if I stepped on the gas, as you might say, you could hear it at the other end of the street. A 'hetra-superdine' couldn't do any more."

"It's just lovely. Now I think you ought to pay for a license. I'll feel more comfortable," said his wife persuasively.

"That's alright! That's alright!! I'm not made of money."

Thrift has laid the foundation of many a fortune, but like strong drink, it has brought many a man into the police court. Such a thought may have crossed Mr. Tite's mind some days later when, greeted on his home-coming with the ominous announcement: "The Radio Inspector has been here to-day."

"Struth! You didn't let him see the clothes line, did you?"

"I couldn't help it—he saw the line before I saw him."

"Hell's bells!" breathed Mr. Tite as he tottered across the room and sank heavily into a chair. "What did he say?"

"He said," replied Mrs. Tite slowly, letting every word sink in, as it were, "that it was one of the worst cases that had come under his notice, and when it came to court you wouldn't get off under ten pounds and costs."

"Struth!" in a faint voice.

"I told him you were not made of money."

"Did he say I'd have to appear? I've never been in a court in my life."

If Mrs. Tite thought it a wonder, she kept it to herself. "I don't know yet, whether you'll have to appear. We had a lot of talk, and he turned out to be not such a bad young chap, but said he had to do his duty—that's what he was paid for—which gave me an idea. I asked him if he thought the matter could be settled cheaper out of court, say, for about a pound. He said he didn't know, but thought that two pounds would be nearer the mark. He's going to make enquiries and let me know to-morrow morning. He said not to say a word to anyone, as he didn't want other people interfering with the business. So I wouldn't be surprised if he talks the radio man round—he seemed to think he might be able to."

Mr. Tite breathed a sigh of relief. "You do show a bit of sense sometimes. I've a sort of feeling that the bloke will fix it up alright. I'll leave you the money—I don't want to see him—the blooming shark," he added viciously.

"Now perhaps you'll listen to me and take out a license as I've begged and prayed of you to do time and time again."

Jim's presentiment turned out to be correct. The matter was fixed up for two pounds, and it was not long before the aerial was taken from its lowly position and raised on high for all men to see.

How true is the old moth-eaten saying that: "Life is just one 'darned' thing after another. Mr. Tite had barely recovered from the painful incident which had set him back two pounds and twenty-seven-and-six at one fell swoop when his wife—bird of ill-omen that

she was—had more news of an unpleasant nature to impart.

Approaching the matter with some trepidation, she asked: "Do you remember that Radio Inspector, Jim?"

"Remember the Radio Inspector!" exclaimed Jim in blank astonishment. "Suffering Susan! do you think I'm likely to forget him?"

"Horace was round to-day. He's going to start work at the pickle factory on Monday."

"What's the pickle factory got to do with the radio shark?" enquired Jim, scenting more trouble.

"Nothing that I know of—but Horace knows all about it. I don't know if it wouldn't be better all round if I didn't tell you. It can't do any good now—it's no good crying over spilt milk," said Mrs. Tite evasively.

"What milk?" impatiently.

"Horace says he knows him, and he's done it to others."

"Done what?" roared the overwrought Jim.

"Why! pretended to be a radio inspector, because he needed the money."



"What!" bellowed Jim. "You've been and let a 'crook' take you down for two pound—two of the best. Struth! this is a job for the police, this is. To strundle a man out of two pounds with intent to defraud is a serious offence. He'll get six months, and I'll get restitution. He can't put that stuff over me and get away with it—the dishonest mongrel!"

"For goodness sake don't go near the police; They'll want to know why you had a clothes line without a licence."

Jim clawed the air and fought for breath. "Where does this sneaking hound live? I'll deal with him myself—the dirty dog!"

"It's no use going after him. He's gone to live at what's-the-name-of-the-place—"

"Boggo Road?" suggested Jim.

"No, that thing-o-me-place, where the what-you-may-call-it is—Canberra—that's the place."

"Canberra!" exclaimed Jim, then he chuckled with fiendish glee—"Serve—him—right!"

Long Legal Battle Comes to an End

A long drawn-out legal battle between the Westinghouse Electric and Manufacturing Company and the De Forest Radio Company, to decide the ownership of the radio feed-back of regenerative patent, has at last come to an end, with the refusal of the U.S. Supreme Court to review the proceedings of the lower courts.

This battle—the legal and technical intricacies of which the general public has been unable to follow—was for the purpose of deciding who was the inventor of the so-called feed-back regenerative circuit.

The regenerative patent, of which the De Forest Radio Company is the owner, is second only in importance to Doctor Lee De Forest's invention of the Audion or three-element vacuum tube, which is the very foundation of the radio industry. In fact, without the Audion, present-day radio would be impossible.

Comparatively few people realise the number of things necessary for their daily welfare, whether it be for pleasure, comfort and safety in travelling, communication, etc., which have been made possible by De Forest's invention of the Audion and the regenerative circuit. The Audion and the regenerative circuit are fundamentally responsible for:—

- Trans-continental telephony;
- Radio broadcasting with all its ramifications;
- Voice amplification as used in churches, lecture halls, etc.;
- Electro-therapeutic surgery;
- Automatic railroad train stop systems;
- Railroad train dispatching by telephone;
- Marine depth soundings or measurements;
- Iceberg detection;
- Marine and air radio beacons;
- Marine and air direction finders;
- Carrier telegraphy and telephony; i.e., the sending and receiving of many messages at the same time over the same two wires without interference;
- Photographs by wire;
- Trans-oceanic radio telephony, subscriber service.

There is an element of romance about most inventions, but few inventors have experienced the vicissitudes which Dr. Lee De Forest has gone through. It would take a volume to recount them all.

The birth of radio actually took place in the summer of 1900, when young De Forest was experimenting in his two-dollars a week room in Chicago, and chanced to come upon the discovery of what he, at first, thought was only a strange phenomenon. On this memorable night, he was working on an electrolytic detector. His wireless apparatus was placed on a table beneath a Welsbach gas burner. The spark coil he was using as a source of oscillations was located in a closet about ten feet away.

On one occasion, when he closed the switch of the spark by means of a string running across the floor from his table, he observed that there was a decided change in the illumination from the Welsbach burner. As soon as the sparking ceased, the light from the gas mantle increased very perceptibly, resuming its normal brilliance. This phenomenon continued and impressed itself strongly upon the mind of the youthful investigator.

From this time on De Forest laboured, often against terrific odds, imbued with the knowledge that he had made an epoch-making discovery.

The following interesting anecdote is told about Lee De Forest. One night, while he was working the basement laboratory of the University, the lights in class room went out. De Forest was suspected of having removed the wrong fuse. Shortly afterwards the professor discovered that De Forest had committed the grave crime of nailing his apparatus to a laboratory table. That was too much. "Any student who will spoil a table like that," said the professor, "will never amount to anything." De Forest pleaded the value of his work and what he hoped to accomplish, but the professor was firm, and out went the student. He wanted his Ph.D., and at length succeeded in being enrolled in another department of the University where, incidentally, Morse did his early work on the telegraph. But at least, the table was saved from the earmarks of the "worthless student."

In due course De Forest's work and discoveries attracted the attention of the big interests who, realising the tremendous possibilities of the Audion in combination with the feed-back circuit—which, by the way, would be useless without the Audion—sued De Forest for infringement of the Fleming valve patent, in spite of the very evident fact that there were no points of similarity in the results obtained from or the possibilities attendant upon De Forest's Audion and Fleming's valve.

As a consequence De Forest was caused to cease the manufacture of Audions until the expiration of the Fleming patent. Since this patent expired, which automatically permitted De Forest to again manufacture Audions, the big interests have persistently striven to drive him from the field by a most formidable barrage of patent suits, but without success.

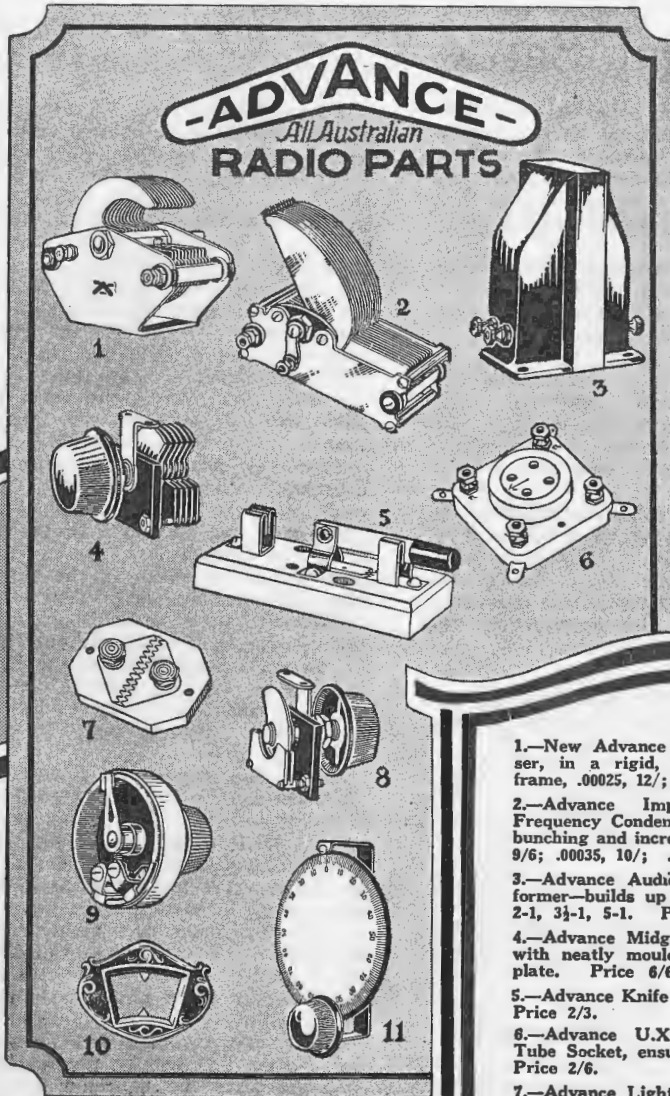
The feed-back or regenerative patent has been bitterly fought over a period of 12 years of continuous legal battles, through every tribunal of the patent office to the court of appeals of the district of Columbia, which is the Supreme Court for patent cases.

As a happy climax to his years of untiring effort for the art he loves so much, De Forest—the father of radio—has the supreme satisfaction of knowing that the company which bears his name, and of which he is now the revered chief consulting engineer, has at last come into its own.

As a result of U.S. District Judge Thompson's decree of October 18, 1926, cancelling the Armstrong regenerative patent, the De Forest Radio Company is in a position to control the whole receiving set market and all tube receiving sets that have been built, excepting those which employ tube detection without regeneration.

To those of us who are of a technical frame of mind, it will be seen that the De Forest Radio Company is in a most formidable position and could, if it were of a monopolistic make-up, collect tribute in royalties amounting to many millions of pounds.

This is all the more interesting when one recalls that it was only a matter of a dozen or so years ago that Lee De Forest was begging people to invest in his new inventions, but they laughed at him and, in fact, a paltry 125 dollars investment to perpetuate the French rights was unobtainable.



A Good Set
deserves the
Best Parts

Ask
for
ADVANCE
Parts

Sold by all Leading Radio Dealers

Wholesale Distributors for Queensland

EDGAR V. HUDSON, Charlotte St. BRISBANE
HOME RADIO SERVICE, Adelaide Street, BRISBANE

-ADVANCE-
All Australian
RADIO PRODUCTS

1.—New Advance "Centralign" Condenser, in a rigid, one-piece aluminium frame. .00025, 12/; .00035, 12/; .0005, 12/6.

2.—Advance Improved Straight-Line Frequency Condenser—eliminates station bunching and increases selectivity; .00025 9/6; .00035, 10/; .0005, 10/6.

3.—Advance Audio Frequency Transformer—builds up volume. In ratios of 2-1, 3½-1, 5-1. Price 17/6.

4.—Advance Midget Condenser, finished with neatly moulded bakelite knob, 11-plate. Price 6/6.

5.—Advance Knife Switch with Arrester. Price 2/3.

6.—Advance U.X. or U.V. Porcelain Tube Socket, ensures perfect insulation. Price 2/6.

7.—Advance Lightning Arrester; passed by the Melbourne University and Fire Underwriters' Association. Price 2/6.

8.—Advance Neutralising Condenser. Correct capacity for neutralising and balancing; 3-plate. Price 4/6.

9.—Advance Rheostat. Gives smooth contact and a perfect resistance. Made in 6, 10, 20 and 30 ohms. Price 3/.

10 and 11.—Advance Rear Panel Mounting Vernier Dial. The neatest you've seen. Price 7/6.

RADIO CORPORATION OF AUST.
PTY. LTD.

Melbourne—Sydney—Brisbane
Adelaide



Other than the opening of a few new stations on the 30-metre band, there is little to report on last month's activities.

4CG broke the monotony by producing a QSL from a Victorian B.C.L., who reports hearing "C.G.'s" 5-metre signals (4.8 metres to be exact). There was much rejoicing when Cliff said it checked exactly with his own log. Congrats. OM! Am not sure whether it's a world's record for 5-metre DX, but it is certainly an Australian one. To celebrate the occasion 4WA ordered drinks all round, but as it was after 9 p.m., we had to dine on coffee and toast.

4BD, I believe, has recently worked Rhodesian 1SR (South Africa). Africa was the last of the six continents he had to QSO. This now makes him the second W.A.C. ham in Queensland. F.B. OM!

More phone is making its debut from several of the local fellows' stations, on short waves. 4LJ puts out some nice phone. Although not too strong, it is very clear and well modulated.

4WA, who now has a really respectable sounding D.C. note, does some star turns on an accordion now and again, coming through fairly well. 4GO's phone is not too bad, but rather too much hum in the wave at present.

4MM reports chewing the fat with 5DX Adelaide phone both ways. F.B. OMs.

4CM has his 1000 D.C. generator working again, judging by the note. His music is very clear, even though it is slightly over-modulated; the speech, however, is not quite as good.

Some new international phone stations heard recently include Siberian RFN, Jap, JKZB, and American WLW. RFN was lately installed by the Westinghouse Co. (of U.S.A.), at Tobolsk, Siberia, U.S.S.R., for the Soviet Government. This bird is about the loudest foreigner heard here, and is at times as loud as local amateurs. They have been testing on 29 and 42 metres. JKZB, the Tokyo Electric Co., near Yokohama (Japan), is also very loud, but the quality of music and speech is very poor. WLW, owned by the well-known Crosley Radio Corp., Cincinnati (U.S.A.) works on about 52 metres. This station is not as loud as the other American "super-powers," but quality is very good.

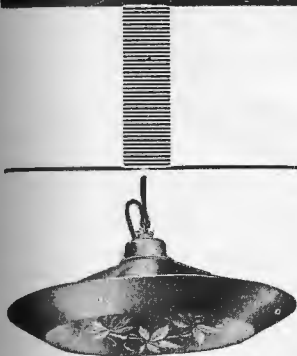
There may be a number of B.C.L.'s interested in "getting down" to the short waves after hearing of all the phone stations working down here. Usually their "neuts.," Solodynes, "Super-Iodines," etc., won't tune below 150 metres, and trying to get these brutes to work on 30 metres, is worse than useless. Good advice is to build a separate, single valve, short-wave detector unit and by means of an old valve base which will plug into the broadcast receiver detector socket, leads are taken from the two filament and the plate legs. The only wire that has to be shifted off the B.C. set is the aerial lead. Nearly every B.C. set has two stages of audio, and these fill the bill nicely in conjunction with a S.W. detector unit. Maybe some enterprising dealer will take this up and be able to work off some of his "low loss" gear (that hams prefer to make for themselves) in building a few of these units.

The Sweetest Music in the World

If you want a beautiful thing to admire while you enjoy music of pure mellow beauty, you want the Sterling Melovox, the newest gift of creative genius in radio. It is made in two colour

combinations of blue or brown with gold floral design. A hinged connection enables the sound to be projected in any desired direction.

Write for Catalogue and Prices



No. R1278
Hanging Type
Diameter of Head
15 inches

STERLING MELLOVOX

Hornless Loud Speaker.

REPRESENTATIVE

A. COLLINS, ROOM 12, 5th FLOOR,
DAILY TELEGRAPH BLDGS. SYDNEY, N.S.W.



No. R1277
TABLE TYPE
Height over all
20ins.
Diameter of
Head 15 ins.

"The Speaker Beautiful"

BURNS Loud Speaker

A FULL-SIZED SPEAKER that is not only mechanically perfect but arrestingly beautiful. Take the illustrated model (205P) with the Mother-of-Pearl flare. Note the graceful lines, the smart black ribs. Note the long sound column and the big sturdy base.

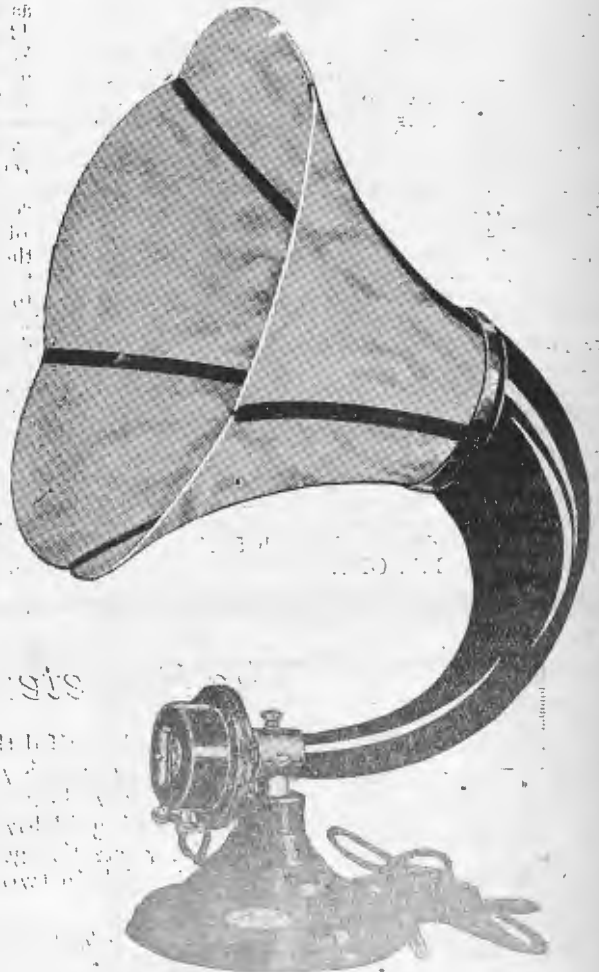
Hear and see the Burns Line of Loud Speakers—and you'll be captivated by their beauty and performance.

Full Tone A very sensitive adjuster is fitted, enabling volume to be increased or reduced at will. The design embodying a full free curve and the wide tonal range of the Hi-lo unit utilises every amplified signal to its utmost.

Purity There are no false notes with a Burns Speaker. It is as pleasant to the ears as it is to the eyes. Years of research have perfected this Speaker, which yields splendid acoustic results.

Beauty With its petalled flare in Mother-of-Pearl, black Pyralin or semi-transparent mahogany, the generous proportions of the sound column and base, makes it to-day's most beautiful speaker—a worthy adornment to any home.

Swivel Movement The horn with the Speaker unit is mounted on a wide staple base of pleasing design. Upon this it swivels freely, permitting the horn to be turned in any direction.



"The Speaker Beautiful"

Home Radio Service
LIMITED

Wholesale Distributors of Quality Radio Lines

First Floor

Ewing House, Adelaide Street

(next to Bryce's)

BRISBANE

Phone: 6143

No. 205 P with Mother-of-Pearl Flare and Black Ribs

£6 - 17 - 6

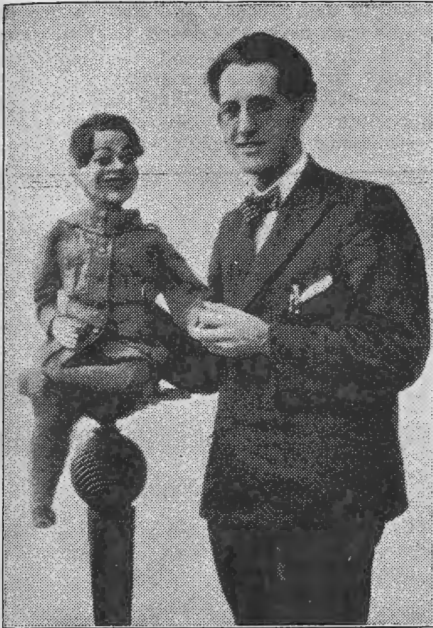
Black Pyralin Flare £6/6/
Tortoiseshell Flare £6/17/6

ASK YOUR DEALER

If your dealer does not stock he can secure one for you

The Children's Corner

(By "The Sandman")



"THE SANDMAN" and "PERCY."

Popular Entertainers at 4QG Bedtime Story Session.

Dear Little Pals,

This is the first letter I have written to you through the "Queensland Radio News." You know the Editor has often asked me, and I have often asked the Editor to let me write a page for the children, but somehow it has never eventuated.

You know, children, the Editor of the "Radio News" is just like all other editors—long whiskers, no hair and a bad temper (Steady on!—Ed.), but I like him, nevertheless, for he has "a way wid him."

Now, I want you all to try my competition. I don't think you have had one like this before. Some of you may find it hard, but then, it no use always havin' easy puzzles, is it?

The prizes offered are good and useful, and somebody has to be the lucky one—and that one might be you. So try real hard and you might win a prize.

Should more than one competitor guess the correct answer I will ask "Mac," the engineer, to draw one out of a box.

Now "Percy" has just whispered in my ear that he wants to write a note, too, so I had better "switch off the mike" to leave a little room for him.

So good-bye, little pals, until next I write on this page—which the Editor tells me will be very soon.

Yours sincerely,

"THE SANDMAN."

A LETTER BY "PERCY."

Dear Childrehn,

How are you? I'm orright; so's "Sandy"—ow's yourself? I made "Sandy" 'oppit while I writ this note. Of course, I never writ this printing—I leave that to your intelligence. This printing is done by a big machine about this big

Are you goin' to have a shot at "Sandy's" competition? I've worked it out already, but, of course, bein' in the profeshin meself I can't send in the answer. 'Seasy as fallin' off a cliff.

I 'ope you don't get lost at the show. (I writ show because I can't spell exhibition.) Hang on tight to your muvver's skirts and keep a pin in yer hand for the big coves when they tram on your "plates of meat." I'm goin' to the show with "Sandy." He's given me five bob to spend. Gee! five bob!! Do you know what I'm going to do wiv it? Will I tell you? Righto!

I'm going to buy 14 ice creams; after they settle down a bit I'm going to have six rides on the merry-go-round. If I don't feel giddy I'm going to have 20 shots at Aunt Sally, and then I'll buy four bags of samples and four walking sticks.

Oh, well, I suppose your gettin' sick of hearin' me yappin'—so I'll 'oppit. Hooray. "PERCY."

"THE SANDMAN'S" COMPETITION.

The following letters represent two words. As they appear now the letters are mixed up. See if you can rearrange them so as to make two words:—

WESTAGUHS

Send your entries to "The Queensland Radio News," Box 1095N, G.P.O., Brisbane, marking your envelope "Sandman's Competition." Competition closes August 20th.

First Prize:—

Girls: Box of handkerchiefs.

Boys: Nice notebook and pencil.

Second Prize:—

Girls: Box of handkerchiefs.

Boys: Nice notebook and pencil.

RESULTS OF "UNCLE BEN'S" COMPETITION.

There were four mis-spelt words on the Children's Page last issue—and no child found them all.

The four words were:—

"NEW" (top of page)

"OFTIMES" (first column)

"ENV-LOPE" (first column)

"CHERRIO" (first column)

Two children found three of the words and the prizes have been awarded as follows:—

FIRST PRIZE: Leyton Mauser, Seventh Street, South Townsville, Q.'ld.

SECOND PRIZE: Edy Hall, Tingall Road, Wynnum South, Q.'ld.

"STEPS AND STAIRS."

From top to bottom: Colin "Sandman," Cousin Russell, Eleanor ("Bubs") "Sandman" with "Dolly."



Shakespeare on the Air

Shakespeare, of course, that giant intellect who seemed to anticipate most things; and even pre-figured wireless in the picture of his Ariel, who could "put a girdle round the earth in 40 minutes," and only erred on the side of slowness in his guess, would not be surprised at knowing that one of his most beautiful love-scenes was going to be shot at far greater than Ariel's speed round the world.

3LO has arranged with Stephanie Deste, that lithe temptress in "Rose Marie" who is an extraordinarily good reciter, to play the balcony scene in "Romeo and Juliet" with Howard Edie. It will be interesting to see how Shakespeare fares on the air. There will be no need of setting a stage for listeners for the Balcony

Scene carries its own implication, and the most sluggish imagination will be equal to visioning what gallant doubled figure looking up to the white-gowned Juliet on her balcony, while the nurse awaits with ready to call a warning. It is often thought that Shakespeare is spoiled by the muck that scenery producers think it necessary to hamper him with, just as by the music that is so superfluous. Shakespeare is scenery, words and music in himself, and without the distraction that stage settings provide, the mind can concentrate far more easily and happily on the immortal words than make the drama. If this succeeds as it should, there is no reason why Shakespeareian scenes should not become a regular part of a programme on certain nights. They may give back to people that appreciation of Shakespeare of which teachers and actors have robbed them.



~ ~ The ~ ~
"BLUE - SPOT"
 MARBLOID

Orchestra Pavilion DE LUXE CONCERT-LOUDSPEAKER

Graceful and Efficient

Its elegant appearance ~ Modelled in the "Louis XVI" Style ~ will immediately compel attention.

PRICE £6/10/-

Arriving soon!!

"BLUE - SPOT" MULTIDYNE

3-Valve Receivers

Tune in all stations with the greatest ease; full tone. Complete with valves.
PRICE £14/15/

Beats all records—nothing to equal this has ever been on the Australian market; far ahead of all others.

To secure one order through your dealer NOW!



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 CENTRAL 1718

Order now
 through your
 dealer

Wholesale only

ALEC. McCULLOCH & Co.

Agents and Importers

King House, Queen Street, Brisbane

TELEGRAMS—
 "ALECMAC"

Questions Answered

"E." Kedron—Would suggest that you buy the condensers, as home-made condensers for a "B" battery eliminator would be both expensive and difficult to construct. It is also questionable whether the home-made job would withstand the high voltages used. The choke coils could be made by winding about 6000 turns of 36 gauge enamel wire on an old R.F. transformer core, although the iron section of the core would need to be at least .75 sq. in.

"W.L." Newmarket—The coil would be necessary in any case, though the tuning could be carried out by means of variable condensers—a much more satisfactory method than the one you are at present using. A circuit diagram showing the necessary alterations and values of components has been forwarded to your address.

"A.C.W." Rockhampton—The Family Four Receiver, published in our May issue, is capable of excellent results, many of our readers reporting reception of all principal Australian broadcasting stations. You do not state whether or not your receiver oscillates. This, of course, is important, as it is impossible to tune in distant stations on this receiver unless

regeneration is present. Perhaps you have a high resistance in the circuit, caused through a badly soldered joint. The circuit diagrams are very explicit and absolutely correct, and the set will function splendidly if wired accordingly.

"J.V.K." Thursday Island—The Amplion Carboncel is a primary battery which uses air as a depolariser. It is capable of producing heavy currents with a practically constant E.M.F. Four of the 229 type would be necessary for your three-valve receiver, as the voltage per cell on load would be approximately 1.1 volts.

"C.D.B." West End—An aerial of 90 feet (including lead-in) would probably sharpen the tuning. Too long an aerial broadens the tuning on account of the extra damping introduced.

"Reader." Red Hill—"B" battery eliminators, if of reliable manufacture, are quite satisfactory. Volume and tone are greatly improved by the use of a good "B" eliminator.

"The Ladies' Page"

EMPHATIC "NO" FROM READERS.

Last month we published a paragraph relating to a proposed ladies' page, suggested to the Editor by the secretary of the Housewives' Association.

We asked our readers to write expressing their views. Some fifty letters were received, and as the "Nays" majority over the "Ayes" was something like three to one, we shall not include a ladies' section in this journal.



A Magnificent Bargain

I have been selling books now for quite a number of years and during that time I have handled some real bargains, but this month we have the best I have ever seen to offer you:—

We have just been fortunate in landing a shipment of HUTCHINSON'S "ANIMALS OF ALL COUNTRIES" at a ridiculous price.

This is one of the most interesting and finely produced works ever published. It presents the living animals of the world in picture and story; and cost over £75,000 to produce. It has been written by such leading specialists as E. J. Boblenger, T. T. Colman, W. P. Pycraft, Edward Step, F. Martin Duncan and others.

The work is in four volumes, well bound in cloth, printed on art paper; over 2,000 illustrations, (50 in full colour) 2344 pages, published in London at £4/4/-. Usual Australian price £5/5/-.

Offered at 50/- complete, delivered free anywhere within the State

The number of sets available is limited and the offer cannot be repeated. I hope to see this fine set giving both pleasure and instruction in many homes and school libraries for it is within the reach of the purses of all.

Before I close—just a word about LUDWIG'S "NAPOLEON." This is, I think, THE biography of the year, for it has been unstintingly praised by historians and literary critics from everywhere. It is not a "dry-as-dust" history, but the story of "The Man of Destiny" realistically and sympathetically told.

this book, but, till now have never had a stock sufficient to supply the demand which will be caused by this little chat.

W. A. BRAIDEN,

General and Technical Dept.

A. McLEOD

Brisbane's Best Bookstore
107 ELIZABETH STREET

Brisbane

The translation is by Eden and Cedar Paul. The book is now in its 86th thousand, and it has been reprinted five times in the few months since publication. The volume is a large one of over 700 pages. It is well bound in buckram, gilt, although its price is but 15/- (postage 1/3). I have been thanked many times for recommending

MAGNAVOX

5-Valve Sets and Loud Speakers

Despite the fact that practically every radio set manufacturer claims pure reproduction, there are few—very few—radio receivers that, in actual performance, deliver a faithful reproduction of the living artist. Magnavox—Leader of the World's Radio—not only claims, but guarantees, flawless tone—and we as their agents, are willing to take back any receiver that does not make good this claim.

**One Dial Control
Amazing Purity
All Stations**

**EASY TERMS
to suit your
Convenience**



"THE BERKELEY"—exquisite two-toned mahogany cabinet with built-in Magnavox Loud Speaker £92



"THE ETON"—Artistic two-toned mahogany cabinet, faithfully built; wonderful value. £51

**Don't buy Radio
on Price alone**

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Club Activities



RADIO CLUBS OF QUEENSLAND.

- AUCHENFLOWER AND DISTRICT**—Secretary, L. Cribb, "Frampton," Ridley Street, Auchenflower.
- CAIRNS AND DISTRICT**—Secretary, Mr. Tarbit, c/o Mr. Les. Fitzsimmons, Cairns.
- EASTERN SUBURBS**—Secretary, J. Burns, Longland Street, East Brisbane.
- GRACEVILLE**—Secretary, H. Carter, Cr. Molonga Terrace and Wylie Streets, Graceville.
- IPSWICH**—Secretary, S. J. Aspinall, Brisbane Street, Ipswich.
- SOUTH BRISBANE**—Secretary, W. R. Gilbert, Gordon Street, Coorparoo.
- TOOMBUL**—Secretary, T. Starkie, Sandgate Road, Nundah.
- TOWNSVILLE**—Secretary, E. J. Jefferies, Fletcher Street, West End, Townsville.
- WIRELESS INSTITUTE (Queensland Division)**—Secretary, Charles Dunn, Perry House, Elizabeth Street, Brisbane; telephone No. Central 7260; postal address Box 689K, G.P.O., Brisbane.
- WOOLLOOWIN**—Secretary, H. A. Jear, Lisson Grove, Woolloowin.
- WYNNUM AND MANLY**—Secretary, P. J. Golden, c/o Trackson Bros., Ltd., Elizabeth Street, Brisbane.

Wireless Institute of Aust. [Q'd Div]

The activities of the institute are at present particularly interesting to the amateur who is keen on developing his knowledge of the science of radio telegraphy. In order to give greater opportunity to amateurs and listeners-in to practice the reading of morse the institute has arranged a series of lecture and morse practices to be broadcast from its experimental transmitting station 4W1.

The first of this series was broadcast on Sunday morning, 17th July, between 10 and 11 o'clock. Favourable reports have already been received from many amateurs and listeners-in, who all report good reception.

These transmissions will be continued on every Monday morning between 10 and 11 o'clock, the station operating at 10 watts on a wave-length of 250 metres. Announcements will be made in morse, and the tuning-in will be by musical items; during the session information regarding the institute, and general talk, will be transmitted.

Toombul Radio Club

At the meeting on June 22nd a lecture on "Valve Application" was delivered by Mr. W. E. Vining. The lecturer dealt with the subject—theoretical and practical—from many angles, and many points were brought up for discussion. At the conclusion of the lecture almost everyone had something to say on the subject of the emission of heat waves from valve elements.

A week later, at the general meeting on the 29th, after the business had been dispensed with, members were invited to relate their individual radio experiences. As can well be judged, the statements made by several "old timers" were exceedingly interesting, and there is no doubt that everyone departed that evening feeling quite satisfied that radio has progressed slightly during the last five or six years.

Quite a surprise was sprung at the meeting on July 1st, when it was announced that two members of the

team chosen to compete with 4WN's team at a debate at Woolloowin the following night could not attend on account of "pressing engagements" for that night. From reports to hand it appears that 4WN, after OK-ing the Toombul suggested subject, "Thermionic versus Mechanical Rectification," decided after a while to change the subject to something not so hard or not so technical, such as, "Should or should not Broadcasting Stations Directors wear Horn-rimmed Spectacles," and accordingly instructed their "zech-tree" to inform 4TC's ditto of the change. The "zech-tree's" letter, however, went astray, but not through the fault of the P.M.G., and when it came to light on June 15th, it was rather too late to arrange matters. The debate was, therefore, postponed until July 7th, but had to be again postponed for the reason mentioned above.

The club members spend an extremely enjoyable time at a member's seaside residence during the weekend of July 9th and 10th. There is no doubt that the members ate more good things and made more noise than they are generally accustomed to do, but still, a holiday is a holiday, isn't it? The 4TC transmitter was also there and, using seven watts, or so input on a Mullard P.M.256, raised a report of R7 from Sydney.

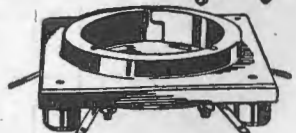
On July 13th and July 20th matters in connection with the radio exhibits at the forthcoming Nundah Show were discussed, and at the latter meeting a committee was appointed to deal with individual matters in connection with this subject. The subject of the erection of a shack for the use of the club members and for the storage of club "junk" was also discussed, and reports will be presented at future meetings. Club meetings every Wednesday night at the residence of Mr. C. A. Walz, corner Eton Street and Sandgate Road, Nundah.

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*A Marvellous Advance
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of good financial
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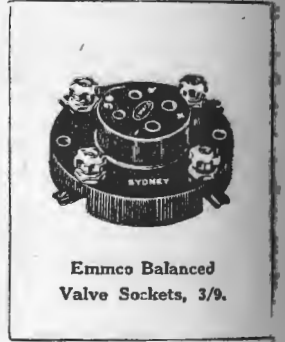
Emmco Headphones, 21/.



Emmco Midget Transformer, 13/9.



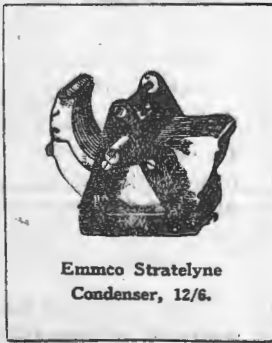
Emmco Illuminated Back-of-Panel Dial, 5/6



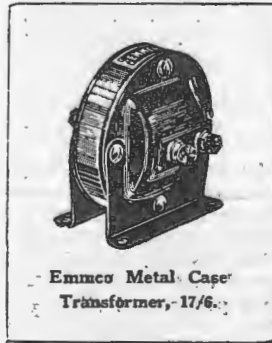
Emmco Balanced Valve Sockets, 3/9.



Emmco Lightning Arrestor, 2/6.



Emmco Stratelyne Condenser, 12/6.



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Maclurcan Tone Purifier, 21/.

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The Transmitting License

(By "Q.R.N.")

ARTICLE No. XI.

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In the preceding articles of this series, designed to instruct the more technically inclined among the readers of the "Queensland Radio News" in the requirements of the Amateur Operator's Proficiency Certificate, discussion has been made on the various pieces of apparatus that go to make up a well equipped amateur transmitting station. From this article until the end of the series the space available will be devoted to consideration of sundry popular transmitting circuits, utilising both morse and telephone methods of signalling.

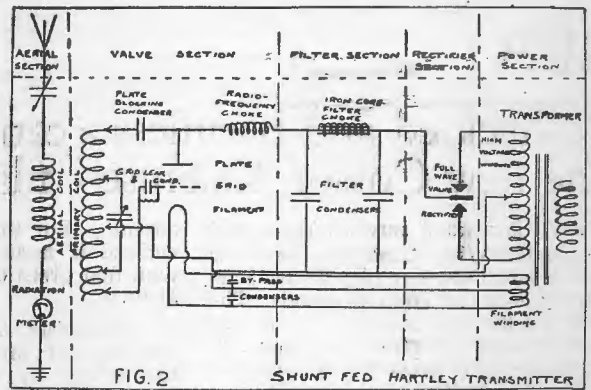
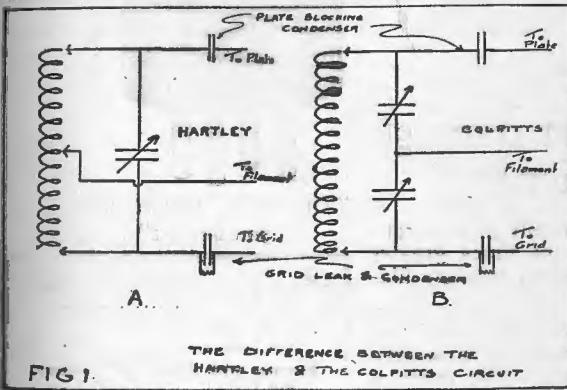
There are three or four transmitting circuits which stand out in point of popularity. These are the circuits known universally as the Hartley, the Meissner, the Colpitts and the Armstrong—the latter especially in its adapted form known as the tuned plate tuned grid circuit.

Of these four circuits probably the Hartley and the T.P.T.G. are more popular than the Meissner or the

a tapped coil and an "untapped" condenser—if such a definition is permissible—while in the Colpitts one has an untapped coil and a "tapped" or split—condenser.

For either of these circuits in its simplest form the rest of the installation, including power supply, may be the same, so that a general discussion will suffice.

In the Hartley the grid plate coil may be regarded as two coils connected in series. Upon the correct balance established between these coils will, to a large extent, depend the efficiency of the transmitter. The coupling between these grid plate circuits would, if two coils were utilised, be governed, firstly, by the physical measurements of the coils and, secondly, by the proximity of one to the other. A very similar arrangement exists in the usual two- or three- coil regenerative receiver circuit, wherein the plate coil (or reaction or tickler coil) is hinged, and may be moved relatively to the grid coil. Indeed, when one



Colpitts, though all four are in use throughout the Commonwealth.

From a point of view of flexibility, probably the Hartley is preferable, for adjustments are few to enable large changes of wave-length. Similar flexibility may be obtained for the T.P.T.G. by the use of interchangeable coils not unlike the use of receiver coils.

These two circuits have been very popular in Queensland amateur circles, and the balance is fairly even between them.

For purposes of discussion, however, it will be convenient to deal firstly with the Hartley and the Colpitts, and later with the Meissner and T.P.T.G.

Refer now to Fig. 1. This shows the "business end" of both the Hartley and Colpitts types, and shows the striking similarity between the two types. It is noticeable that the only essential difference between the two lies in the fact that the Hartley uses

considers fundamentals, there is virtually no difference between receiving and transmitting circuits, except that the latter (yes, the latter) are usually simpler.

Though the main part of a Hartley circuit usually does not consist of two coils, but of one only, as shown in Fig. 1, variations in coupling between the plate and grid circuits are very easily obtained. The leads—three in number—from the plate, grid and filament circuits, terminate in spring clips which may be moved backward or forward so as to include less or more turns of the coil within any one circuit. Thus, at once, the flexibility of the Hartley transmitter becomes apparent, for a change of wave-length from the so-called 30-metre band to the 80-metre band becomes primarily only a question of moving a couple of clips to a pre-determined position and a retuning of the circuit by use of the condenser.

Now for the rest of the circuit.

The chief details are shown in Fig. 2. When the



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HHEAT is a good servant, but a bad master. When Heat gets the upper hand he commences to play havoc. Particularly does this apply to metals. The moment a metal gets excessively hot its molecules get distorted. It begins to crystallise—or in other words—becomes brittle. And brittle metal is easily fractured. Look at the damage Heat can do when he is let loose in a valve. That slender thread of metal which we call the filament becomes incandescent. It is always expanding and contracting. No wonder it has a short life. In fact, it is a marvel that the filament in the ordinary valve lasts as long as it does. But now a filament has been produced which operates practically without heat at all. It is the new Cossor Kalenised filament. The familiar glow is entirely

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power supply, derived from a step-up transformer, is applied to the terminals as shown, it is obvious that sundry alterations must be made to our circuit in Fig. 1.

First of all, a "good" condenser must be placed in lead to the plate. The reason for this is obvious—because were it not there the coil would simply be short-circuiting the whole power supply which would, to say the least, cause fireworks. The "plate-stopping" or "plate-blocking" condenser should be of a good, reliable transmitting make to carry anything over comparatively low power. It is realised that the latter statement is impossible of definition. The average Australian amateur uses a $7\frac{1}{2}$ watt valve for transmitting; this does not, however, mean that he transmits with a power of $7\frac{1}{2}$ watts. Oh dear, no!

The poor little $7\frac{1}{2}$ -watt valve is loaded and loaded with power until the plate is blushing (literally, not metaphorically!) under the burden of fifty, seventy, or ninety watts. Indeed, many amateurs regard, seemingly, that their transmission is a failure unless the plate of their valve is glowing nearly as brilliantly as the filament. So it is obvious that the capacity and insulation value of the plate blocking condenser is not safe if limited by the rated value of the transmitter. However, a good quality receiving type condenser will stand up to all requirements when reasonably low power is used.

Just as the plate-blocking condenser is placed in the plate-coil lead to prevent the power from breaking into the coil circuit, so must a radio-frequency choke be placed in the plate-power lead to confine the radio-frequency current to its destined path. It

A condenser is, however, required in the latter (series fed) type in the plate coil feed, as shown across the power supply, to prevent short-circuiting the high voltage supply and to provide a low resistance leakage path for the high-frequency currents in the primary coil. Choke coils are used, as shown, to keep the radio-frequency oscillations out of the power supply.

All in all, shunt-feed is preferable to series-feed, inasmuch as the former gives a greater measure of safety to the operator—no small matter when high voltages are being used. In series feed the helix and tuning condenser are both "alive" at the potential of the applied power, and adjustment to either component may become dangerous.

As for the aerial circuit, all that needs to be said is that it usually contains a separate helix, coupled to the main coil of the transmitter, and tuned with a condenser. If an indicating milliammeter of the Thermo-couple or hot-wire type be used, it may be placed in the aerial or in the earth lead. From a point of view of protection to the meter the latter position is preferable. Coupling between aerial and plate-grid coil should be variable, and the condenser should be of a type to stand the applied radio frequency current without leakage.

Relative to the Colpitts circuit in its simple form, all that needs to be known can be gathered from the preceding remarks. It only remains to be emphasised with the exception of the difference shown in Fig. 1, that, fundamentally, the circuits are precisely similar and the remarks made as to the operation of the one apply with equal strength to the operation of the other.

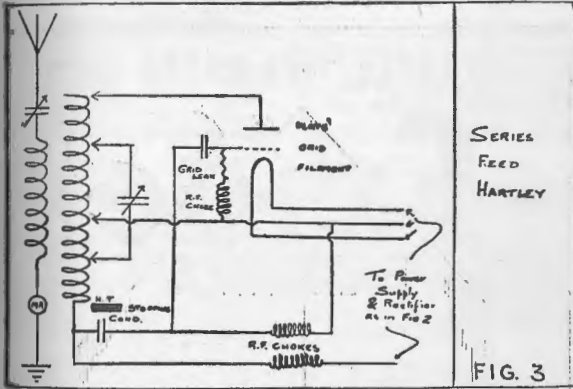
IMPORTANT ANNOUNCEMENT.

The Queensland Pastoral Supplies Ltd. have just been appointed Queensland agents for the "Astor" wireless sets, which set represents the very last word in wireless manufacture. The great feature with this set is the manufacturers' unconditional guarantee, which reads as follows:—

"We unconditionally guarantee that the "Astor Five" will out perform any other radio receiver made, regardless of price or number of valves. And further, that the "Astor Five" will receive interstate broadcasting stations at full loud-speaker strength in the city or country, regardless of proximity of local stations.

"We agree that the "Astor Five" will make good on this guarantee, or you will receive your money back—you to be the judge."

"This set is advertised in the present issue at £26. Sole country agents are now being appointed, so anyone interested should write this firm direct."



will be remembered from earlier articles that condensers block direct or low-frequency alternating currents while by-passing high-frequencies, while chokes act in the opposite way.

This is all that needs description in the circuit shown in Fig. 2. All of the other parts have been well labelled, and a description of their uses given in earlier articles.

It should, however, be carefully noted that the power supply in Fig. 2 is "shunt-fed"; that is, the power is connected in parallel with the valve. An alternative method of feed is in use known as "series-fed," when the power is in series with the plate circuit shown in Fig. 3.

From a consideration of Figs. 2 and 3 it is obvious that the plate stopping condenser used in the shunt-fed circuit is not required in the series-fed type.

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If you would become proficient in Morse Sending and Receiving let me coach you, as I coached 4RB 4AZ and others, including commercial operators. Sounder or Buzzer method; speed and proficiency guaranteed; terms moderate.

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Whispers from Maoriland

Mr. J. Ball, of Wanganui, has been appointed editor-announcer at the new Wellington station of the Radio Broadcasting Company of New Zealand. Mr. Ball will enter upon his new duties at an early date. Mr. Ball has had a long experience of journalism and is said to be an able public speaker.

Mr. J. Culford Bell has been appointed successor to Mr. J. M. Prentice as announcer at the Auckland radio station, 1YA. Since February Mr. Bell has been teaching elocution in Auckland, and has already commenced his new duties. Mr. Bell has had no previous experience as an announcer, although he has several times performed over the wireless. He did not apply for the position, but was approached by the company. He intends carrying on his professional duties as well as acting as announcer.

The Secretary, General Post Office, announces that for some time the department has given careful consideration to the question of wave-lengths of the New Zealand broadcasting stations. It was reported that the Commonwealth Authorities intended to review the wave-lengths of Australian stations. Consequently, action on the part of the New Zealand Authorities has been delayed in order that the wave-lengths of the stations of both countries should not clash. As some months will elapse before action is taken in Australia, it has been decided to make the alteration forthwith, and the following arrangement has been decided upon:—

1YA (Auckland)	333 metres
2YA (Wellington)	420 metres
3YA (Christchurch)	3/6 metres
4YA (Dunedin)	463 metres

The change at Auckland, Christchurch and Dunedin will take place at an early date, which will be duly announced by the stations concerned. The old Wellington station will continue on its present wave-length until the opening of the new station, which will operate on the 420 metres.

In fixing the foregoing wave-lengths, states the secretary, due weight has been given to technical considerations, in addition to the matter of clearance between the wave-lengths of the Dominion stations and between the latter and those of the Australian stations.

The new Wellington station, 2YA, is to be officially opened on the evening of 16th July.

All hope of Mr. Prentice's services being retained in New Zealand have vanished. Mr. Prentice has explained that although he has made every possible effort to reach a satisfactory understanding with the company, he has been unsuccessful, and that in con-

sequence his intention is to return to Australia at an early date. Reviewing the situation, he asserts that promises made to him regarding the scope of his activities have not been kept, and that in consequence his resignation was tendered as a protest. His action has been more than justified in the fact that already the company has agreed to increase the talent allowance, which was one of the factors in which he alleged that promises were made and left unfulfilled.

Although his plans are as yet indefinite, Mr. Prentice contemplates a short visit to Great Britain and Europe in order to bring his political and economic studies up to date. This will be conditional on matters awaiting his attention in Sydney, but probably he will sail about the middle of August and return about February of next year, after which he will re-establish himself with radio, in all probability in one of the Australian capital cities.

Listeners in general seem to have accepted the new wave-lengths "on appro.," for there has been little, or no criticism of the allocation. 2YA has, of course, been testing in its allotted place, 420 metres. It was a curious faux pas that these tests started while 1YA was still running on the same wave-lengths, with results for northern listeners more easily imagined than described.

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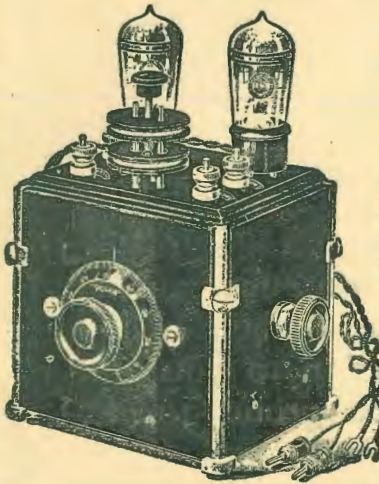
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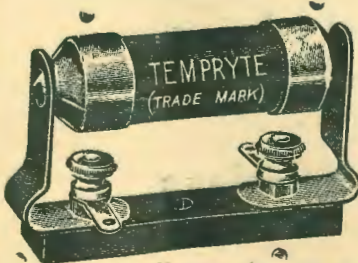
SOLODYNE (Shielded)	75/	set of three
ELSTREE SIX (Shielded)	75/	set of three
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