Are you building a good Set at the lowest possible Cost?

NOT unless you are making use of the following:

**PILOT VERNIER DIALS.**
- Pilot 4 inch Bakelite Dial
- Pilot 4 inch Bakelite Dial

**PILOT CONDENSERS.**
- Straight Line Wavelength, No. 8112, 10 plate: 20, 11
- No. 4417, 17 plate: 0, 12, 0
- No. 6125, 33 plate: 0, 13, 0
- Straight Line Frequency aluminium plate from 20, 12
- Straight Line brass, from
- Pilot Universal Sockets
- Pilot Bakelite Standard 201A socket

**PILOT Rheostats.**
- No. 910, 10 ohm rheostat
- No. 920, 20 ohm rheostat
- No. 930, 30 ohm rheostat
- Pilot Jacks from

**PILOT ISOGRAF MOULDED CONDENSERS.**
- No. 170 Fixed Condensers for 1st, with 6 volts
- No. 170 Fixed Condensers for 2nd, with 6 volts
- No. 170 Fixed Condensers for 3rd, with 6 volts
- Hoosick Bakelite Rheostats, with White Arrow knobs, 0 ohm
- Hoosick Bakelite Rheostats, with White Arrow knobs, 0, 3 ohm
- Hoosick Bakelite Rheostats, with White Arrow knobs, 5, 3 ohm
- Hoosick Standard Bakelite sockets of all types (round base and standard panel type)
- Hoosick Universal sockets for U.V. or U.X. type valves
- Hoosick 4 inch Bakelite dials
- Hoosick 4 inch Composition dials, two-piece and one-piece

**MUTER FIXED RESISTANCES.**
- Condensers: Capacity from:
  - No. 600, capacity .00015
  - No. 601, capacity .0001
  - No. 602, capacity .00005

- Loose Bakelite Rheostats, with White Arrow knife:
  - No. 940 Fixed Rheostat, with 6 volt

- Special Variable Grid Condensers
- Special Balanced Condensers

**MUTER TRANSFORMERS.**
- Transforms, 1st and 3rd
- Shock-proof Vacuum plunger, with spring grip
- Single Pole switches, No. 930
- Double Pole switches, No. 940

- Amplifiers in 1st, 2nd, 3rd, and 4th stages
- Also 1st stage Resistance Coupled

**MACS MOULDING BAKELITE SOCKETS.**
- Standard 201A Sockets
- Universal Socket

When you have completed your set, give your customers the lowest profit by fixing them on the spot.

**Ray-O-Vac Batteries**

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**SOLE AGENTS: UNITED DISTRIBUTORS LIMITED**

72 Clarence Street, Sydney

345 Queen St., BRISBANE
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25 Queen St., PERTH
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BENJAMIN
RADIO PRODUCTS
First in Quality and Performance

BENJAMIN CLER-A-TONE
Push Type Socket.

Some of the outstanding features of this socket are:
1. It is compact and neat appearing.
2. Side wiping contacts, insure perfect electrical connection to the tube prongs.
3. Suspension spring and contact member are made in one piece, thereby eliminating the high resistance joints.
4. All metal parts are heavily nicked.

By replacing the old type of socket in your set with the Benjamin Cler-A-Tone "Push" Type Socket, you positively eliminate tube jar and resultant microphonic noises.

No. 9049 is without lower mounting base and is intended for direct panel mounting. They include a drilling template and four machine screws with nuts for attaching.

Description.
No. 9040 with mounting base. Price 5/-
No. 9049 without mounting base
(for direct mounting to 1/8 inch panel). Price 3/6

BENJAMIN
SELF SUPPORTING BRACKET

The Benjamin Self Supporting Brackets are designed for use with sub-panels and are of such depth that all wiring and mounting of small radio parts can be done underneath the subpanel, thereby decreasing the hazards of short circuiting and blowing of tubes. Brackets are intended to be attached to the front panel.

PRICE 4/6
AT ALL RADIO DEALERS

107-9 Queen Street,
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Amalgamated
Wireless

97 Clarence Street, Sydney

King and King Chambers,
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2FC (Farmer’s Sydney) now 442 Metres

This means that the most perfect Radio Receiver for the Australian and New Zealand market is the Neutrodyne, and the ultimate in Neutrodyne which will never become obsolete is the...

GILFILLAN NEUTRODYNE

SOUTHERN AUSTRALIAN RAILWAYS INSTITUTE

Wireless Section.

CHAMPION PRIZE.

£10 Deposit. Balance over 12 months

GILFILLAN NEUTRODYNE GN. 2. 5 VALVE £59/10/-

Features: Maximum depth of modulation, SELECTIVITY and Sensitivity, Freedom from oscillation noises and static.

OBTAINABLE FROM LEADING RADIO DEALERS:

Harringtons Ltd.

Sydney: 100 George Street
Melbourne: 16 Swanston Street
Adelaide: 10 Hindley Street
Auckland, N.Z.: 12 Queen Street

Wholesalers and Retailers
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Harringtons Ltd.

For full description see page 39.
NOW that 2FC is finally broadcasting on the low wave length of 442 metres every trader and listener-in is out to see that radio in this State makes up the headway lost during the past year. Official figures show that there are 4.6 listener-ins to every hundred people in Victoria whereas there are only 1.8 in N.S.W., despite the progress made here before broadcasting began in Victoria.

Among the reasons advanced for this are; that the novelty of radio has not yet worn off in Victoria, that there is a great deal more home-life in that State than there is in N.S.W., and that 3LO has a low wave length. The first two reasons are open to debate, but there is no doubt about the third.

Modern development has shown that the low wave station is the most efficient. Under the new conditions sets will employ simpler controls; there will be no need to change coils; they will look better and will possibly cost less.

This will be an era of selectivity, of super-heterodynes and neutrodynes, since the loading coils required on these sets for the high wave lengths are now unnecessary. Static will also receive a blow from loop aerials, which will become more popular.

Every radio trader is prepared for a chorus of complaints during the next few weeks from listeners who are unable to separate the broadcasting stations from one another. The question of broad tuning will become a bone of contention until listener-ins realise that it is the old-fashioned receiver that is broadly tuned and not the transmitter.

Traders are divided on the question of the advantages of the new wave length. The chief objection raised has been that there will be an immediate influx of cheap American ready-made sets. This, they point out, will cripple our own radio industry, which has just gained its feet, mainly because the wide range of wave lengths in the past has required a specially-built receiver for Australian conditions. However, this remains to be seen. There is a formidable tariff on American radio goods.

Daylight reception of 2FC may not be as good over long distances on 442 metres, but the country listener-in will be easily compensated by the night programmes, which will be received at a much greater volume. Unfortunately, the change will make no difference to fading.
Between You and Me and the Microphone

Conducted by R. E. CORDER

A NEW type of oscillating quartz crystal is announced from Germany, one which actually gives when oscillating. It is necessary, however, that it be placed in an evacuated chamber similar to the bulb of a vacuum tube.

RADIO experiments held over a period of two weeks in Naples, Italy, revealed unfavourable reception conditions, due to continuous interference. Perfect reception was never obtained during the course of the tests through the lack of adequate wave length regulation.

TAKING new's radio test to hospital is frequent experience of the inspector. We have more radio doctors.

AN UP-TO-DATE broadcasting station, with call letters AYX, has been placed in service recently for the Ernest University de Radio-Oldest in Galician, Venezuela.

EXPERIMENTS with the Australian beam wireless system will begin long months. Work on the stations at Wally and Rockham pt, Vic. is almost finished.

THE Athletic Corporation, the Swedish broadcasting company, reports a net profit of $37,323 for half after meeting the deficit of $26,660 for 1925. The company operates stations at Oddesberg, Helsingberg, Sandefjord and Boden.

B CLASS station 2GF, owned by the Theosophical Society, began transmitting on 3000 watts on September 16.

THE V.F.W. radio affairs are subjectively improved since the advent of the V.F.W., in which he will emphasize that the broadcasting of new descriptions is conducive to class work.

THY activities of Broadcasting Station 2FG, Sydney, in connection with horse racing, was the subject of inquiry last week by Mr. Arthur V. Brown, Secretary of the Victoria Racing Club, who has been on a visit to Sydney. Mr. Krwitz spoke again at Station 2FG with the "Western Post Commissioner." He is preparing a report for the President of the V.R.C., in which he will emphasize that the broadcasting of race descriptions is conducive to class work.

WITH a one stone an anorak and a waterproof as an earth, Mr. Alfred Porte, manager of the Nearby Distric Union, tunes in every broadcast station in Australia and on his theological set. Local stations come in with almost sufficient volume to knock it over, he says. This freak reception is due to the atmospheric effect produced by the gas stove and a galvanized iron roof.

A WITNESS before the Standard of Living Inquiry has been impressed by the peculiarity of radio receiving sets being limited in determining a reasonable standard of living. He witnessed the Commissioner that although the larger were conversation had held that a radio was entitled to such comforts as newspapers, picture shows, and between, transmitting had not been taken into consideration.

ACCORDING to figures just made public by the Postmaster General in England, the number of receiving licensees issued this year was 241,350. This represents an increase of over 1,000,000 which is shared by the H.R.C. and the post office. However, the B.C.C., by a governing clause in their license, are limited to an increase of 150,000, as it was now becoming apparent that the post office is seeking more for the trouble of handling out receiving licenses than the R.C.C. is for providing a complete service.
Russia Educates its Masses by Radio

In this article, specially written for "Wireless Weekly," the editor of "Radio Amateur," Moscow, tells how Russia is seriously tackling the problem of educating its people by broadcasting.

By A. F. Shevchuk, R.E.

Immediately you set eyes upon the article there jumped into your mind the one thought—propaganda. It is propaganda, but not of the type you suspect. It is propaganda for radio.

For, despite the misunderstanding which we Russians meet when dealing with other countries, there are erudite radio fans here, and I am one. An editor of the "Radio Amateur," I am delighted with the opportunity of acquainting Australians with the development of wireless here and of commenting on the part radio will play in the task of propounding ideas throughout the whole world.

I know that the better is the most interesting, because, naturally, what we broadcast will be heard in all countries, and so again that fearful thought creeps into your mind—propaganda. But there is no need for this fear. We are too keen with ourselves for, like you in Australia, our interest is in the stimulus which makes us think seriously of methods of quicker transportation and a better means of conveying international ideas.

The conditions in our country are to a certain extent similar to conditions in Australia. The means of putting schemes into effect between our various centres are not sufficiently developed and it is naturally worse between unimportant villages. We have an immense territory, sparsely populated and unopened up with lines of communication. We also have an extremely hardworn populace—a population for the most part illiterate. Our vast spaces and lack of communication greatly hinder the rapid dissemination of ideas and with it an increase in culture.

There lies before us the tremendous lack of conquering time and space. It is imperative that we raise the standard of culture among our people because we recognise that the lack of knowledge hinders production and an increase in the material resources of our country. The minds of the people had stagnated, but the revolution with its strong forward movement has commenced to awaken them from their accustomed slumber. However, we need to electrify them into quicker motion in order to conquer a thousand years of conservatism.

In this respect we place great confidence in the efforts of radio amateurs and broadcasting. Broadcasting will provide an opportunity of improving the method of spreading information across our vast spaces. This scheme was first undertaken at the beginning of the revolution in 1918 by V. I. Lenin and in 1920 at the end of civil war when the great and terrible famine prevailed, we had in use a powerful experimental radio-telephone station which could be heard at a distance of 2,000 kilometers.

Radio amateurs, who are themselves purveyors of knowledge and upon whose favours we largely depend, will assist in using broadcasting to its fullest degree. Through radio amateur organisations a great number of people have become interested in the technical side of radio, a matter of extreme importance because the enormous task of imparting technical knowledge still lies before us.

At present we have more than a dozen broad-casting stations in operation, and at the end of the year we expect to have at least twenty-five, several of which have a power of from 4 to 16 kilowatts, and one even of 25.
At the beginning of the year there were upwards of 350,000 radio sets registered. The number of sets in use was increasing at the rate of 5,000 per month. Thousands of sets, equipped with loud speakers, are being used in village reading rooms and in workers' clubs in the cities, and each of these is patronised by hundreds daily, particularly when the monthly and evening radio newspapers are broadcast from Moscow and other cities. Several million people listen in on the various programmes every day.

The low current trend, which has virtually monopolied in the manufacture of radio apparatus, is having difficulty in keeping up with the demand. It plans to provide 2,500,000 receiving sets during the next few years. This year's programme calls for an output of 25,000 sets, as against 6,000 produced last year, and 22,000 crystal sets, as against 20,000 last year.

The elaborate programmes broadcast by the microphones in Moscow every day, including symphonies and chamber music, opera and drama, lectures and educational and newspaper material, are broadcast over a radius of 800 miles by a system of relays to which stations in Leningrad, Kharkov and various provincial cities participate. This system will be greatly enlarged this year, so that Muscovites on the Arctic coast and on the shores of the Black and Caspian Seas will be able to get the Moscow programme simultaneously with the capital city.

Radio enthusiasts are showing increasing interest in foreign programmes which they get without difficulty in many places. Noting anew the city of York, Elkhorn, heard the full programme of the powerful Doncaster station, England, over 3,500 miles away.

I wish to draw attention to the special broadcasts that broadcasting gives us in our country in comparison with other countries. The work of improving broadcasting was first undertaken by the United Kingdom in 1924, and results have obtained which are not impossible even in the most remote regions. Up to the present they have been most active in perfecting wireless systems, and their successes in serving workers' clubs and villages by radio has definitely been established.

The Twice Unions also have their own radio-station stations which they use for official purposes as well as for social enlightenment in the form of lectures and concerts. At present there are more than one hundred thousand radio stations.

There are the most important of our work is in the development of radio in its present form. For it is universally has special local significance.

Simultaneously with the news, we are seeking out new methods for questioning space. This work also has international significance because it concerns the use of short wavelengths. The best known experiments in short wave have been carried out at the State Radio Laboratory in Baku by Professors M. A. Bubnov-Bubnovich and V. V. Tatarkin.

The most important has been the development of a new method of transmitting on wavelengths of 83, 35 and 16 metres an output up to 20 kilowatts, using one powerful transmitter from the Netherlands Radio Laboratory. These transmissions using the call-signs "KPN" and "KPP" have been heard throughout the world, including Australia, (Melbourne in Windsor Harbour), Johore, New Zealand, Hobart, Tasmania (N. V. Gillhans, etc).

These preliminary results inspire confidence, proving us that space has been conquered—only within the boundaries of one country, but throughout the world. The choice is only a general opinion of our activities in relation to radio.

As far as the prospects of an international exchange of ideas are concerned, this may be immediately brought about with the aid of literature, whilst for the future international broadcasting may be depended upon. To me it seems that such an exchange of thought will be carried out in the very near future by a combination of radio and the press.

Without broadcasting in its present stage the transmitting of the human voice by radio, will not ensure an exchange of thoughts, and one must not expect too much from this method.

In addition to radio journals and newspapers read in front of the microphone and the theatre of radio (broadcasting about television), there will also be printed radio journals and newspapers (transmitted by radio) adopting one of the main methods of sending signals. In this way a radio paper may appear on the same day and at the same hour before every radio audience in the world. Similarly whole books may be broadcast.

If these newspapers and books are published in the same language, usually understood by everyone, then the barriers between people will be eliminated and human thought, with every possibility of rapid diffusion to everyone will enrich the whole world at the same time, holding mankind to wonderful new necessities which cannot be envisaged by any stretch of imagination.
Radio

Radio is responsible for much of the popularity of jazz.

Radio has popularised jazz, says the writer, but radio achieved popularity shortly after jazz. It was a fortunate coincidence that radio achieved popularity shortly after jazz. In less than two years, jazz had spread from its birthplace on the Pacific Coast of America to Europe and the Far East, and there is little doubt that to overseas popularity, enjoyed by no other type of music, would have been impossible in so short a time without the aid of wireless.

But on the other hand would radio have achieved popularity so short a time without the advent of jazz. Without the advent of jazz, radio would have been impossible in present-day music. Beurley, some people call it. But when Richard Wagner was asked if he considered his music as “radio.” He said: “I prefer it that way!” And thus it has come about that much of the popular music of to-day is based upon some of the loveliest themes of the great masters.

What is “classical” music? Even the critics cannot agree in their answer to this question. Some say that Wagner is the greatest of the classical; others say that his work is the very negation of classicalism. The popular idea is that, to be ranked as a classical, a piece of music must have established its permanent value. It must be something to which we can listen again and again without getting tired. It matters not a jot who the composer is; Tunes, like good clothes, lose their charm. And if I do not hesitate to declare my belief that it will be found that, after the test of time, some of the most popular music of to-day will merit the designation “classical.”

Radio has popularised jazz, says the writer, but radio achieved popularity shortly after jazz. It was a fortunate coincidence that radio achieved popularity shortly after jazz. In less than two years, jazz had spread from its birthplace on the Pacific Coast of America to Europe and the Far East, and there is little doubt that to overseas popularity, enjoyed by no other type of music, would have been impossible in so short a time without the aid of wireless.

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The famous “Yes, We Have No Bananas!” is made up of sections from the Hallelujah Chorus of Handel’s Messiah,” “The Bohemian Girl,” and “My Baby Lies Over the Ocean?” If you are sceptical, try it on your piano, a phrase at a time, and see if I am not right.

The Superior Highbrow

The Superior Highbrow is a recitative mood for classical music. They wish to be amused rather than “educated” to forget, if only for an hour, the worries of to-morrow. What is known as classical music has no greater admirer than myself, but to the majority of folk it is not relaxation. Personally, I am exhausted for a week after hearing such a great work as “Falstaff!”

The Superior Highbrow

For some reason best known to himself, the highbrow seems to take a pleasure in telling the average man that his musical taste is terrible. The truth of the matter is that nobody—not even a music critic—has a monopoly of the capacity to appreciate music. The power to appreciate music is everyone’s birthright, for every normal human being has a sense of music. And broadcasting is helping us to learn that to be cultured does not mean that we must sever those things which, in our secret hearts, we all love.

Beethoven, Chopin, Puccini and many more have been thus utilised. “I’m Always Chasing Rainbows” is a transcription of Chopin’s Fantaisie Impromptu. “Onward” is a variation of Liszt’s Einbussreignis, and “My Baby’s Arms” copies the Cavatina of Staff. These are a few facts of which, perhaps, the highbrow is ignorant.

In my view, good music is being adapted to our modern environment. Just as Shakespeare is read and loved not in the archaic language of his day, but in our modern speech. Let us, then, render the music of earlier centuries in our modern style.

Radio reception is not “jazz,” but reverberating riot of (Continued on Page 45.)
Are Radio Regulations Under Revision?

The companies naturally would be entitled to know that the prospects of revenue and the methods of conducting the business would be unobstructed, at least for a reasonable time otherwise the risk would not justify the laying out of capital and plans. And as the amounts given by the P.M.G.s to the broadcasting companies covered a period of five years, the Government would have to produce valid reasons for making any vital alteration that would affect the business. It was developing the confidence which the companies had in the Government that led to the commencement of broadcasting services on a plan that would not be disturbed as long as the five years of the licence period.

But the review of the conditions now existing is apparently in progress. The usual critics of such enterprises have been active of late in conferences, in press propagandas and in political editorials, alleging the P.M.G. how the broadcasting business should be run. Some of these critics have been chewing over改改in the present system without suggesting any alternative. Others have reasonably wished, even if not much better informed, have put forward alternative schemes and it is worth considering some of the more complete proposals, and at the same time considering if they are practicable and likely to be for better broadcasting.

Several schemes have recommended radical changes. Free licences—or no licences—was a favourite proposal. It would surely be unfair to the companies that risked their capital in an uncertain enterprise—a new untried business—to be placed in the position that the revenue may be reduced, or some unforeseen new laws might be introduced at the whim of political exigencies.

...
ALREADY readers from every part of N.S.W. have entered our subscription competition.

Wideawake listeners have mailed the widest of beginning ears. There are three months in which to win.

In that time the listener in securing the greatest number of prepaid subscriptions to "Wireless Weekly" receives a first-class return passage to Java and Singapore on one of Messrs. Burns Philp's mail steamers. Here is almost two months' holiday touring the fascinating East Indies for the reader who knows how to make use of his spare time moments.

The vessel leaves Sydney, calling at Brisbane, Townsville, Thursday Island, Darwin, Sourabaya, Sumatra, Batavia, and Singapore. Right through the spice islands, into the realm of romance, the ship carries the winner. At Java are to be seen the ruins of ancient civilizations, while around one are the millions of a later race, yet even older than our own. The voyage costs us £100, and the winner receives £60 for incidental expenses.

In addition to a trip to Java as first prize, we offer a special prize for the youth between 16 and 18 securing the greatest number of subscriptions. By special arrangement with Amalgamated Wireless, we will present a full course through the Marconi School of Wireless to the winner in this section.

Here is a course which in the ordinary course of events would cost £50 to begin, free to any youth willing to devote his spare time and energy to an attempt to grasp this opportunity.

An intensive Marconi course lasts approximately 12 months, and at the end of that time the student sits for examination, conducted by the Postmaster-General's Department, and on passing receives a first-class wireless operator's certificate. This qualifies him for the position of ship's operator, and paves the way to the position of a radio engineer.

It is immaterial whether the student be in the city or country, since the course will be dealt with by post until the student is well advanced, and then several weeks' personal tuition will be given in the school in Sydney.

No wonder young men of vision are entering our competition.

Subscription orders may be secured on "Wireless Weekly" forms. Books of 20 will be supplied to anyone filling in the following contract and sending it to Wireless Newspapers Limited.

-------------------

To the Director,

Wireless Newspapers Limited.
31 Castlereagh Street,
Sydney.

Sir,—

In consideration of your allowing me to enter the "Wireless Weekly" Subscription Competition of Wireless Newspapers Limited, and supply me with a book of subscription forms, I undertake to remit to you within 24 hours after receiving same any signed subscription orders received and the amount of money received by me as represented on the order. I also undertake to account to you for all subscription order forms which you supply to me.

Signed, ........................................

Address ........................................

-------------------
Is a Radio Set a Necessity?

Giving evidence before the standard of living inquiry recently as to the necessity of radio being included in the essentials of home comfort, Mr. C. C. Faulkner explained the importance of radio as a service.

The necessity of including radio when considering the needs of a family in determining a reasonable standard of living, was urged upon the Inquiry Commission last week by Mr. C. C. Faulkner, director of Radio Broadcasting.

The following examination of Mr. Faulkner by the Chairman of the Commission (Mr. A. R. Piddington) was interesting:

Commissioner: What are your views on the standard of living of the average worker, Mr. Faulkner?
Mr. Faulkner: The standard of living of the average worker should be a point of starting the work day with the greatest comfort. That is a valuable commodity. At the Wynnum School, the school bell rings at exactly 7 o'clock, the time being marked by the school radio set.
Commissioner: Have you any definite information as to the cost of the service?
Mr. Faulkner: The cheapest form is, of course, the crystal set, and about $2 would be the limit of expense to install it. The upkeep is practically nothing except the occasional renewal of a crystal at 10/- at a newspaper at 10/-.
Commissioner: Speaking for myself, I do not think that that is necessary. In the Basic Wage Commission I have heard the advocate of newspaper, rather than radio sets. Nobody needs to be told that the working-man needs the newspaper, as he can find it in 10/-.

Mr. Faulkner: So far as I know, in fixing the standard of living in the past the fact of broadcasting has not been taken into consideration.
Commissioner: Quite so.

Mr. Faulkner: I desire to place one or two facts before the Commissioner which, in my opinion, will make the Commission conclude that, just as you allow no special weekly for the purchase of newspapers and magazines, you will consider a radio set equally essential. The first thing that happens in the morning from the radio listener's point of view is that at 7.30 the scene from the Sydney station. The consequence is that many homes make a point of starting the day with the greatest comfort. That is a valuable commodity. At the Wynnum School, the school bell rings at exactly 7 o'clock, the time being marked by the school radio set.

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Commissioner: Have you any definite information as to the cost of the service?
Mr. Faulkner: The cheapest form is, of course, the crystal set, and about $2 would be the limit of expense to install it. The upkeep is practically nothing except the occasional renewal of a crystal at 10/- at a newspaper at 10/-.

Commissioner: Speaking for myself, I do not think that that is necessary. In the Basic Wage Commission I have heard the advocate of newspaper, rather than radio sets. Nobody needs to be told that the working-man needs the newspaper, as he can find it in 10/-.

Mr. Faulkner: So far as I know, in fixing the standard of living in the past the fact of broadcasting has not been taken into consideration.
Commissioner: Quite so.
FROM THE PROJECTION ROOM.

Captain Frank Hurley will give listeners a graphic description of the making of his new film, “Hounds of the Deep,” on Friday, September 24. Captain Hurley will punctuate his story with incidental music, and 2FC dual broadcasting will be carried out, whereby a lecture will be given from one spot and incidental music will be given from another spot, and superimposed one to another, so that the music will form an effective background to the description. This novelty, which was originated from 2FC, opens up further opportunities for broadcasting work in the future.

WEEK-END PROGRAMME.

On Saturday, the usual sporting information will be broadcast. At 8 p.m., the first act of “Katinka,” by Permission of Messrs. J. C. Williamson Ltd., will be broadcast from the Rockdale Town Hall. The opera is being produced by the Longton Operatic Society. From the Studio, a talk on “Rowing,” by Captain Fred Aaron; comic numbers, by Charles Kingsley; orchestral music from the Crystal Palace; baritone solos by Mr. Laurence Halbert; tenor solos by Mr. James Donnelly, together with a musical play especially written for 2FC by Mr. Donnelly.

The morning service will be taken from St. Mark’s, Darling Point, the evening service from Petersham Congregational Church. Mr. Conley will deal with “Boy’s Week” in the afternoon. A musical programme from the Lyceum, and in the evening an organ recital by Mr. Christina Halbert. From the studio, Mr. Cyril Monk will give his final talk on his “Travels Abroad.” After the church service, the Leichhardt Band will be heard.

CLEVER INNOVATIONS.

Two new effects have been introduced into broadcasting by Station 2FC, Sydney, within the last few days.

Firstly, 2FC transmitted from two places at once. While an announcer described Rudolf Valentino’s new picture, “Cobra,” as it was shown at the Film House, the Operatic Orchestra played at the Haymarket Theatre half a mile away. The music was “superimposed” on the words of the announcer, and the two went out on the air by radio together.

The significance of this is that henceforward the broadcasting stations will be able to join up two separate programmes from any place. A duet can be sung by artists miles apart—each hearing the words of the other by loud speaker; two musicians can play separate parts in different rooms, yet listeners will receive the two parts perfectly blended.

Secondly, Station 2FC has adopted the principle of fading in and out when changing their programmes from one concert hall to another. Hilbertio listeners have been accustomed to hear the announcer say “that Joseph Right now concludes our saloon, a regular programme from the Town Hall, we are now crossing over to the King’s Hall.” Then followed a moment of silence, and suddenly the new programme was heard. Now the Station has adopted a method of making the first programme die away in the distance, and the second is heard, at first faintly, gradually swelling in volume until it is heard on full strength.

Innovations of this kind may sound trivial, but they show the high standard to which broadcasting has been raised in Australia.

MOTOR TALKS BY RADIO.

The Traffic Department is broadcasting through Station 2ML a series of talks on traffic problems. The question of different coloured lights on vehicles is one important subject to be dealt with. The first took place last Thursday.

BURGESS—“They’re on the Leviathan”

BATTERIES.
3LO is out to Please Listeners

Once more the listeners of the State are agitating themselves about the sweet warblings of Sarah and Willie, for 3LO are broadcasting Radio Song Competition for the kiddies.

Everyone will remember how successful the last one proved. This is likely to be even more popular, both with the public and the competitors themselves.

No performer is so utterly lacking in self-confidence as a child. Generally speaking, the competitors in a competition like this are not at all nervous. That going only with later years, and the candid way they face the microphone gives joy to the enthusiasts in charge.

There can be no doubt that these tests are very useful. The radio is no comparatively recent that there is everything to be learnt, even in such a thing as voice production before a radio. Not every good voice broadcasts well, and some, not so good, come beautifully through the air. A case in point is that of Jack O'Hagan, the song writer, who watched his own efforts through 3LO. Mr. O'Hagan would be the last to claim that he had a very fine voice, yet so artistically does he sing, and so entirely does he adjust himself to the microphone, that it is probable if any other singing voice sounds as cleanly over the air of all the time can any advocate his differs from other singers, in relation to his position before the microphone, the loudness of his voice, and his methods. Further study of radio details may yield the secret.

Getting these children young and training them, may develop some natural radio voices as excellent as Mr. O'Hagan's. 3LO is always on the lookout for talent, and those kiddies are all listened to with the utmost attention, in case some one or more may show that little degree of unconventionality that may be developed into something good. 

Already, I am told, over 100 entries have been received for the three classes.

The adjudicators, Mr. Alfred Lane, is well known in Victoria. He looked forward to the tests, for he, too, is always on the look-out for talent. First and silver medals will be given as first and second voices in each of the three sections. The first in the children over 8 and under 11, who may sing any of the following songs:— "Little Tree", "Patty Robin", "Main Fancy," or any from the compilation known as "Real Australian Children's Songs."

"Hello," our 3LO correspondent, has some good news from the southern station. He discusses the children's radio voice competition and the "Fading Hunters."

The next section is for children over 8 and under 11, who may choose any song from "Recreational Songs for Children." The third section is for those under 8, who may choose any song, from "Primary Melodies," or "Songs the Children Love to Sing."

Can't you imagine the fascination that is going on in more than a hundred Australian homes just now. What a sister-washing do you know better? asks Maria of Sydney.

"Oh, there's one now," she added. "The younger ones, of course."

The last section is for children under 8, who may choose any song, from "Country Songs," or "Songs for Younger Children." The third section is for children under 8. The last 15 minutes were again devoted, with sharp, quick "fading."

So much for 3LO, Melbourne. Brisbane showed very slight fading and no interference, but 3ML and 3CF, showed both. Farmers were slightly indicative of fading, but otherwise clear. S.A.R were too weak for useful observations between Bairnsdale and Yackandah.

The expedition began at Yackandah, where they found daytime reception from 3LO very good indeed. Two circuits of very good alternated with very bad. After 19.30, fading was most marked on 3LO, 3ML, and 3CF. Farmers were clear and money, throughout. Brisbane faded slightly, but was free from fading.

The latest report came from Orbost. Conditions there were a decided improvement on Bairnsdale. Though the stations are so near together. Here the fading is not so marked. Though not pronounced. Of the four stations, Brisbane and Fremantle were at the present most consistent.

What happens to the atmosphere during these hours when the programme "goes west." That is the question for the experts to answer. The problem will be solved, of course. Man does anything he sets his mind to. One thing is certain, that the fading was not due to lack of skill in the stations themselves, but to something in the "air of the atmosphere," or the condition of the atmosphere. All that can be done is being done. Investigation being the first step.

BROADCAST GHOST STORIES.

I have been asked at some of the letters sent in to 3LO about the ghost stories being broadcast every fortnight or so from that station. Many people, whether they believe in
ghosts or not, get a decided thrill from the exciting denouement of a skilfully told story. A ghost story, if it is successful, should make the most sceptical feel just a little reluctant to leave the bright room and climb the dark stairs to bed. If it doesn't thrill, it is a dire failure.

Yet correspondents have written to 3LO, complaining that these stories are very bad for nervous people. Why on earth the nervous people, knowing that the first sentence of a ghost story is to be on the air, don't tune out and put the cat in readiness for bed, or not the support boldly, is more than I can say. It would seem that it is as impossible for these nervous wrecks to go without their ghost yarn as for a dispensary to do without his whisky. They sit with twisting nerves, ready to scream at a shadow, possibly with the lights out, in subjection to the programme order, and then write to the station about it being so bad for them. People are genuinely徐徐, there's no doubt of it.

One last paragraph, and I am done. 3LO's new studio is practically finished. Indeed, it is now in partial use, and in a week or two show visitors will be down in town, possibly wondering where the studio is from which comes so much delight. They will be shown round, and have the modern magic explained to them. They may sit down comfortably and rest their pavilioned feet, while they listen to what the programme happens to be going on. The studio is in Cambridge Buildings, Collins Street, near the old "Argus" office.

In answering readers' queries, we regret that our correspondence has reached such a volume that we have had to cease replying to queries by post. Under the new system, the Technical Editor will answer queries through the columns of the journal only. Owing to the increase of business since the inauguration of "Wireless Weekly," we are unable to answer queries made by personal callers or by telephone.

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**Wireless Weekly**

**Page Thirteen**

**Dealer Agents Wanted**

To sell up-to-date and efficient Radio Sets under our sound merchandising plan.

If you have the business organisation and sales ability to sell profitable Radio Sets we are in the position of being able to stand right behind you.

Are you ready to advance your business along the lines of a sound, sensible and constructive radio merchandising programme?

If so, tell us who you are, what your business is, the territory you can profitably cover, your financial position and your sales policy. This will be held in strictest confidence. We will then send you particulars of how we can help you.

Our Dealer-Agency is the assurance policy of your future business.

It gives you:

1. A line of the highest quality radio products to meet a demand all the year round.
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4. New stocks supplied promptly, making it unnecessary to carry large stocks.
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If you want to take the safe, sure road to lasting success, write today for full information about a Mingay's Wireless Dealer Agency in your district.

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36 ALMA STREET, DARLINGTON, N.S.W.

City Office: Dalton House, 115 Pitt St., Sydney

WHEN the Goodyear III won the right to represent the United States at Belgium, Burgess Radio Batteries supplied the electrical energy for the operation of the balloon's radio equipment.

Almost every day from somewhere in the world news comes to us of new Burgess adventures.

And that Burgess Batteries have contributed their bit in so many interesting events of sport, commerce and science reflects the esteem in which they are held.

"Ask Any Radio Engineer"

Your own radio dealer is quick to speak with Burgess Batteries. He probably sells the famous Burgess Spotlights, too. Only obtainable from High Class Dealers.

NEW SYSTEM TELEPHONES Pty. Ltd.
Melbourne —— Sydney —— Adelaide
What's on the Air in Melbourne

Miss Gwen Perham, SLO.

SHOW ITEMS POPULAR.
One of the most popular items with Melbourne's radio visitors was the transmission which SLO made three days earlier from the Show Grounds, at 12, 3, and 4 o'clock. These were heard at Knees. Allen's music stand.

NEW OPERATIC SINGER.
Among the "specially good" items to be broadcast from the SLO Studio this week, attention must be drawn to a series of dramatic recitals by Miss Davies, which should arouse considerable interest among the musical circles in and around Melbourne. Born in Victoria, Miss Davies trained at the Melbourne University Conservatorium, gained an Ormond Scholarship, and finally went to Italy to complete her studies at grand opera. This accomplished, she made several successful tours throughout Sweden, Russia, Finland, and England, scoring heavily in "Colouratura" parts. However, home ties proved too strong and she returned to her native land, partly because she wished to place her daughter, a promising young vocalist at the Conservatorium, which is, according to Madame Davies, one of the finest of its kind in the world. Choosing as models from the selections that Madame has decided to include in her broadcasting repertoire, one must visualize the inspired "Informations" from Rossini's "Stabat Mater" (in which a chorus under the able direction of Mr. Sutton Crow will lend support), "Vespro" (Gounod), and the familiar "Ave Maria" (Mendelssohn).

RAYMOND ELLIS BACK.
To all those SLO correspondents who have been reporting "where Raymond Ellis has got to," why his name has not appeared on the SLO programmes for some time late, SLO announces that, after a successful season in Sydney he has returned to Melbourne, and is again at his old post in the Studio. Many "request numbers" have poured in from all quarters—chiefly for operatic selections.

TOLD BY A SLO ARTIST.
Although Miss Gwen Barham, the popular English contralto, only arrived (per "Jarvis Bay") on August 19, she has gleaned one or two facts about Melbourne. "I was awfully disappointed to find Melbourne so modern," she said, everyone seemed to be in an awful rush, and where I expected kangaroos and adventure, I simply found business. When taking my first bus ride, the conductor eyed me thoughtfully, scratched his head, and finally said, "Are you from the Old Country?" I replied in the affirmative, wondering why he should address me. "I'm looking for a conductor," he said (here his eyes narrowed and his brain worked visibly), "one about eight stone—a light-weight." Again he pondered, and finally business commended, I prefer to be brash from the SLO Studio.

UNDILUTED PRAISE.
It is always a source of gratification to receive letters of praise—we all like our measures of appreciation, and the Directors of the SLO studio are no different from their fellow creatures. This praise is all the more valued when it comes from someone who has been "globe-traveling," and has had a chance to study broadcasting conditions and programmes in more than one country. Quite recently SLO's post bag contained such a letter. "I would like to tell you," wrote the correspondent, "that you have the finest resident orchestra that I have ever heard, although I have listened to the transmissions from most of the broadcasting stations in the principal cities of England, and America."

LONG DISTANCE WIRELESS.
Excellent long distance wireless results were achieved by the wireless officer of the T.S.S. "Hobson's Bay" on a recent voyage from Australia to England and return. The vessel was in communication with Perth radio up to 1,000 miles in daylight and nearly 5,000 miles at night, while the new A.W.A. Thursday Island radio station was worked with ease when the vessel was midway between Perth and Coral Island. When the "Hobson's Bay" was in the Great Australian Bight, all Australian stations were received during the day, while at night reception was effected from Hongkong, Japa, Manila, Honolulu, Madras, Colombo, Aden, Java, Singapore, Lisbon, Marques (East Africa), New Zealand and Suva.

The receiving set used was a standard A.W.A. P.I receiver utilizing one valve. Both the transmitting and receiving apparatus on the "Hobson's Bay" were manufactured at the Radio Electric Works of Amalgamated Wireless (A/WA) Ltd.
BURNS PHILP TOURS

JAVA

The Wonderland of the East

Famous Temples
Interesting People

Native Bazaars
Tea Gardens

Regular Monthly Sailing by the Favorite Liners—

“MARELLA” —— 7,375 Tons
“MALABAR” —— 5,000 Tons
Via the picturesque Torres Straits Route

Full particulars from
BURNS PHILP & CO. LTD.
BRIDGE STREET, SYDNEY
Make a Regenerative Interflex for Farmer's New Wavelength

A single control receiver which is selective and yields astounding volume on the loud speaker. The circuit is reproduced above.

Now that station 2FC has brought its wavelength down to 445 metres, the design of many sets will be altered considerably. Cell changing—the bane of many receivers—will now not be necessary, and those sets so equipped will, we feel sure, gradually disappear.

Multiplicity of controls on a receiver often makes it difficult to receive any station at its best and leaves opportunities for the set owner to tinker with the knobs and dials, much to the annoyance of the rest of the family.

What is Ideal Set?

Were you to ask anyone to tell you what is considered the ideal radio set, you would invariably be told that such a set should only have a single control. No doubt you would also be told that there should be no batteries, etc., but simply an arrangement whereby the power for the valves could be obtained by simply plugging into the electric light socket. This latter possibility is gradually becoming practicable, but we have no hesitation whatever in recommending this receiver as a single control which lives up to its name.

Regenerative Interflex.

Looking through some old radio publications, we came across this Regenerative Interflex, which was originally described by that well known American, Hugo Gernsback.

Such outstanding claims were made for it that we built it and found it extremely efficient. Remarkable volume and clarity resulted, and stations which were easily tuned in and maintained on the loud speaker. When properly balanced you will be surprised at the wonderful results obtainable even on the first valve alone. The first valve is not a detector—actually it is an amplifier, the crystal acting as a detector. The crystal must necessarily be neither, hence the specification of the earthenware detector already popularized in these pages.

Crystal Action Explained.

Although the crystal acts as a detector, it acts in a resistance, which, if too great, will tend to stop oscillation and thereby unbalance the circuit. Again, of course, if the crystal shows too little resistance, it will be found somewhat difficult to control oscillation.

It will be readily understood that, as in valves, no two crystals are alike. It therefore follows that some means of recouping the crystal to the valve is necessary.

The method adopted is filament adjustment of the valve, and for this purpose a Bradleystat is incorporated in the receiver. Once this Bradleystat is properly adjusted it need seldom be touched again; in fact, only when new batteries are installed, or when a new valve is inserted. As a further means of stabilizing the crystal detector a miniature condenser is necessary. For the sake of space and also efficiency, we should certainly advise constructors to use the Mikro Mite specified in the list of parts on page 21. This is a neat little arrangement and is most suitable.

Filament Wiring.

It will be seen that Amperites are used instead of rheostats, thereby ensuring the number of controls. When purchasing your amperites specify the type of valve you intend using, as there are different Amperites for different valves. Also you will notice that filament control jacks are employed in such a fashion that when you plug into the double open circuit jack, one valve only lights up, the three valves being used when you
Such a panel view of the Resonator receiver showing Flexo-Coupler.

Panel Layout.

Looking at the back of panel view of the receiver one of the most outstanding features is the flexo-coupler. This type of coupler is the only kind suitable for this receiver. As you will perceive from the drawings given here very little difficulty should be experienced in making this flexo-coupler. Study the drawings carefully before you proceed and everything will be plain sailing. Should any difficulty be met with in tapping the spindle hole in the top supporting strip B, here is a means of overcoming it.

Instead of threading the whole length of the spindle rod, simply cut a thread for say 3½ inches, just sufficient to take the coil with the attendant wires and nuts. The spindle hole in the top supporting strip B may now be drilled with a 3/16 inch bit and tapped with a bronze or more frequently to be found in a Rotary switch. These bushings are invariably just the right size to allow the 3/16 inch rod to pass through nicely, but should the rod slide too freely, a small cut extending about half way up the thread will leave a small opening which may be pressed cleanly with a pair of pliers and thereby give the grip to the spindle which will prevent the tension coil from slipping right down to the bottom. Don’t balk at making this flexo-coupler; it is really quite a simple little job and the balelite tube and end and all other materials are easily obtainable.

Wiring.

The wiring will be found very easy; indeed, a certain amount of care being necessary with the jack. The circuit diagrams will show the wiring a little more clearly perhaps than the back of panel. Wire up carefully reconnecting the circuit diagrams with the back of panel diagram. Where soldering is noted can be most particular with this. A well annealed, good clean, but soldering iron with

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National Library of Australia
some soft solder and a tin of flux are an invaluable asset to any radio constructor. Don't simply stick your busbar together, but allow the iron to remain on the joint long enough to permit the solder to run freely. A damp rag to wipe the excess flux off after soldering is an excellent thing and certainly prevents any corrosion which may take place, as well as leaving a nice clean job. Be careful not to spread too much flux around your joint contact—a very small portion applied with a match is ample.

Where the busbar is gripped between nuts and terminals, make sure that good contact is made by tightening every nut well with the pliers. Don't be satisfied with the finger tightness only—it will create trouble later on.

When you complete the wiring, check over all your work, carefully rectifying any errors which may have crept in.

The Tickler Loads are Important.

Don't solder those three at first, as the set will only function with the tickler loads connected in one way. Don't connect these permanently until you find which type of valve suits you best. That makes them permanent by soldering.

Operation.

Moreover, granted that everything is wired correctly, proceed to connect up your A and B batteries, parallel and earth, and plug in your microphone on the first valve. You will no doubt find that 226 volts is ample for the first valve and between 50 and 80 for the second and third valves.

Balancing.

Immediately you plug in your phone, push or screw your tickler down very near to the bottom of the unit and tune with the variable condenser. The receiver should oscillate violently—if it doesn't do this, move your tickler up and down until it equals, and bring it back a little. If you cannot stop the squalling, adjust the Micro Mite. Use a long, sharpened stick for this purpose or a long wooden handled screwdriver and slowly screw down your receiver plate (a screwdriver is provided for the purpose), until the howl diminishes. Don't leave your coupled during this process.

Having stopped the squalling, adjust your Bredgirestat. An infinitely variable rheostat is useless here as the adjustment is so critical, that even eighth of a turn will make all the difference in the world. Perhaps you will find that a very high hiss is taking place showing that your filament is too bright. Slowly reduce your filament until the hissing is eliminated and then readjust your tension coil and Micro Mite until maximum results are obtained.

We will admit this operation of balancing requires a certain amount of care, but it is worth it, as when properly balanced, you need never worry with it again unless you install a new valve or renew your B batteries, when the howl will be picked up on the Bradleystat alone.

Speaking of valves, by the way, reminds us that all valves are not suitable for detectors. Some valves work better in one position than in another. Change your valves about until you find just the best position for each individual valve.

Read over again the two previous paragraphs and understand the balancing of the set. Let us impress upon you again just how critical the Bradleystat adjustment is. All the hisses and squawks should be eliminated from the set, and this is done by locating the correct position of the reaction coil, the Micro Mite and the Bradleystat.

Minor Points.

It may be advisable to reverse the leads of the detector. Don't hesitate to do this, as, often much better results may accrue.

Again the .00025 fixed condenser is most important. It may be advisable to change that band of this condenser which is connected to the B to 223 volts to the B-. Try it anyhow.

Should an audio howl develop when you plug in your speaker, this can quickly be eliminated by inserting a fixed condenser across the secondary of the second transformer, or perhaps from the grid to the B- of the transformer. It may even be possible that you have used two different makes of transformers the terminals of which don't agree. If a high pitched whistle results, try reversing the leads of one transformer. Either of these methods will cure this whistle.

The person who builds this set will have a receiver to be proud of. Just think of it— one control, easy, so easy in fact, that anyone can turn the dial and bring in the intermediate stations one after another. The tone quality is excellent—the crystal detector transmits that, and the volume is terrific. Take some pains over it and you will be well repaid.
"SFERAVOX"

(Pronounced "SERRAVOX")

The Masterpiece of Cone Speakers

Purity of Tone.

Powerful.

Toned in Silver.

Distortionless.

Moderately Priced £5-5-0

Produced by

Societe Francaise Radio Electronique Paris

Installed

Hearing one before buying your Speaker

In order to appreciate the qualities of a SFERAVOX, it is necessary to listen to a pure transmission taken off by a receiving set of such quality as not to cause distortion in the set. Transmissions are not by any means uniform in purity and thus a single test will not be conclusive unless the reproduction is absolutely perfect. The "SFERAVOX" does not distort the tone in any way, but reproduces everything that is put into it by the receiving set and thus it may be taken for granted that if the reproduction is pure, the fault lies in the listener.

Australian Representatives: BROWN & DUREAU, Ltd.

Adel at Melbourne, Perth, Brisbane, Auckland & Wellington, N.Z.
Brighton House, Clarence St., Sydney
The list of parts enumerated here-with are necessary to construct the most excellent receiver. When purchasing them, be advised to obtain good quality parts, as it often happens that cheap shoddy parts are next to useless, the efficiency of the receiver being greatly impaired.

Care of the Condenser

Not only does this apply to the Regenerative Interflex, but to all other receivers irrespective of the circuit employed. Be careful of the condenser in particular. It often happens that the moving plates touch the fixed plates at different parts. Overcome this by straightening out the wrongly spaced plates to ensure free running.

Look carefully to your valve sockets and see that the spring contacts are of sufficient tension to ensure good contact with the valve pins. Nothing is more annoying than a rattle in a receiver — it is generally hard to locate, and bad spring contacts often are the cause.

Pay attention to these minor details and the Regenerative Interflex will serve you as well as it has served us. Sensitivity, volume, clarity and selectivity are ensured.

List of Parts:
1. Diode Panel, 25 x 7 x 8/16 inches.
2. 0.054 variable condenser.
3. Dial (thermistor preferred).
4. Valve sockets.
5. Audio transformers.
7. Acrophonics.
8. Filament control jack (double open circuit).
9. 0.0025 fixed condenser.
10. 0.01 fixed condenser.
12. Fuses and fuses.
13. Terminals no strip.

The Regenerative Interflex is a decided affinity, a quite definite link between each Edison Receiving Valve and Edison Power Valve. The Receiving Valves are supplied either H.F. or L.F., and the best Power Valve to use is shown in the table below.

THE RIGHT VALVES in the Right Place!

T. E. E. is a decided affinity, a quite definite link between each Edison Receiving Valve and Edison Power Valve. The Receiving Valves are supplied either H.F. or L.F., and the best Power Valve to use is shown in the table below.

EDISWAN VALVES

Leading Dealers Sell Them!

EDISON SWAN ELECTRIC CO. LTD.
38 Clarence Street, SYDNEY
Also at Melbourne, Brisbane and Adelaide

THE VALVES TO USE:

<table>
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<th>Receiving or Driving Valve</th>
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<td>A.R.E.</td>
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<td>A.R.H.</td>
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With above groups and Vedone: H.F. and L.F. Accumulators the kind is similar.

PRICES:

| A.R.E.                    | 1/2   |
| A.R.H.                    | 1/2   |
| A.H.E.                    | 1/2   |
| F4                        | 1/2   |
| F9                        | 1/2   |
| F5                        | 1/2   |
| F9                        | 1/2   |
| F4                        | 1/2   |

Next Week’s Article.

It is proposed to give full constructional details of a 4 valve Browning Drake receiver next week. This receiver also boasts of the quality of selectivity and is really very simple of control. Look out for it.

PHONE HEADACHE

Most of those who have had to wear telephone listeners for long periods on end in the course of experimental work will have experienced the unpleasantness of phone headache, which is brought about by the pressure of the bands on the top of the head.

To minimise this inconvenience the bands should be shaped as nearly as possible to fit the head. This can be done by starting at the middle of one band and working downwards the earpiece with the thumb and fingers, gradually straightening or curving as you go. When one of the bands has been dealt with the other should be treated in the same way.

When the bands have been made as comfortable as possible in this way, a small pad made of soft material should be fixed to the middle of them.
Broadcasting Programmes for the Coming Week

Friday, Sept. 24

2 B L

The wireless weekly : the hundred per cent Australian radio journal
S-A Talk
10 down.

12. London evening
12.15 - Foreman, piano.
12.30 - Choral music.
12.45 - Choral music.
1.00 - London evening
1.15 - London evening

8.18 - Sopranos by Edith Wilmot, M.A.
8.10 - Piano forte by Mrs. Blackburn and Mr. Blackburn.
8.00 - Opera.
6.45 - Mr. Thomas, tenor.

9.00 - Maestro and chorus.
9.15 - Piano forte by Mr. Blackburn.
9.30 - Operatic "Aida", by Mr. Blackburn.
10.00 - Maestro and chorus.
11.00 - Maestro and chorus.
12.00 - London evening.

11.00 - Maestro and chorus.
11.15 - London evening.
12.00 - London evening.

2 GB

8.00 - "Children's Hour" by Pastel, Edward借钱.
8.15 - Rose of London, piano.
8.30 - "Children's Hour" by Pastel, Edward借钱.
8.45 - "Children's Hour" by Pastel, Edward借钱.
9.00 - "Children's Hour" by Pastel, Edward借钱.

2 KY

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8.15 - Rose of London, piano.
8.30 - "Children's Hour" by Pastel, Edward借钱.
8.45 - "Children's Hour" by Pastel, Edward借钱.
9.00 - "Children's Hour" by Pastel, Edward借钱.

3 LO

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8.45 - "Children's Hour" by Pastel, Edward借钱.
9.00 - "Children's Hour" by Pastel, Edward借钱.

4.20 - "Children's Hour" by Pastel, Edward借钱.
4.30 - "Children's Hour" by Pastel, Edward借钱.
4.40 - "Children's Hour" by Pastel, Edward借钱.
5.00 - "Children's Hour" by Pastel, Edward借钱.
5.15 - "Children's Hour" by Pastel, Edward借钱.
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8.00 - "Children's Hour" by Pastel, Edward借钱.
8.15 - Rose of London, piano.
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10.15 - Rose of London, piano.
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10.45 - "Children's Hour" by Pastel, Edward借钱.
11.00 - "Children's Hour" by Pastel, Edward借钱.
11.15 - Rose of London, piano.
11.30 - "Children's Hour" by Pastel, Edward借钱.
11.45 - "Children's Hour" by Pastel, Edward借钱.

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The wireless weekly : the hundred per cent Australian radio journal

WIRELESS WEEKLY

September 24, 1926.

Evening Session.
8.00 - "Children's Hour" by Pastel, Edward借钱.
8.15 - Rose of London, piano.
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11.00 - "Children's Hour" by Pastel, Edward借钱.
11.15 - Rose of London, piano.
At 10:10 AM, "Anthem,"

10:30 AM: "Sonora Reel".

11:00 AM: "Spacelab Report".

11:20 AM: "Sonora Reel".

11:30 AM: "J. M. O. W. A. Ltd.".

11:45 AM: "The Australian Daily Report".

12:00 PM: "Radio News".

12:15 PM: "Sporting Feature, Mr. T. D. Binns:"

12:30 PM: "Sonora Reel".

12:45 PM: "Sonora Reel".

1:00 PM: "Sonora Reel".

1:15 PM: "J. M. O. W. A. Ltd.".

1:30 PM: "Radio News".

1:45 PM: "Sporting Feature, Mr. T. D. Binns:"

2:00 PM: "Sonora Reel".

2:15 PM: "J. M. O. W. A. Ltd.".

2:30 PM: "Radio News".

2:45 PM: "Sporting Feature, Mr. T. D. Binns:"

3:00 PM: "Sonora Reel".

3:15 PM: "J. M. O. W. A. Ltd.".

3:30 PM: "Radio News".

3:45 PM: "Sporting Feature, Mr. T. D. Binns:"

4:00 PM: "Sonora Reel".

4:15 PM: "J. M. O. W. A. Ltd.".

4:30 PM: "Radio News".

4:45 PM: "Sporting Feature, Mr. T. D. Binns:"

5:00 PM: "Sonora Reel".

5:15 PM: "J. M. O. W. A. Ltd.".

5:30 PM: "Radio News".

5:45 PM: "Sporting Feature, Mr. T. D. Binns:"

6:00 PM: "Sonora Reel".

6:15 PM: "J. M. O. W. A. Ltd.".

6:30 PM: "Radio News".

6:45 PM: "Sporting Feature, Mr. T. D. Binns:"

7:00 PM: "Sonora Reel".

7:15 PM: "J. M. O. W. A. Ltd.".

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1:15 AM: "J. M. O. W. A. Ltd.".

1:30 AM: "Radio News".

1:45 AM: "Sporting Feature, Mr. T. D. Binns:"

2:00 AM: "Sonora Reel".

2:15 AM: "J. M. O. W. A. Ltd.".

2:30 AM: "Radio News".
WIRELESS WEEKLY
September 24, 1926

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10 o'clock.

3 AR
Morning Service.
11.45-Flute from Mr. W. E. Ferguson.
11.30-Hymn, "Morning Light" (L.M.1.2).
11.20-Norfolk Anthem Choir, conducted by Mr. W. E. Ferguson.
11.10-The Bell from St. James' Old Cathedral.
11.00-Service from Church of Christ, Stanley Street.
10.40-Mr. R. E. Ferguson, Organist.
10.30-Mrs. C. E. Hill, Accompanist.
10.00-Service from Uniting Church.
9.45-Mr. C. E. Hill, Accompanist.
9.15-Mr. R. E. Ferguson, Organist.
9.00-Mr. W. E. Ferguson, Organist.
8.45-Address at "The Bell" and announcements.
8.40-Sermon from St. Peter's Congregational Church, "Elderly advice and its value.
8.30-Service from the Presbyterian Church, Macleod Street, conducted by Mr. W. E. Ferguson.
8.20-Mr. E. J. J., Organist.
8.15-Mr. W. E. Ferguson, Organist.
8.05-Mr. C. E. Hill, Accompanist.
7.50-Mr. W. E. Ferguson, Organist.
7.45-Mr. W. E. Ferguson, Organist.
7.30-Mr. W. E. Ferguson, Organist.
7.15-Mr. W. E. Ferguson, Organist.
7.00-Mr. W. E. Ferguson, Organist.
6.45-Mr. W. E. Ferguson, Organist.
6.30-Mr. W. E. Ferguson, Organist.
6.15-Mr. W. E. Ferguson, Organist.
5.45-Mr. W. E. Ferguson, Organist.
5.30-Mr. W. E. Ferguson, Organist.
5.15-Mr. W. E. Ferguson, Organist.
5.00-Mr. W. E. Ferguson, Organist.
4.30-Mr. W. E. Ferguson, Organist.
4.00-Mr. W. E. Ferguson, Organist.
3.30-Mr. W. E. Ferguson, Organist.
3.00-Mr. W. E. Ferguson, Organist.
2.30-Mr. W. E. Ferguson, Organist.
2.00-Mr. W. E. Ferguson, Organist.
1.30-Mr. W. E. Ferguson, Organist.
1.00-Mr. W. E. Ferguson, Organist.
0.30-Mr. W. E. Ferguson, Organist.
0.00-Mr. W. E. Ferguson, Organist.

Morning Service.
11.00-Service from the Ladies' Benevolent Institution, conducted by Mr. W. E. Ferguson.
10.45-Mr. W. E. Ferguson, Organist.
10.30-Mr. W. E. Ferguson, Organist.
10.15-Mr. W. E. Ferguson, Organist.
10.00-Mr. W. E. Ferguson, Organist.
9.45-Mr. W. E. Ferguson, Organist.
9.30-Mr. W. E. Ferguson, Organist.
9.15-Mr. W. E. Ferguson, Organist.
8.45-Mr. W. E. Ferguson, Organist.
8.30-Mr. W. E. Ferguson, Organist.
8.15-Mr. W. E. Ferguson, Organist.
7.45-Mr. W. E. Ferguson, Organist.
7.30-Mr. W. E. Ferguson, Organist.
7.15-Mr. W. E. Ferguson, Organist.
6.45-Mr. W. E. Ferguson, Organist.
6.30-Mr. W. E. Ferguson, Organist.
6.15-Mr. W. E. Ferguson, Organist.
5.45-Mr. W. E. Ferguson, Organist.
5.30-Mr. W. E. Ferguson, Organist.
5.15-Mr. W. E. Ferguson, Organist.
4.45-Mr. W. E. Ferguson, Organist.
4.30-Mr. W. E. Ferguson, Organist.
4.05-Mr. W. E. Ferguson, Organist.
3.30-Mr. W. E. Ferguson, Organist.
3.00-Mr. W. E. Ferguson, Organist.
2.30-Mr. W. E. Ferguson, Organist.
2.00-Mr. W. E. Ferguson, Organist.
1.30-Mr. W. E. Ferguson, Organist.
1.00-Mr. W. E. Ferguson, Organist.
0.30-Mr. W. E. Ferguson, Organist.
0.00-Mr. W. E. Ferguson, Organist.

The wireless weekly : the hundred per cent Australian radio journal

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The Battery is a Vital Part

A good battery is essential to the efficient working of your set, since so much depends on its power and reliability.

Ever-Ready Radio Batteries represent the highest value in long and efficient service. This is the reason for their widespread popularity. Your dealer has a type to suit every purpose.

EVER-READY

NEW EVER-READY No. 116, or A, B, or C Battery
One of a group of radio batteries. Useful in winter, summer, and emergencies. Easy to handle, fitting all standard dry cell radio sets, it is always ready to go. With these three types, there is no lack of reliable cells for all service purposes as well as general utility.

The Standard

Dry Cell Radio Battery

Price: £1.00

The Ever-Ready "Standard" Dry Cell Radio Battery is illustrated. It is fitted with say five terminals, and since its introduction has met with great success, having superiority over any imported cell. This cell is No. 10. Weight 6 lbs. Also for sale, high-tension, motor, and electrical appliances, etc.
WIRELESS WEEKLY
September 24, 1936

6.2-Australian House Orchestra, under the direction of Mr. Eric Mervyn. 6.2.1-Two lawn tennis matches, 541 & 542, Grasmere Park, Underwood.

1.3.4-Gallic Football Team, under the direction of Mr. Eric Mervyn. 1.3.4.1-2 lawn tennis matches, 541 & 542, Grasmere Park, Underwood.


7.4.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins. 7.4.1.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins.

8.2.5-The Australian National Orchestra, under the direction of Mr. Eric Mervyn. 8.2.5.1-The Australian National Orchestra, under the direction of Mr. Eric Mervyn.

9.3.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins. 9.3.1.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins.

10.3.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins. 10.3.1.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins.

11.4.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins. 11.4.1.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins.

12.4.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins. 12.4.1.1-From the Studio, "The Rich Girl Who Tried" by Mr. William Collins.

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2BL
Early Morning Sessions

2.0-From the Studio, 1.0-From the Studio.

2BL
Morning Sessions

10.0-From the Studio, 10.0.1-From the Studio. 10.0.2-From the Studio.

6.0-From the Studio, 6.0-From the Studio.

3.0-No. 201, Underwood, Market Radio. 3.0.1-No. 201, Underwood, Market Radio. 3.0.2-No. 201, Underwood, Market Radio.

9.0-From the Studio, 9.0.1-From the Studio. 9.0.2-From the Studio.

3.0-From the Studio, 3.0-From the Studio.

4.0-No. 201, Underwood, Market Radio. 4.0.1-No. 201, Underwood, Market Radio. 4.0.2-No. 201, Underwood, Market Radio.

8.0-From the Studio, 8.0-From the Studio.

4.0-From the Studio, 4.0-From the Studio.

5.0-No. 201, Underwood, Market Radio. 5.0.1-No. 201, Underwood, Market Radio. 5.0.2-No. 201, Underwood, Market Radio.

7.0-From the Studio, 7.0-From the Studio.

5.0-From the Studio, 5.0-From the Studio.


8.0-From the Studio, 8.0-From the Studio.

6.0-From the Studio, 6.0-From the Studio.

7.0-No. 201, Underwood, Market Radio. 7.0.1-No. 201, Underwood, Market Radio. 7.0.2-No. 201, Underwood, Market Radio.

8.0-From the Studio, 8.0-From the Studio.

7.0-From the Studio, 7.0-From the Studio.

8.0-No. 201, Underwood, Market Radio. 8.0.1-No. 201, Underwood, Market Radio. 8.0.2-No. 201, Underwood, Market Radio.

8.0-From the Studio, 8.0-From the Studio.

7.0-From the Studio, 7.0-From the Studio.


8.0-From the Studio, 8.0-From the Studio.

9.0-From the Studio, 9.0-From the Studio.


8.0-From the Studio, 8.0-From the Studio.

9.0-From the Studio, 9.0-From the Studio.

The wireless weekly: the hundred per cent Australian radio journal

**WIRELESS WEEKLY**

**Page Twenty-eighth**

**Mighty Search**

**5 CL**

**Morning Searches**

11.15—E.P.O. (London).  
12.00—Boston (U.S.A.).  
12.15—Boston (U.S.A.).  
12.30—Boston (U.S.A.).

**Afternoon Searches**

14.00—E.P.O. (London).  
14.45—New Zealand Station.  
15.00—Boston (U.S.A.).  
15.15—Boston (U.S.A.).

**7 ZL**

**Morning Searches**

12.00—Boston (U.S.A.).

**Afternoon Searches**

14.00—E.P.O. (London).  
14.45—New Zealand Station.  
15.00—Boston (U.S.A.).  
15.15—Boston (U.S.A.).

**NOTICE! SUPER HETERODYNE RECEIVING SETS COMMONWEALTH PATENT 10552/20**

To MANUFACTURERS—SELLERS—USERS—of the above type of Wireless Receiving Sets.

A License under the above Patent is required by all manufacturers, sellers and users of Super Heterodyne Wireless Receiving Sets.

Full information will be furnished on application to STANDARD TELEPHONES & CARLES (A.S.H.A.) LTD., Box 523-B, General Post Office, Sydney.

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WIRELESS WEEKLY

September 26, 1926.

Section A.

H.C.D. (Hundred per Cent Australian) Wireless Society:

Section B.

Section C.

Section D.

Section E.

Section F.

Section G.

Section H.

Section I.

Section J.

Section K.

Section L.

Section M.

Section N.

Section O.

Section P.

Section Q.

Section R.

Section S.

Section T.

Section U.

Section V.

Section W.

Section X.

Section Y.

Section Z.

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WIRELESS WEEKLY

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3AR Morning Service.
11.30—The British Empire Handbook from the Royal College of Science, London. Read by Mr. W. J. H. May, M.A.
12.45—Squads
13.15—National News, Commercial
13.60—Music

Afternoon Service.
15.00—Ministry of War, London.
15.15—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
15.30—Mr. John Jones, M.B.E., from the British Broadcasting Corporation, London.
15.45—Ministry of War, London.
16.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
17.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
17.15—Ministry of War, London.
17.30—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
17.45—Ministry of War, London.
18.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
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18.45—Ministry of War, London.
19.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
20.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
20.15—Ministry of War, London.
21.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
22.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
22.15—Ministry of War, London.
22.30—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
22.45—Ministry of War, London.
23.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
23.15—Ministry of War, London.
23.30—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
23.45—Ministry of War, London.
24.00—Mr. Henry Smith, M.B.E., from the British Broadcasting Corporation, London.
Now is the time for Toroidal Coils! Maximum Efficiency. No magnetic field.

All-American Toroidal Coils

Range with 65005 Con-troller 125 to 550 Metres

FOR GREATER EFFICIENCY.

In this case, the design of the radio tube is such that the radio tube is resonant with the inductance and has the same normal resonance. This is due to the resonant properties of the spiral coil, and the coil can be tuned for best results by adjusting the turns to obtain the best resonance.

Web address: www.wirelessweekly.com

Amplifiers

Receivers

Kit Complete £3.19

N.E.A. Australian Distributors

O. H. O'BIEN, Sydney

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105 Collins St., Melbourne

W. E. PETERMAN, Perry House, Brisbane.
The World's Wireless

Standard Loud Speaker.

We carry a full range of these world-famous speakers. Featuring every factor essential to perfect radio reproduction, the "Amplion" are recognised amongst the experts of the wireless world, as being the last word in loud speakers.

"Dragonfly" Model A.R. 102 (as illustrated). Overall height, 8 in. Diameter of flare, 5¼ in. Price... £1/5/-

"Junior" Swan Neck Model A.R. 38 (as illustrated). Overall height, 20 in. Diameter of flare, 10 in. Price... £3/-

"Radio-Blender" Junior Model (as illustrated). Width, 14 in. Height, 23 in. Type R.S. 50. English oak finish... £7/10/-

"Radio-Blender" Senior Model (as illustrated). Width, 14 in. Height, 23 in. Depth, 9 in. Type R.S.13/M. English mahogany... £11/10/-

"Radio-Blender" Junior Model. Overall height, 20 in. Diameter of flare, 14 in. Height, 16 in. Type R.S. Junior Oak... £9/10/-

Hear any of these speakers demonstrated under the most favourable conditions in our sound-proof Audition Room.

BUILD IT YOURSELF!

A 6-Valve Neutrinoine Set... £13 0 0
A 4-Valve Set. Browning Complete set of parts... £11 8 6

Mick Simmons Ltd
"The World's Greatest Sport Store"
Headquarters: HAYMARKET, SYDNEY
And at BRISBANE

September 24, 1935.

The Wireless Weekly: the hundred per cent Australian radio journal
The wireless weekly : the hundred per cent Australian radio journal
"Dad— I want these batteries"

That's the actual recommendation from Boyland. A spontaneous, genuine and positive expression of preference.

Based upon—perhaps the building and publishing of an after sales network to extend the lifetime and improving of service equipment.

And what is more obvious that those youngsters, who in your family first receives improved reception through the addition to your set of newly arrived and superior parts?

It is not surprising then that every day, everywhere, what Dad says batteries, he requests the expansion of recommendation of his young audience. And when he says, Dad, I want those batteries with the black and white stripes—well, what would you say?

Only available from High-Class Dealers

NEW SYSTEM TELEPHONES PTY. LIMITED
206 CASTLEREACH STREET, SYDNEY
Also Melbournes and Adelaide

BURLGESS RADIO BATTERIES

burghess—Constant satisfaction assured—BATTERIES.

Is a Radio Set a Necessity?

(Continued from Page 37)

Mr. Allport (member of the Commission): What is the cost of a machine to be sold—Mr. Faulkner: At least £30 I think should be paid by a man who intends to use his radio set for business in that way.

Commissioner: Is there anything else you wish to add?—Mr. Faulkner: Yes, I wanted to take a moment on the question of fixing time accurately, which I suggest has a definite influence in the general standard of life.

Commissioner: The evidence you have given about the cost of radio will be important if the Commission decides that radio ought to be included in the standard of living?—Mr. Faulkner: I should like to suggest that talks on cooking and cooking recipes are broadcast from the stations two or three times a week. This has a bearing on the cost of living.

Commissioner: I think we all know about that.

Mr. Faulkner: Radio has a further interest to listeners on account of the broadcasting of sporting information—results of races, talks on form.

Mrs. K. Night (member of the Commission): Oh, give you a horse winner? (Laughter).

Mr. Faulkner: The broadcasting stations give you the winners either an hour past the post or within a few minutes after. The special turf commentaries of the broadcasting stations also give you a good idea before the race of what animals are likely to win (Laughter).

Mr. Faulkner, who had a business of men in his 20's, seemed prepared to consider his evidence all day, but the remainder indicated that the cost of radio was the only thing he was interested in, so this exceeded the witnesses' evidence.
A Great Improvement in Valve Design

Filament, Grid and Anode are now secured at top and bottom in the new Cossor Point One.

Sectional view of the elements in the new Cossor Point One.

Tests prove a great increase in life. A further improvement over the present valve design, this new model is the result of the painstaking research and development carried out in the laboratories of the Cossor Valve Company. The new Cossor valves are now available at all radio and electrical dealers.

The New Cossor Point One

13/6 (Combination 1 amp.)
13/6 (Combination 2 amp.)
17/6 (Combination 3 amp.)

All operate at 1.4 volts.

Wholesale only from United Distributors
Sydney: 71 Clarence St.
Melbourne: Queens, 1201

The New Cossor Stentor Two

12-14/6 (Combination 1 amp.)
14-16/6 (Combination 2 amp.)
20-25/6 (Combination 3 amp.)

All operate at 1.4 volts.
Build it Yourself

EVEN if you have never built a RADIO SET before in your life, you can build one now.

The COLMOVOX Ready-to-wire Set with a fine, polished maple cabinet, equipment already mounted on a panel of pure bakelite, is accompanied by a detailed wiring diagram showing how to fit up the receiver, wire for wire.

TWO VALVE SET

With polished maple cabinet and all panel equipment, wiring diagram, wire, solder, etc., but without coils

Accessories required to fully equip this set are as follows:

9 Valves, Radiotron, Philips, Gec or De Forest
5 Mounted coils, covering 300-1500 metres
2 15 Columbia dry cells
1 Pair Headphones
1 60-watt high tension battery
15 ft. Aerial wire
15 ft. Lead-in wire and 4 insulators
£ 10 0

THREE VALVE SET

With polished maple cabinet and all panel equipment, wiring diagram, wire, solder, etc., but without coils

Accessories required to fully equip this set are as follows:

9 Valves, Radiotron, Philips, Gec or De Forest
5 Mounted coils, covering 300-1500 metres
1 15 Columbia dry cells
1 Pair Headphones
1 40-watt high tension battery
100 ft. Aerial wire
15 ft. Lead-in wire and 4 insulators
£ 20 8

FOUR VALVE SET

With polished maple cabinet and all panel equipment, wiring diagram, wire, solder, etc., but without coils

Accessories required to fully equip this set are as follows:

9 Valves, Radiotron, Philips, Gec or De Forest
7 Mounted coils, covering 300-2500 metres
2 15 Columbia dry cells
1 Pair Headphones
1 100-watt high tension battery
100 ft. Aerial wire
15 ft. Lead-in wire and 4 insulators
£ 3 0

THE RADIOLUX

ADULTS 10S50. The latest
Cradle in the 5-valve
series.

COLVILLE MOORE WIRELESS SUPPLIES LIMITED
10 ROWE STREET - (Near Hotel Australia) - SYDNEY
THE GILFILAN NEUTRODYNE

The normal arrangement of the operation of ZPC's (Sydney) wavelength to 420 metres, immediately brings to notice of the experienced radio amateur the Neutrodyne receiver. All the important broadcasting stations in Australia and New Zealand are now operating on wave lengths between 400 and 600 metres, which is the wave length range of the Neutrodyne receiver. The Neutrodyne method of reception has everything to recommend it, and when one has handled a Neutrodyne, like the Gilfillan G.N., one will be convinced that the detector is far beyond the rest in other types of receivers. Mason Harrington Limited, the Australian and New Zealand agents for the Gilfillan Neutrodyne, have sent us a copy for test and the results are truly remarkable. The outstanding features are:

(1) Selectivity.—No matter how close your home is situated to a local broadcasting station, it can be tuned out with ease, and all foreign and New Zealand stations tuned in on as much strength as is required.

(2) Sensitivity.—The Gilfillan Neutrodyne is extremely sensitive, being one of the weakest signals will, good local stations strength, and remarkable clarity, entirely free from any hum or hiss, it is impossible to make the Gilfillan Neutrodyne receive

(3) Simplicity.—The matched dial operation, the absence of vacuum and so-called "interference" makes the simplicity of the Gilfillan Neutrodyne appeal to the non-technical broadcast. For example, in town in 3LO, Melbourne, a station at the wave length chart shows that each of the three dials is to be set on No. 52, and with receiving receiver like New Melbourne station comes in sound as sharp as a knife.

It seems almost too good to be true to be able to bring in stations over 1000 miles distant, at almost the same strength as the local stations. Can one listen to the stations from 1100 miles away, and yet be able to receive them with perfect clarity. The writer tested the circuit of the Gilfillan five times, and night after night the performance were duplicated by merely turning the dials to the previous logging position.

Above is shown the front view of the Gilfillan G.N. receiver. The three tuning dials are on the left, while the volume controls and dials are on the extreme right. Above those is the combined "A" and "B" battery voltmeter.

Technical Details of the Receiver.—

The receiver is a four-valve Neutrodyne, and it is built to keep pace with the latest American practice. The majority of the spacers is mounted on a sub-plate, and the tuning is held beneath them. The selection of this scheme of tuning gives the receiver a clean appearance, and has something to do with the efficiency by removing the varying loads from the electrical fields of the inter-Iormers and the tuning condensers.

Indispensable to all Crystal users

Built around the Carborundum Filtral detector in this simple, highly efficient stabilizing device. By adjusting the detector resistance to match the circuit it absolutely controls self-vibration in the radio frequency range. Diodes operation at point of regeneration.

To give greater sensitivity—increased selectivity—greater speed.

The Carborundum Stabilizing Detector Unit gives a potentiometer controlled heater voltage to the Carborundum Filtral Detector.

A small hand flashlight battery is all it needs. The unit comes equipped with the genuine Carborundum Detector.

The Genuine Carborundum Detector consists of a potentiometer controlled heater voltage to the Carborundum Filtral Detector.

The Genuine Retailers:

- Economic Radio Stores
- Harrington Ltd.
- Folen & Co., Ltd. Collin
- Easton Moons Wireless Co.
- Milne and Hume Ltd.
- West Adelaide Supplies
- Radio Supplies, Pty., Ltd.
- Morris Wilkinson Park Street, Ltd.

Who guarantee them fully

Sale Wholesale Agents:

E. Eliza Tinsley, Pty. Ltd.
484 Kent Street, Sydney
614405 Eureka Street, Melbourne
Charges while you sleep

Buy a Philips Charger and you have a never failing supply of filament current from your “A” battery. No more spoil programmes, no more disappointments through the battery failing. A child can use this Charger as easy in it to attach. It is absolutely needless in use and charges while you sleep. When you install a Philips Charger, your “A” battery troubles are ended.

ASK YOUR DEALER TO DEMONSTRATE IT TO-DAY

PRICED EVERYWHERE AT 46 EACH

Packed complete, with Rectifying Valve, Resistance Lamp, 2-3/4 yard Plug, Plug, etc.

Let your next Valve be a Philips

PHILIPS
LAMPS AND RADIO
Unstability Is Enemy Of Good Reception

By George Gardner

GIVEN to the habit of personalizing the commonplace, I derive almost unnecessary pleasure from labeling the impression, squaring it with confronting me as I listen in such a way that I am inclined to my neighbor, to a large degree--spirit relies changing little, sentimentally objective and whimsical a temporary incomprehensible to those with nothing else. Clarifying and though clearing the illusion may be, at time I even on the radio with an actual device to hear what is being broadcast, and as these occasions my favorable imagination is turned into more histrionic changes of an unchangeable worse to which I would subject ever so somewhat is the limit of my anger.

Approaching the problem from a less literate and more practical angle, the misapplication or cover is as great an officer, if not more so, than the possession of the old valuable imaginations. With the latter type of receiving set, it is possible for the operator to control regeneration, and consequently squelching at all times. With the former set, however, it is not believed below 200 meters and not at all regeneration of modulation which, is true for 90 percent of the existing sets using radio frequency transformers.

It then stands to reason that it is impossible for the operator to stop squelching when tuning within this range, since misapplication of Thomson Brilliency will result in nasty and unacceptability接收.

This changes the complexion of matters and I am having more confusing new forms of tuning in my mind, and unacceptability reception.

This changes the complexion of matters and I am having more confusing new forms of tuning in my mind, and unacceptability reception.

After a little thought on the problem, however, it is evident that the manufactures is not materially to blame for receiving conditions, above the cause of definition of current receivers in this particular sense is one of design and consequently fraught with engineering complications. Apparently the problem resolves to a single fact--the more valves used to perform a single function the greater the unstability.

There is only one reason for unstability is multi-valve receivers that are so designed to neutralize the effect of valve capacity, and that is interaction. The problem of eliminating interaction between elements is far from a straight, even if great care is taken to have wide frequency transformers used of each other's field.

In Figure 1. we see a means for preventing this undesirable effect by means of radio frequency choke coils to be placed when these units have been incorporated in a conventional first valve receiver that many more turns can be placed on the primary winding without upsetting the balance of the receiver, thereby securing considerably greater amplification and stability.

However, this is eliminating the trouble is only one instance. This plate circuit, too, is responsible for much of the distortion that is present in the average set. The center of the R.F. choke coil is usually applied, but in this it includes a condenser, .008 mfd. or larger, connected from the A battery end of the primary to ground. It would seem from this that the radio frequency choke coil is something of a cure all, and the average person might wonder why the application is not more universal. The answer is this will not even be the need. With the use of radio frequency choke coils it is possible to obtain considerable modification which is valuable at present from the receiving end of the various circuits and at the same time prevent squelching by by-passing each circuit below the oscillation point on even the best wave length.

Radio Accessories: 13" Batteries, 8' Wire, with polished wood tray and lid, fully charged ready for use, $1.80; and other sizes, as required. Apply by letter to BLACKMAN, C/o. "Wireless Weekly," 51 Castlereagh Street.

BURGESS--"Fine by American Navy." BATTERIES.
An Entirely New Departure

Following upon the success of our easy payment system with complete receivers, we have now decided to extend this plan to accessories. A small deposit brings you the parts for a receiver which you can build at home yourself. Super-Het, Kits, Neutrodyne parts, or any accessories required for the construction and operation of a modern receiver, may be purchased from us on our well-known small-deposit, easy-payment plan.

Come in and talk it over with us

A Few of Our Lines.

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philips 6 Battery Eliminator</td>
<td>£ 1.10</td>
</tr>
<tr>
<td>Starmen Lead Speakers</td>
<td>£ 0.50</td>
</tr>
<tr>
<td>Also all other makes of Lead Speakers</td>
<td></td>
</tr>
<tr>
<td>Ferranti Audio Transformers</td>
<td>£ 2.50</td>
</tr>
<tr>
<td>All sizes Radio Accumulators</td>
<td>£ 2.25</td>
</tr>
<tr>
<td>Also all other makes of batteries</td>
<td></td>
</tr>
<tr>
<td>B battery accumulators, all makes</td>
<td></td>
</tr>
</tbody>
</table>

Also many other types of apparatus.

Radio Distributors

29 ROYAL ARCADE
SYDNEY

MA 1780
MA 1744
September 24, 1926

WIRELESS WEEKLY

Does this Solve One of Your Many Problems?

A few of the causes of interference you may have met with on your broadcast receiver.

PROBABLY no word in the vocabulary of the radio enthusiast is used more often or more broadly than “interference.” It may be and is frequently used to designate everything from adverse atmospheric conditions to the walls and boxes emitted by a radiating receiver in the hands of a careless or indifferent operator. Every form of communication is subject to interference of one kind or another, and it may be safely said that radio is not more suited for such service than any other. Space does not permit a detailed discussion of every kind of interference that may prevent good radio reception, but the most common ones will be considered and remedies suggested.

Static holds the list because it is one of the greatest offenders which is yet to be conquered. Interference from this source may be minimized through the use of either a loop— if it is a type of set which will operate with a loop—or an indoor antenna composed of five or six turns of wire suspended around the wall near the ceiling. Shortening the outdoor antenna may also have a tendency to reduce interference from this source.

Interference from broadcasting stations whose signals cannot be turned out is another form which concerns a large proportion of the listening public. Long and strong stations—more than 100 feet—to employ, much less difficulty will be encountered in tuning out unwanted signals if this wire is shortened. As stated, a short antenna—approximately 75 feet—permits much more selective tuning than with a long antenna. This change will always result in slightly decreased signal volume, but in such cases it remains with the enthusiast to choose between volume and selectivity.

The use of a wax trap will aid materially in picking out the desired programme from the air when two or more stations are in operation. Such a device may easily be constructed with a little wire, a cardboard tube and a variable condenser.

Recently a case was called to the writer’s attention, in which a continuous cracking noise began promptly at nine o’clock, and ended about two every night of the week, which prevented the satisfactory use of every radio receiver in the neighbourhood. Familiar fans got together determined to locate and do away with the offender. With the use of a portable loop receiver mounted in a motor car, they traced the interference to the residence of two elderly neighbours. They learned that these ladies were in the habit of using a voice-sleeping machine every night. Now the fans want to know how to prevent individuals from using their voice-sleeping machines when radio fans are honestly listening to what the wild waves are saying.

Another common cause of interference is that created by some types of farm lighting plants when in operation. One method of minimizing this disturbance is to connect two 1 mill. fixed condensers across the line and ground the centre connection between the two condensers. Another plan is to enclose completely the engine and generator within a housing of copper screening, which is then grounded. Closing the commutator segments and brushings of the generator very often will reduce a large percentage of the noise present in the radio set when the generator is in operation.

This brings us to the receiver proper. A loose connection in any part of the set, or a broken wire in the head phone or loud-speaker cord, loose connections at the batteries, a defective fuse, or socket in which the springs are loose, might cause interference. A careful examination of the set will doubtless lead to elimination of trouble from this source.

An improved variable condenser—the plates of which touch when the movable plates are rotated—a damped grid leak, an improved fixed condenser or a new dry battery, may be other causes of interference of one kind or another.

Calls for SFC’s New Wavelength

Many owners of the oil changing type of receiver may have been unable to listen to recent shows and programmes due to the recent combination of conditions which created static. An old gas-engine receiver, in the last five minutes of their last wavelength of 125 miles. To those who use the standard 3 coil condenser receiver we recommend the following hints:

Primary Secondary Selection

50 75

We are considering that the primary is tuned with a 600 mill. condenser, a 3000 mill. using the secondary, a further supply will be switched by means of a loop mounted in the Station 22, Melbourne, and the oil changing type of receiver. From experience we find that tuning out unwanted signals is often best accomplished with the use of a loop. The receiver will be tuned by means of condensers. The efficiency of a loop may be increased by the use of copper screening, which is then grounded. Closing the commutator segments and brushings of the generator very often will reduce a large percentage of the noise present in the radio set when the generator is in operation.

This brings us to the receiver proper. A loose connection in any part of the set, or a broken wire in the head phone or loud-speaker cord, loose connections at the batteries, a defective fuse, or socket in which the springs are loose, might cause interference. A careful examination of the set will doubtless lead to elimination of trouble from this source.

An improved variable condenser—the plates of which touch when the movable plates are rotated—a damped grid leak, an improved fixed condenser or a new dry battery, may be other causes of interference of one kind or another.
The REAL Pure tone Valve

GIVES EVERY
NOTE IT'S
TRUE VALUE

DESIGNED to give pure and strong amplification in all L.F. stages. Produces abundant volume free from distortion and will operate all loud speakers.

MULLARD Double Green Ring VALVES

Type D.3 for 2 volt accumulators 13/6

Each

Type D.06 for 3 or 4 dry cells at 6 volt accumulators 13/6

Each

Power Valve

Current

Description

Type Value Current Price

D.06 0.6 0.64 13/6


GOTAINABLE FROM EVERY RADIO DEALER IN AUSTRALIA.

Mullard
THE MASTER VALVE (ARKS 2)

sound which made its appearance during the war, when everything, music included, was in turmoil. "Dance" and syncopated music have one thing only in common—a programmed rhythm. Once upon a time, we are told, all music was crude rhythm, but it gradually came to be embellished with harmony and melody.

Harmony and melody are, of course, essential, but there is rhythm, as well in modern symphonic symphonies, which I believe is the first really successful combination of these three elements ever achieved.

Why then, in syncopated music so popular? As I saw it, music, to be popular, must express what people in the show are thinking or feeling. Modern syncopation does this. It expresses cheerfulness. We all want to be happy, to radiate cheerfulness. That is what all this work-weary world is wanting most of all today.

By broadcasting syncopated music, radio stations are reaching throughout the land among countless listeners, cheer, hope, and vitality. The full truth of this fact may not be realized at present, but here lies the reason why I believe that symphonic symphonies will find an increasing place in future radio programmes. The critics cannot stop it. Like everything else, broadcasting programmes are governed by the inexorable law of supply and demand. Undoubtedly, the public wants symphonies. Undoubtedly, they will get it.

The Appeal of Rhythm.

Have you ever noticed a number of people listening to a radio programme? When a syncopated beat starts, heads begin to nod and feet to tap in sympathy with its cheerful rhythm. A powerful force is at work, evidently. What is it? The psychological explanation of the appeal of rhythm of any sort lies in the fact that it engages the conscious attention in such a way that subconscious activity is minimized. A state of heightened suggestibility is induced in which the accompanying suggestion is more powerful than usual.

In syncopated music, the suggestion unconsciously received by the listener is one of cheer. That universal demand for cheerfulness is thereby unconsciously gratified. Here is the secret of the success of symphonies.
Years of patient research and the enormous resources of the famous PHILIPS LAMP WORKS have combined to produce radio valves of unrivalled quality. The following series are specially recommended for Australian broadcast reception.

A.109—"The One-Dry-Cell Valve," Price 1/6
Filament, 1.0-1.5 volts. 0.06 amp. Plate voltage, 20/100
A.109 consumes less current than any valve yet introduced and makes it possible to operate a set for many weeks with a single dry cell. It is the ideal valve for portable work.

B.106—"The New Wonder Valve," Price 1.5/6
Filament, 3 ½ to 4 volts. 0.1 amp. Plate voltage, 30/100.

Truly a "Wonder" Valve, gives all the volume and range of the 20A type with the exceptionally low electrical consumption of only 0.1 amp. Can be used with a 4 volt accumulator or it dry cells in series.

Obtainable at all radio dealers, with English or American, as well as the new American Cap.

When you order a receiving set, specify that it must be fitted with Philips Valves.

Let your next valve be a PHILIPS
Are you building your Sets to excel others, and obtain superlative results?

NOT unless you are using the following:

- 21 19 6 51 plate SLF Condensers
- 17 19 6 11 plate SLF Condensers
- 11 17 6 1 plate SLF Condensers
- 12 17 6 L.D. 13 plate double Condensers
- 20 17 6 L.D. 17 plate double Condensers
- 0 11 6 L. 13 plate Condensers
- 0 12 6 L. 17 plate Condensers
- 0 14 6 L. 22 plate Condensers

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

- No. 2 M. Radiometers ........................................... 0 14 6
- No. 190 M. Radiometers ......................................... 0 14 6
- No. 204 M. Radiometers ......................................... 0 14 6
- No. 999 Modulators ................................................ 0 14 6
- No. 106 Variable Grid Links, without condensers ........... 0 9 6
- No. 107 Variable Grid Links, with No. 3035 condenser ....... 0 19 6
- No. 205 6 ohm Rheostat .......................................... 0 19 6
- No. 236 6 ohm Rheostat .......................................... 0 19 6
- No. 106 300 ohm Potentiometer ................................ 0 12 5
- No. 111 300 ohm Potentiometer ................................ 0 12 5
- Centralab Push-Pull Battery Switch ................................ 0 12 5
- Centralab Modulator Plug ....................................... 0 18 6

Short Wave Outfit .................................................... 3 3 0

Bremner-Tully Tuning Control Dial ................................ 49 14 6

Bremner-Tully Euphonics 2.2 to 1 Transformer, No. 400 ........ 44 14 0
- Bremner-Tully Euphonics 2.7 to 1 Transformer, No. 410 .... 1 17 0

The Centralab Rhoostat is the best obtainable—the standard in Deluxe Sets

SOLE AGENTS:

UNITED DISTRIBUTORS LIMITED

72 Clarence Street, Sydney

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27 Chesser St.,
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26 Queen St.,
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Cr. Jervois Quay & Harris St.,
Wellington, N.Z.

46 Charles St.,
Launceston, Tas.
Listen-In To-night with B406

Listen-in to-night to an entertainment plucked from the air. Enjoy nights of perfect reception by equipping your set with Philips Valves. Philips Valves, especially the B406 which is designed for Loud Speaker Reception, combine undoubted economy with the highest efficiency. The B406 has a filament consumption of only one-tenth amp. but the purity of tone and wonderful volume given add merit to its name, the New Wonder Valve.

Price 13/6

Obtainable at all Radio Dealers.
Stocked with either Standard, English or American Cap, also the New UX Cap.

Manufacturers of the Famous Philips Lamps.

B406 Characteristics:

<table>
<thead>
<tr>
<th>Filament Voltage</th>
<th>5/4 in 4 Volts</th>
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</thead>
<tbody>
<tr>
<td>Filament Current</td>
<td>0.1 amp</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>200 ± 10 Volts</td>
</tr>
<tr>
<td>Plate Current</td>
<td>12 m A</td>
</tr>
</tbody>
</table>
Are Radio Regulations under Revision?

(Continued from Page 8.)

wealth from which it pays for the services that affect all taxpayers—defense, payment to the States, reduction of the war debts, etc. The application of a proportion of this revenue, that obtained from duty paid on imported wireless equipment, would be unfair, in that it would exempt local manufacturers who do not contribute, or contribute very little, to the upkeep of the broadcasting services.

But there are stronger objections to these proposals. In the first place the Customs revenue would be inadequate; the duties would not produce sufficient revenue to pay the broadcasters unless the duties were to be very sensibly increased. And that, of course, would mean greater payments by the listeners for their equipment, including consumable and renewable items such as valves, batteries, etc. In the second place, the inducement for the broadcasters to give good service and improve these would be removed. The removal of that inducement would be a serious blow to the development of broadcasting. Improved service should be rewarded by increased revenue; and that would be impracticable if the revenue were simply to be handed out regularly by the Government like the payment of interest on bonds. We have only to consider what has been done by 3LO Melbourne in developing broadcasting. The service from that station was improved in many ways, and a big increase of listeners—and revenue—followed. With this inducement the company continued to improve its service knowing that it would be rewarded; and demands knowing also that if it did not improve the service, the license would fall off. Reasonable inducement must be held out to the companies to give good service and improve them.

Proposals are also made to reduce the fees. These proposals are not based on a sound foundation or on a consideration of all the factors in the problem. It is too early to say whether or not the companies are receiving more than a fair return. Two years is not a long enough period on

(Continued on Page 53.)
**12/6 "CANNON BALL" HEADSETS 12/6**

A high grade Headset at a moderate price

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filofractas: The supreme filament control</td>
<td>0 9 s.6 d.</td>
</tr>
<tr>
<td>Genuine Straight Line Frequency Condensers: 0.005</td>
<td>0 10 s.6 d.</td>
</tr>
<tr>
<td>Neutrodyne Kite: Including neutralising condensers and Maculran blue-print</td>
<td>1 12 s.6 d.</td>
</tr>
<tr>
<td>Browning Drake Kite: With Maculran blue-print</td>
<td>1 3 s.6 d.</td>
</tr>
</tbody>
</table>

**“GORDAN” PARTS**

We carry stocks of Gordan Spider formers, ECG Plugs and Sockets, Perliton detectors and refills, also cardboard tubes, valve adaptors and boxes.

**THE RADEX VALVE IS NOW MADE WITH UX BASE,**

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radex Valves: 199 type, 06 amps., 3 volts</td>
<td>0 6 s.9 d.</td>
</tr>
<tr>
<td>Radex Valves: 201A type, 23 amps., 5 volts</td>
<td>0 6 s.9 d.</td>
</tr>
<tr>
<td>Not these valves checked on the Jewell Tube Checker</td>
<td></td>
</tr>
<tr>
<td>Phillips Valves: B406, A169, C367, C369</td>
<td>0 13 s.6 d.</td>
</tr>
<tr>
<td>Mullard Valves: PM3, PM4, 06G</td>
<td>0 13 s.6 d.</td>
</tr>
<tr>
<td>Radiotron Valves: UX199, UV199, UX201A, UV201A</td>
<td>0 13 s.6 d.</td>
</tr>
<tr>
<td>Radiotron Power Amplifier Valves: UX120</td>
<td>0 17 s.6 d.</td>
</tr>
<tr>
<td>Radiotron Power Amplifier Valves: UX115</td>
<td>2 5 s.0 d.</td>
</tr>
<tr>
<td>Ediswan Valves: 7006, American base</td>
<td>0 3 s.0 d.</td>
</tr>
<tr>
<td>Aerial Wire: 3 strands, 20 gauge copper, 100 feet</td>
<td>0 2 s.0 d.</td>
</tr>
<tr>
<td>Standard Aerial or Long Wire: Extremely flexible, 100 feet</td>
<td>0 3 s.0 d.</td>
</tr>
<tr>
<td>Egg shape Aerial Insulators, per dozen</td>
<td>0 0 10 s.6 d.</td>
</tr>
<tr>
<td>B Battery: Heavy duty “Volten,” 45 volts</td>
<td>1 2 s.6 d.</td>
</tr>
<tr>
<td><strong>LOUD SPEAKERS:</strong> Call and hear them demonstrated</td>
<td></td>
</tr>
<tr>
<td>The Amplion Dragon Fly: AR192</td>
<td>1 5 s.0 d.</td>
</tr>
<tr>
<td>The Amplion Swan Neck: AR58</td>
<td>5 0 s.0 d.</td>
</tr>
<tr>
<td>The Amplion Junior De Luxe: AR134</td>
<td>4 0 s.0 d.</td>
</tr>
<tr>
<td>The Amplion Dragon: AR19</td>
<td>5 10 s.0 d.</td>
</tr>
<tr>
<td>Browns: H4</td>
<td>3 0 s.0 d.</td>
</tr>
<tr>
<td>Browns: H3</td>
<td>4 2 s.6 d.</td>
</tr>
<tr>
<td>Sferavox: Cone type speaker</td>
<td>5 8 s.6 d.</td>
</tr>
</tbody>
</table>

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nla.obj-670402575
National Library of Australia
Beginners Problems

C.C.K. (Concord):
Q. I would like to know how to make a simple charger for recharging my 12 volt accumulator type 96 battery.
A. The particulars of the chemical rectifier published on page 18 of “W.W.” of 20/4/26, will meet with your requirements. As is mentioned there the lamp controls the charging rate, a 25 watt or so lamp being generally suitable.

G.W.M. (Newcastle), and B.M.J. (Newcastle):
Q. Will you please inform me the best type of five valve receiver to receive the interstate broadcasting stations?
A. Strongly recommend you to build a Neutrodyne, which will also tune to Farmer’s new wavelength.

R.J.K. (Dundonald):
Q. (1) Will the Super Heterodyne kit met on the market cover the wavelength range up to 2000 metres.
A. (1) New that ZEC has come down in wavelength over 600 metres is hardly necessary.

Q. (2) Is the Super Heterodyne recently described in “W.W.” efficient over all wavelengths?
A. (2) Yes, excepting 8WF.

J.C. (Paddington):
Q. (1) Does the “W.W.” Super Heterodyne receiver work?
A. (1) The drop in the wavelength to 442 metres brings ZFC within range of this Super Heterodyne without any hindrance.

Q. (2) Does the Miscellaneous used in this receiver include the three intermediate frequency transformers, and also the filter?
A. (2) Yes.

K.V.D. (Armfield), and S.P. (Lilfield):
Q. I have a standard three coil representative receiver with tuned aerial coil, and I don’t find it sufficiently selective. Can you suggest anything?
A. Yes. Properly handled, you should receive interstate stations on your receiver. See that all your coils are running in the right direction. It is a good plan to connect the beginning of the coil to the socket portion of your coil plug, and the end turn of your coil to the pin portion. Mount every one of your coils in this fashion, and note they are all mounted right way up.

You won’t mention the size of the coils you are using, but I suggest you try 52S, 850, and 37/6 for 3LO and 30/6. The reaction coil is critical of adjustment. Why not build the Regenerative Interfer?

C.A.A. (Concord):
Q. (1) I desire to build a four-valve receiver suitable for Coastguard. Can you recommend a good four valve receiver which will be able to get daylight reception at loud speaker strength?
A. (1) We recommend the Remington Drake Receiver as being quite suitable, but we are afraid that we cannot guarantee lead speaker reception in daylight. It is an accepted fact that the short waves do not carry nearly so well in day-time as they do at night time. If daylight reception is imperative, nothing short of the Super Heterodyne described in “W.W.” recently will be satisfactory.

G.M.E. (Uphill):
Q. (1) Many thanks for your suggestion in the first part of your letter, but we are afraid it would not be practicable. Refer to “W.W.” of 3/4/26 for full particulars of the five-valve receiver you require.

W.A.T. (Folkestone):
Q. What is the capacity transformers suitable for a Super Heterodyne receiver?

H.L.D. (Rockdale):
Q. 1. Where can leads and zinc electrodes for a chemical rectifier be purchased?
A. 1. The lead need only be good quality dampproof lead and No. 50 gauge aluminium is quite satisfactory. Both these materials may be cut to shape and are available at any big department store.

Q. 2. What are the proportions of water and borax to make a solution for a rectifier?
A. 2. A saturation solution is advisable. Mix some pure distilled water and add as much borax (obtainable from any chemist) as the water will accept. If a sediment is left at the bottom pour off the saturated solution into another jar and simply eat sediment.

Q. 3. Is it necessary to renew boars every time the rectifier is used?
A. 3. No; the one solution will last for months. Experience will tell you when it requires renewing.

Q. 4. What size lamp will be required to charge a B battery of 60 volts?
A. 4. You can arrive at this conclusion by calculation. It is a general accepted theory to take carbon filament lamps as consuming 3 watts per candle-power. To arrive at the saparage divide the rated voltage of the lamp into the watts, the saparage being the result. For example, a 50 candle-power carbon lamp consumes, say, 160 watts, the member saparage would be approximately half an amp. Metal filament lamps are approximately one watt per candle-power.

Q. 5. Is it necessary to have four jars to make a home-made rectifier?
A. 5. It is advisable so as to prevent overheating.
Concerning EMMCO Parts

The unique position of esteem and confidence occupied by EMMCO Radio Products, is a natural development of the policy which has always characterized their manufacture: a policy which employs the highest engineering skill — rigid supervision — and modern production methods. It will be of interest to the thinking buyer to know that an EMMCO product is neither advertised nor sold until its efficiency has been proved by radio experts. To buy EMMCO parts is to get the utmost in good value and dependability.

EMMCO PARTS
Obtainable at all Radio Dealers

Manufactured by
Electricity Meter Manufacturing Company Ltd.
SYDNEY, N.S.W.
Are Radio Regulations under Revision?

(Continued from Page 88.)

which to base any safe estimate of the future of broadcasting. Moreover, the figures quoted in the press as to the revenue received by the companies are not to be misunderstood. The Government pays the companies in advance, and a large sum paid away, say in March or June, cannot be regarded as all the revenue for a year closing at the end of June; a big proportion of the sum must be carried forward in respect to the nine or eleven months' service that has to be rendered to the listeners, who paid in advance.

Thus these figures must not be accepted without proper consideration. Some reduction of the fees may be justified in distant country districts where the service is not as complete as in the city, and where more expensive receivers have to be employed by listeners. But there is no justification for reducing the already low fee —less than one penny per day.

It can safely be said that there is no need to amend the regulations in so far as they relate to fees; at least in the metropolitan and inner country districts. Other proposals to amend other aspects of the regulations can be considered in a later article.

NEW 2PC SPEAKER.

On Thursday, September 2, Farmers were able to secure the services of Mr. W. Spender-Darby, a popular baritone, from England, who arrived in Sydney on board the P. & O. Brusich liner, e. s. "Malapandu" recently, in charge of Dr. Bernardo Boya. The Barnardo Boys gave selections on the mouth organ on the Saturday afternoon, and a talk by their leader clearly showed that he possessed the type of voice for effective broadcasting. Since then, Mr. Darby has appeared at the Studio several times.

The broadcasts on each occasion were particularly clear and without static or noise. Mr. Spender-Darby has figured on E.R.T. London programmes, and his homespun and artless voice should carry him far in the profession.

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Super-Hets Must Have Number Plates Now!

The super-norm or double distortion principle of wireless reception, to which has been given the generic name of "Super-Heterodyne" is likely, before long, to become a topic of interest to many people. For general use (that is to say, "cutting short-wave work"), it is undoubtedly the most selective circuit in use to-day. It is employed in the vast majority of totally enclosed sets, having no earth or aerial connection.

Many people will be interested to learn that the patent rights of the circuit are the absolute property of Standard Telephones & Cables (A'asia) Ltd., within whose power, therefore, it is to say under what circumstances the "Super-Het" may be manufactured or sold. On this point, an official notification of the Company's stand in the matter was delivered to the trade by Mr. C. R. Foster, Victoria's representative of Standard Telephones, in an interview with a trade journal.

As far as it affects the general public, it may be summarised thus:

Every "Super-Het" sold in the Commonwealth must bear a numbered name-plate on which a small royalty is paid to "Standard Telephones & Cables (A'asia) Ltd."

It should be pointed out that the master-patents held by the Company are absolute and exclusive, and that it is fully within the power of the Company to enforce them.

Radio Mail.

We have just received a copy of a most interesting booklet, entitled "Radio Mail," put up by A. C. Cossor Ltd., manufacturers of Cossor Valves.

A number of articles appear in this little paper, both technical and topical. Of especial interest is an article entitled "Trade in Sweden." This gives a lot of particulars concerning wireless affairs in Sweden, and broadcasting matters are dealt with very fully.

There are other exceptionally good features in this book, which make it probably one of the best books we have yet had the pleasure of reviewing.

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There are other exceptionally good features in this book, which make it probably one of the best books we have yet had the pleasure of reviewing.
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