

WIRELESS WEEKLY

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Transmission by post as a newspaper.

VOL. 7. No. 23.

THURSDAY, APRIL 1, 1926.

3D



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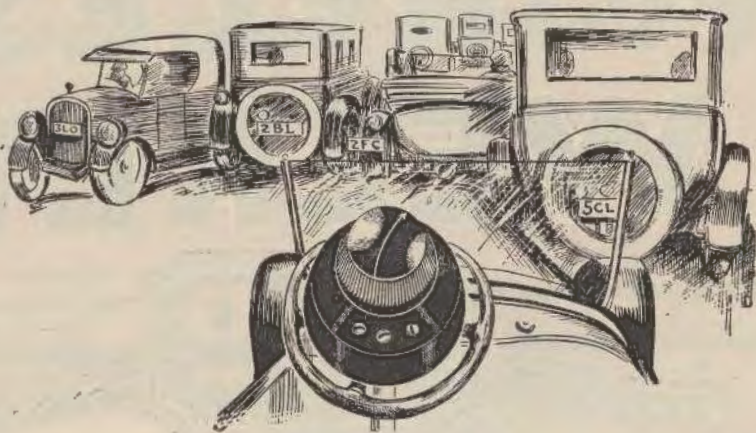
"In harmony with the Home and Air—Magnavox"
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NEW MAGNAVOX?"

FEATURE

Progressive System
of Construction

A Very Useful
Selector Switch

W.C.



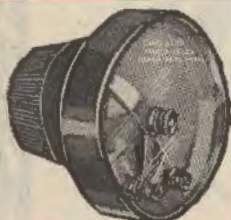
Through the RadioTraffic

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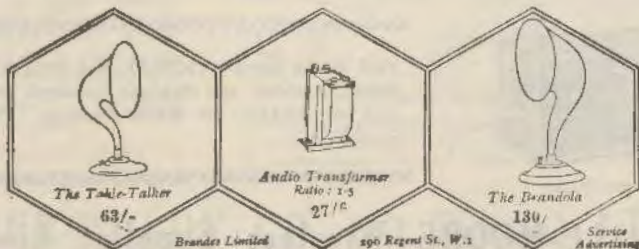


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THE NEW 2FC.

In view of the controversy that has raged for some months on the question of whether low or high waves are more suitable for Australian broadcasting, or, what is more to the point, for the Sydney station 2FC, the remarks of Mr. G. Wright, Managing Director of Farmer and Company Ltd., at the official opening of the new station at Pennant Hills on Monday, March 29th, were of more than passing interest.

Briefly summing up the situation, Mr. Wright concluded: "It is confidently expected that the new and higher power station would give a service that would meet all possible demands in the highest manner. If it did not do so, then the directors would not hesitate to take whatever action was considered necessary to bring about the desired improvement."

Looked at from any point of view, this represents a fair and direct statement to the radio public, and may certainly be construed as a definite indication that 2FC intends to pursue a policy of catering primarily for the needs of the listeners-in, which is, after all, the chief business of any broadcasting station.

While it is unquestionable that, at least in certain localities, results from short wave stations have been considerably better than on the wavelength of 2FC, the explanation proffered by Mr. Wright, that variations in the night transmissions from 2FC were due to deflections in the electric current supplied to the station, must be taken into consideration by those who in the past have been prone perhaps to blame the wavelength for purely mechanical faults. In any case, with this completely new station, a new location, and an entirely different source of primary power, the controversy regarding short versus long wavelengths should speedily settle itself.

Irrespective of the question of wavelengths, the benefits that must result from the installation of the new 2FC are so many and varied that it would be almost impossible to list them.

The main point undoubtedly is that within range of the big station will be brought a vastly greater field for crystal reception than hitherto existed. It is no exaggeration to say that consistent crystal reception from 2FC will be had at distances considerably greater than those previously contended to be within the normal range of a crystal.

A. W. WATT.

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Tune-in that distant station with a

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Manufactured in response to a demand for a highly efficient receiver that will tune-in the main Broadcasting Stations of Australia without the use of outside aerial and with more ease than ordinarily accompanies high-class receivers requiring outside aerial.

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3 inch dials, each			9

Complete sets and parts on TERMS or lay by.

LOOSE COUPLER PARTS Complete 11/6

Coil Plugs, each 9

The Progressive System of Construction

By Wireless Weekly

Some of the older broadcast listeners, who have passed the crystal stage, have probably not been interested in the previous two issues of this series of articles, but from this week onwards we feel sure that everyone, no matter how far advanced he is, will learn something that he did not know before. Those of you who are at present more or less satisfied with the results obtained with your present broadcast receiver are recommended to make comparisons with your layout of components with that of our back views. Each and every one of these articles is written by a practical man who has had years of experience in building every type of receiver known. Furthermore, he has a thorough knowledge of the pitfalls generally experienced by the average reader who is interested in radio, but who has a limited amount of technical knowledge and only a very small kit of tools.

This week, in dealing with a very efficient reflex circuit, it is only fair to state that we lay no claim to the originality of the hook-up, but have added one or two refinements, which makes the receiver far more suitable for Australian conditions than the original S.T.100: (1) We have added an extra coil which does not increase the number of controls, but greatly improves the selectivity; (2) Have shown the method of using a loop in lieu of the outside aerial.

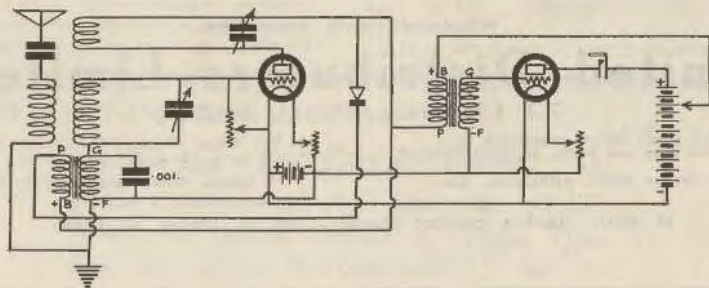
Construction.

It will be readily seen that the back view of the panel shows the addition of an extra rheostat. If you have followed last week's instructions you

will find there is ample room for it without cramping. This completed you may wire up connections 1 to 10. Next secure the baseboard components, as shown in Fig. 2. Don't be tempted to alter the arrangement of the various parts. After this you may commence to wire the connections Nos. 11 to 18. Connections 1 to 10 are self explanatory, but in order to make it more simple for the beginner we are stating where each connection goes from Nos. 11 to 27.

No. 11 is the +A busbar and links the two outside F terminals of the two valve holders. Don't forget what we said last week about the positive and negative markings on the valve holder. Don't let them mislead you, but follow our drawing exactly. No. 12 is a link taken from the crystal side of the detector to P of the first transformer. Nos. 13 and 14 place the necessary by-pass condenser across the secondary terminals. No. 15 connection goes from the +B of the first transformer to the P terminal of the second transformer. Don't forget the link shown as No. 16. So many constructors of the ST.100 have forgotten this connection that we feel we cannot stress this point too forcibly. The fact that the receiver will work reasonably well on near-by stations without this connection has probably been the cause of so many readers forgetting it.

Nos. 17 and 18 connections place the variable grid leak between the grid and positive filament connection of first valve, and No. 19 links the G terminal of second transformer to the G terminal of the second valve. When these connections are



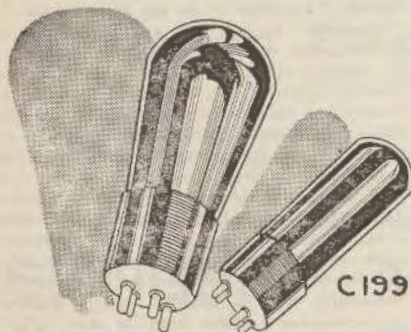
The Circuit Diagram.

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Plate Voltage, 15-140.
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completed, secure the panel to the baseboard again and wire up the remaining links shown as Nos. 20 to 28.

No. 20 links the —F of first transformer to the —A busbar, which you will notice continues on to the earth terminal. No. 21 is a connection taken from the moving plates of the first variable condenser to the G terminal of first audio transformer. No. 22 links the fixed plates of the same condenser with the G terminal of the first valve holder. Leads Nos. 21 and 22 must be kept as short as possible. No. 23 connection links the P terminal of the first valve holder with the fixed plates of No. 2 condenser, and No. 24 links the crystal arm, or catswhisker with the moving plates of the same condenser.

No. 25 connection completes the filament circuit of the first valve, and goes from the right hand terminal of the rheostat to the left hand F terminal of the first valve holder. No. 26 links the right-hand terminal of the second rheostat with the right-hand terminal of the second valve holder, and the final connection, No. 27, links the P terminal of the second valve holder to the lower telephone on panel.

The battery leads, which should be flexible, are taken direct to their respective connections. It will be readily seen that no H.T. voltage is directly connected to the B terminal of the first audio transformer. It is necessary to carefully experiment with various plate voltages on the second transformer. Usually between 50 and 60 volts will be found O.K. with the average type of valves used in a receiver of this kind.

Regeneration is obtained in two ways: (1) By the usual tuned plate method. (2) By coupling the tuned plate coil back to the tuned grid coil. This double reaction effect tends to make the set howl, but if it is properly handled and arranged according to our drawing regeneration may be introduced to its fullest advantage without any fear of howling.

In actual operation, if too strong a regeneration is used the set will oscillate at high frequency and then begin howling at low frequency. Should

this happen, reduce the coupling by placing the plate coil further away from the grid coil, when the low frequency oscillation or howl should stop. **The Crystal.**

Make sure that the crystal is doing its full duty, i.e., that of detecting. If it is poor crystal, or if the signals are very strong due to being situated too close to a broadcasting station, the absence of the crystal detector will not make very much difference and signals MAY be heard with the catswhisker lifted from the crystal.

To adjust the crystal it is as well to detune the grid circuit until the music or speech is very weak then adjust the crystal until maximum volume is obtained. Now retune the grid circuit. Too light a contact between the crystal and catswhisker will sometimes cause a howl. If it is possible to obtain a fairly firm pressure without sacrificing signal strength, the receiver, you will find, will remain much more stable. Crystals fitted with Hertzite and a micrometer thread for adjusting tension of catswhisker are particularly suitable.

This receiver is essentially one for use with a loud speaker. It is capable of giving just as much volume as any four valve receiver, with the perfect tone reproduction so well known by crystal detector users. We feel sure that this article will catch the eye of many "Wireless Weekly" readers who have been more or less disappointed with the results they have previously obtained with this well-known hook-up. We advise these folk to try again, being careful to follow our layout explicitly. Someone asked: "Is it selective? Will it separate 2BL and 3LO?" To this we reply that it is reasonably selective, but it will not entirely eliminate 2BL when tuned in to 3LO by the average broadcast listener. It will, however, successfully operate a loud speaker at Croydon from the Adelaide station, 5CL, and the Queensland station, 4QG, without any interference. As a loop receiver it is capable of loud speaker reproduction at a distance of 200 miles air line. What more can one expect with two valves?

In order to use a loop it is necessary to re-

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1½ volts. Supreme in quality and service for all Standard Dry Cell Requirements.

Cat. No.	Gtd. Shelf Life.	Diameter	Height	Weight
6A	12 Mos.	2½in.	6½in.	2½lb.



No. 15-90 each 13/6

22½ volts. Five positive brass screw terminals arranged to give 16½, 18, 19½, 21 and 22½ volts from the negative. This battery is specially designed for use with soft detector tubes.

Cat. No.	List Price Each	Gtd. Shelf Life	Length, Width, Height	Weight
15-90	13/6	9 months	6½ x 4 3/16 x 3½	5½lb.



No. 30-05 each 26/-

45 volts. 30 cells. Standard square type. Gives most economical service on 3 and 4 tube sets. Six positive brass screw terminals give 16½, 18, 19½, 22½ and 45 volts from the negative. Designed for sets using 45 or 90 volts. Taps make it suitable for use with soft detector tubes.

Cat. No.	List Price Each	Gtd. Shelf Life	Length, Width, Height	Weight
30-05	26/-	9 Months.	6½ x 8 x 3	9½lb.

INTERNATIONAL RADIO CO. LIMITED

200 Castlereagh St., Sydney—91-93 Courtenay Place, Wellington, N.Z.

move the primary coil, and attach two flexible leads from the loop to an ordinary honeycomb coil mount. This mount is then plugged into the grid coil holder of the three coil mount of the receiver. The writer has carried out some very interesting experiments using two loops, one for the grid coil and the other for the tuned plate coil. Those who have never used a loop before are in for a very agreeable surprise with the results they will obtain with this two valves. A good quality loop wire is, however, very essential.

Warning.

With any circuit employing tuned plate where the coil is coupled back to the grid circuit, it is very easy to get reversed coupling regeneration, opposing the other form of regeneration, caused by tuning both grid and plate circuits. The near-by signals will probably be very strong, but you will be unable to get any distant stations. The following method, however, will prove to you whether one is opposing the other or not:

(1) Place the tuned plate coil right back against the panel; (2) Adjust the two variable condensers and crystals until maximum volume is obtained; (3) gradually bring the tuned plate coil closer to the grid coil. If the volume gets weaker, you may be sure your coupling or feed-back regeneration is reversed. The fault may be due to mounting the coils in their respective mounts in

a reversed manner. (See also articles on Tuning in the last two issues of "Wireless Weekly.")

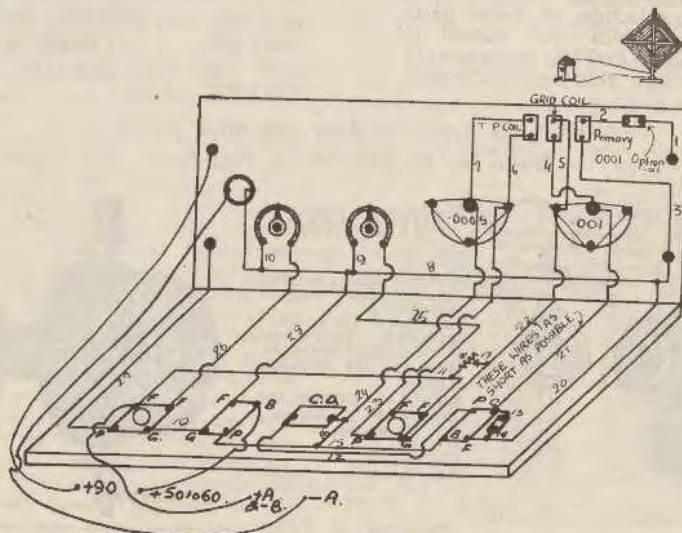
The following articles are necessary to build this receiver:—

- 1 Radion panel—20 x 6½ inches.
- 1 Baseboard—20 x 6 inches.
- 1 .001 variable condenser.
- 1 .0005 variable condenser.
- 1 .0001 fixed condenser.
- 1.001 fixed condenser.
- 1 3-coil holder (or 1 panel plug and 2 coupling plugs).
- 4 Terminals.
- 2 Rheostats to suit valves.
- 1 Crystal detector (good type).
- 2 Valve holders.
- 1 Filament switch.
- 2 Audio transformers.
- A and B batteries to suit valves used; honeycomb or spiderweb coils.
- 1 Loop.

THE MUSICIAN'S UNION.

The British Musicians' Union has withdrawn the ban on its members playing for broadcasting.

The reason for this is that an agreement has been reached regarding the union's claim for a special fee when music by members is being broadcast from theatres and picture shows.



Back of Panel Wiring Diagram.



ANNOUNCING ADDITIONS TO THE FAMOUS IGRANIC RANGE

Radioloc. Micro Condenser. Stand-off Insulator. Vernier Balancing Condenser. High Resistance Potentiometer. Low Loss Dual Variable Condenser.

Combined Earthing Switch, Lightning Arrester, and Lead-in Tube.

Micro Condenser. Variable Grid Leak. Indigraph Knobs and Dials. Anti-Microphonic Valve Holders. Low Loss Transmitting Condenser.

AND

THE IGRANIC SUPERSONIC HETERODYNE RECEIVER OUTFITS

The talk of two hemispheres

With the additional items enumerated above, the famous Igranitic range is now the most comprehensive selection of radio parts and accessories ever offered to the public. And the finest quality that British skill and craftsmanship can produce.

These new goods have never before been offered on the Australian market and already the first shipment has been practically sold out. Don't start on that better receiver until you have inspected what IGRANIC offers.

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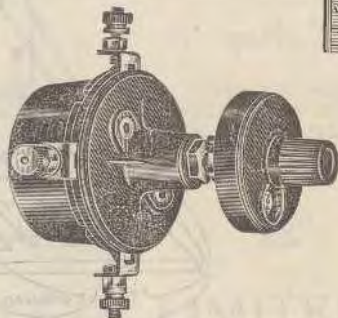
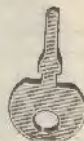
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The Radioloc—A novel dual purpose switch for master control of filament circuits, and for preventing unauthorised persons from using your Radio receiver. PRICE 4/6.

The Variable Grid Leak—Provides for smooth and continuous variation of resistance from 0.5 megohms. Exceptionally Reliable and constant. PRICE .. 7/6.

LECLANCHE "B" BATTERIES

AND HOW TO MAKE THEM UP.

By A. E. GARRETT.

I, like many "broadcatchers," have had my full share of "B" battery troubles; finally I got "fed up" and set to work to try and overcome the difficulty somehow. So successful have I been that I feel that many other radio enthusiasts will also welcome a solution.

I am not claiming anything new — merely a miniature set of Leclanche cells that can be made up by anyone at all handy with tools. A little carefulness in construction will result in a reliable and efficient high tension battery that "delivers the goods" without any more attention than an occasional drop of water from the nearest tap to replace that lost by evaporation. My battery has been in operation now for over twelve months and is still going strong.

A glance at the sketch will give a general idea of construction. I built mine in units of 12 cells (approximately 15/18 volts) both for flexibility and ease of renewal when necessary.

The first step is to get your "dud" "B" batteries and remove the positive elements from them. Carefully remove the black pitch or sealing wax, placing it to one side for future use. This positive element consists of a brass-capped carbon in a little bag of manganese dioxide. Clean away the zinc casing and as much of the sal-amoniac mixture as possible, but do not remove the cloth wrapping. So far so good. A little washing soda will help matters and also clean your hands.

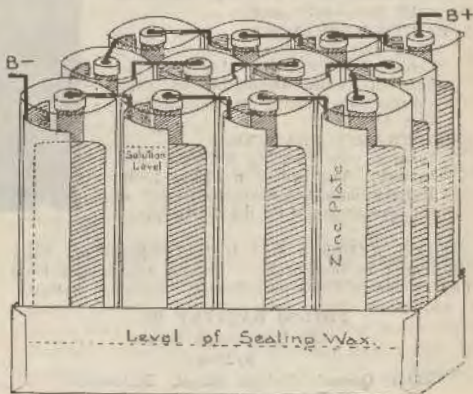
The next matter is the containers. These may be either glass or celluloid. I prefer glass, myself, as being the better of the two. Purchase some glass tubing 1 inch internal diameter and cut this into 2½ inch sections. Did I hear somebody say "How?" To do this, file a small groove round the tube with a three-cornered file. (Wetting the file with turpentine will help considerably.) Heat the end of the kitchen poker to a bright red and lay it on the groove you have cut—crack—right round the groove. Then make a tin box to hold, say, a dozen tubes, and about an inch deep. It is wise to solder the joints. Put this box over a gas ring and melt in it the sealing wax from the battery tops that you have saved. About half an inch is quite deep enough. Take off the gas ring and place the glass tubes in the wax and secure them with a bit of wire or string until the wax sets hard. This forms both the bottom of

the cells and also cements the lot into a solid unit.

Now for the negative elements. Get some sheet zinc, the thicker the better, and cut into pieces 1½ inches square. Bend this into a semi-circular shape to fit snugly into the glass tubes. While it is not necessary to amalgamate the zincs, I strongly advise you to do so, as it stops local action and lengthens the life of the zinc considerably. To do this, dip the zinc (after bending to shape), into dilute sulphuric acid for a second only, then touch it, while wet, with a small bead of mercury. Smead the mercury over the whole of the zinc with a pad of rag, wiping off any excess, then rinse in water and remove any remaining acid. Next solder a piece of copper wire to your zinc for connecting up.

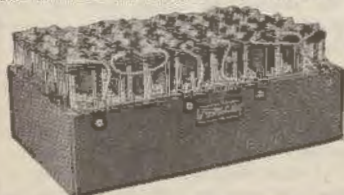
Put your positive elements into the glass tubes and a zinc in each and connect up in series as shown in the sketch. The zinc in No. 1 cell is the minus or negative terminal of the battery and is left free. Connect the carbon of No. 1 to the zinc in No. 2, and so on, until all are connected; the carbon in No. 12 being the plus or positive terminal.

Lastly, fill each cell to the top of the little bag round the carbon with a semi saturated solution of sal-ammoniac (this solution is made as follows: Dissolve the sal-ammoniac in water until it refuses to dissolve any more, then remove the



WHY YOU SHOULD USE PHILCO "B" BATTERIES

When dry batteries run down they are useless and are thrown away. The average listener in spends £5 per annum in dry batteries. Philco Rechargeable "B" Batteries can be recharged for a few pence. The initial cost plus a few pence per year for charging is the only cost.



Type 83X, Replaces 90 Volt Dry Battery.
Capacity, 3000 Millamp Hours.
Price £8/15/-, from all dealers.

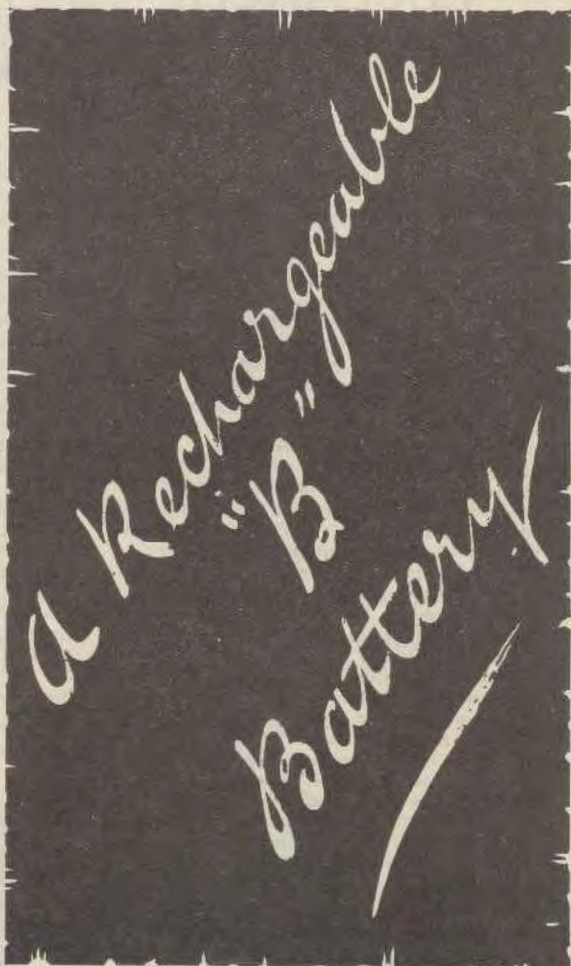
SIX POINTS!

- 1. GLASS CELLS.**
With acid-tight sealed covers. Safe for use anywhere in your home.
- 2. MAHOGANY-FINISHED CABINET.**
Beautiful and Decorative.
- 3. CHARGE INDICATORS.**
Exclusive Philco Feature that tells all conditions of charge and discharge. No more bothering with old-fashioned hydrometer or guesswork charging.
- 4. TREMENDOUS CAPACITY.**
Double that of ordinary "B" Battery. Needs recharging only every 2 or 3 months and filling with water only once every season.
- 5. EASILY RECHARGED.**
With new Noiseless Charger—just a throw of a switch—a plug in a socket. No noise—impossible to overcharge. Recharging costs only from 2½d. to 5d.
- 6.—DRYDYNAMIC FEATURE.**
Insures your getting a fresh new battery. The life of a Philco Radio Battery does not start until you or the Dealer pours in the electrolyte.

PHILCO RADIO A and B BATTERIES are fully illustrated in the catalogues which can be got from any Dealer in Town and Country, or direct from—

PHILCO BATTERY CO.,
280 Castlereagh Street,
Sydney.

25/27 Queen's Bridge Street, Melbourne.
26 Leigh Street, Adelaide.



PHILCO
DRYDYNAMIC RADIO
BATTERIES

solution and add an equal quantity of water.) Your "B" battery is now completed, and will continue to function until the zinc is corroded away. This will take from 3 months to 18 months according to the thickness of zinc used. I used 12oz. zinc which lasted over 12 months.

The nominal voltage of each cell is 1.5 volts, but in practice it is only about 1.2 owing to resistances. The carbon or positive element is permanent and only the zincs have to be renewed.

For the detector valve, tappings can be taken off as required by soldering on the little brasses that are on the carbons, or, better still, by using binding posts.

SQUARE OR ROUND.

Square wire certainly makes a neat job of the wiring provided it is handled with care, but as a general rule it is harder to handle than the round type. If it gets slightly twisted, the square wire presents an unattractive appearance, much more so than in the case of round wire, such as inned copper which is sold in reels. Lots of people find it difficult to make their connections straight. A good plan is to unwind and cut off about 15 feet from the reel, fix one end in a vice, and give a strong steady pull on the other. This operation straightens out all kinks and the wire may then be cut up into convenient lengths of say, 2 feet.

WINDING LOW LOSS COILS.

Here is a handy tip for those who find difficulty in the construction of self supporting coils. Get a glass milk bottle, or something similar and smear it with French chalk. Lay along the outside, four pieces of insulation tape equally spaced and sufficiently long to double back over the coil when it has been wound. Wind on the wire and when sufficient turns have been reached, turn each piece of tape back over its nearest end to meet the other end. The result is a coil secured at four points and sufficiently rigid for most experimental purposes.

WHO IS 2ME?

2ME is a station owned and operated by Amalgamated Wireless A/sia Ltd., located at Willoughby. The station may often be heard maintaining communication with Radio-equipped trawlers at sea, and frequently carries out experiments on telephony.



Radio is a science which is being studied by the world's greatest engineers, but Australians have every reason to be justly proud of the work done in this country by its own sons.

Every day we are told of some particularly fine piece of transmission carried out by a local man, but I think that not enough credit has been given to Raymond G. Allsop, of 2BL, for his remarkably fine achievements. Everybody all over Australia has heard of him at some time or another, but one of his very finest jobs of work and one which he carried out recently was the low wave, low power transmission to America. He was received by Mr. Donald Morris, of 7389 Anboy Road, Tottenville, New York, while this gentleman was using only a single valve with no amplification whatever, and an aerial of only 30 ft. high and 100 ft. long.

Chatting to Mr. Allsop this week, I learned that his power input was only 1.8 watts, using two No. 2306 Burgess batteries and a wave of 40 metres.

It is great work, and Australians should be proud of him.

A piece of apparatus which has come to great favour lately is the Yaxley 400 ohm potentiometer. Everybody knows the quality of Yaxley radio products (and I have no doubt most of you have inspected the Yaxley display boards which all the dealers have), but the unique feature of this particular job is that it is air-cooled.

There is also a rheostat which is built on the same lines, and which is also selling well. If you have not already seen them, ask your dealer next time you are in town.

The Burgess people managed to secure a few more of their popular "World's Index of Broadcasting Stations," and these were sent out this week. Dropping in at their office the other day, I was shown an immense stack of letters applying for this booklet, and I was astounded at the tremendous response my remarks brought. It certainly looks as though it will be some time before everybody receives his or her copy, but the company is not sitting down on the job, and will keep faith with my readers.

(ADVT.)

**RADIOTRON UV 199.**

A SMALL TUBE, BUT A BIG PERFORMER.

The new UV 199 is proving a mighty popular member of the Radiotron family, particularly for Portable Sets.

Battery economy, long life, less activity, are the big points of Radiotron UV 199.

If by accident it should be operated at too high a temperature, instead of burning out like other tubes, it becomes inoperative.

When it becomes inoperative, it can be brought back to normal operation all over again by disconnecting the "B" Battery and lighting the filament for 20 minutes.

For quiet operation, great ruggedness, uniform operation, Radiotron UV 199 is unsurpassed.

Ask for the Radiotron and look for the Seal.

AUSTRALIAN GENERAL ELECTRIC CO. LTD.

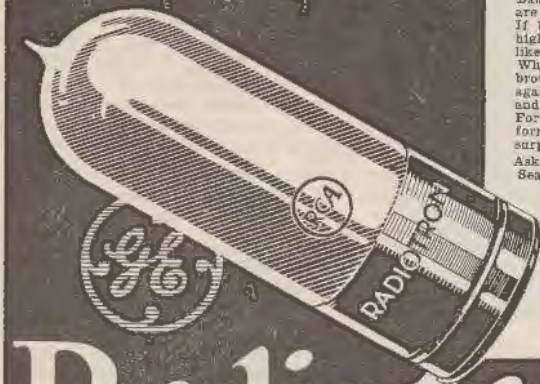
G/r Wentworth Avenue & Goulburn St., Sydney;

C/r Queen & Little Collins St., Melbourne;

Box 497 H., G.P.O., Brisbane, Q.;

Box 351, G.P.O., Adelaide, S.A.;

Box 8, G.P.O., Newcastle West.



Radiotron Valves

A Very Useful Selector Switch

Most of the older broadcast listeners and experimenters have more than one receiver of some kind or other, but invariably they have only one set of "A" and "B" batteries. This necessitates a considerable amount of trouble to change from one receiver to the other. By means of a six point double-throw switch or three double-pole switches, linked together as shown in Fig. 1, the whole of the connections may be automatically changed from one receiver to the other without any danger of making wrong connections.

It would be very difficult to state what percentage of replacements of valves were made necessary by broadcast listeners accidentally placing the "B" battery where the "A" battery ought to be, but we feel sure we are quite safe in saying that it is not always the "new chums" who make this drastic mistake. Remember "familiarity breeds contempt," so that those of you who have two broadcast receivers, or one broadcast and one short-wave receiver, will be very wise to adopt this method of changing over from one to the other. If good quality heavy contact porcelain switches are used no losses whatever will be experienced. "Wireless Weekly" has carried out exhaustive experiments with this arrangement before publica-

tion, and has proved conclusively that the above statement is absolutely correct.

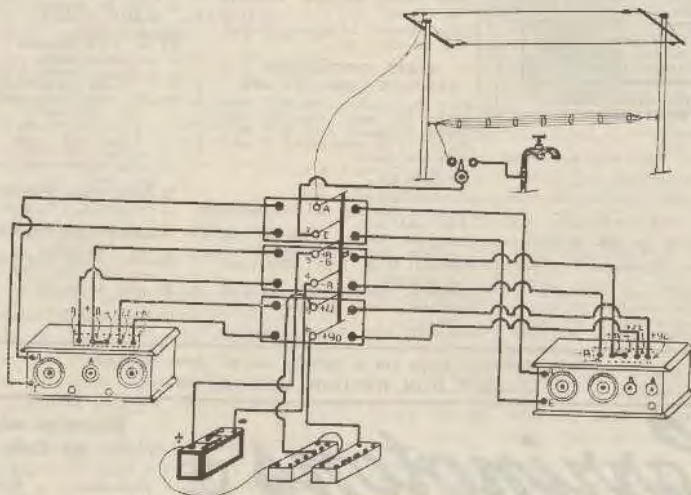
Readers who copy our example and use the ordinary heavy porcelain type of double-pole double-throw switch will need to link the three together by means of a strip of Radion or Bakelite. A small knob or handle is then firmly secured to the centre, which permits easy action of the whole six blades.

In wiring up, carefully copy our drawings; the top switch takes the aerial and earth or counterpoise. The extra double-pole double-throw selector switch for counterpoise or earth is optional. We would like to point out, however, that no broadcast listener can be absolutely sure that his earth is efficient until he has compared his results with those obtained with a counterpoise.

The positive A and negative B connections go to the No. 3 blade terminal. It will be readily seen that the negative B terminal on the actual receiver is not in use. The negative A goes to the No. 4 blade and positive 22 and 80 volts go to the 5 and 6 blades respectively.

We would like to point out that this switching method is the only fair way of making comparative

Continued on page 19, bottom of col. 1



A Simple Way of Changing Oversets.

Harringtons

Cash Bargain Month March 19th — April 19th

New Stocks coming to hand compel us to clear certain lines to make room

TEAR THIS PAGE OUT
Present the page with your order and receive

SPECIAL CASH DISCOUNT

Here is a further list of some of these specials.

Mars Aerial Wire, 50 per cent. increase signal strength, 12/6.
Low Loss Condensers, 0006, 12/6.
Lightning Arresters, 3/6 & 4/6.
Multi Phone Connector Blocks, 4/-.
Crystal Sets, with crystal and coils, 7/6.
Rheostats, bakelite, with knob and dial, 20 ohms, 7/6.
Rheostats, bakelite, with knob and dial, 30 ohms, 5/-.
Potentiometers, 100 ohms, 3/3.
Hydrometers, 3/- each.
Bezel, 4d. each.
Harley Adjustable Crystal Detectors, 7/6.
Instruments, 3d., 1d., and 2d.

BOOKS. We have a great selection of real good value in literature from 6d.

HONEYCOMB COILS. MOUNTED.

20 turns ..	3/6
25 " ..	4/-
35 " ..	4/6
50 " ..	4/3
75 " ..	4/6
100 " ..	4/9
150 " ..	5/-
200 " ..	5/8

Bus-bar Wire, 1/- doz. lengths.
Headphones, 13/6 per pair.
Headphones, Baldwin, 001/ per pair.
Jacks, single circuit, 2/- each.
Jacks, double circuit, 2/6 each.
Jacks, Double Filament, 5/9 each.
2 Coil Holders, 1st class job, 5/6.

IRON CLAD GUARANTEE ON VALVES. When we say a thing is guaranteed we mean it. The Cleartron Valve is guaranteed against faulty manufacture, and so long as the filament will light we will replace, **FREE OF CHARGE**, any Cleartron Valve that does not function.
17/6 each, and good value at that.

Valve Socket Adapters, American to English, 3/6.
Valve Socket Adapters, English to American, 3/-.

FIXED CONDENSERS, AEROVOX. QUALITY JOB.

0001, 2/6 each. 004, 3/6 each.
00015, 2/6 each. 006, 6/- each.
00025, 2/6 each. 01, 6/6 each.
00025, with Grid Leak Mounting, 3/- each.
25 Mfd. By-Pass, 5/6.
.5 Mfd. By-Pass, 4/9.
1 Mfd. By-Pass, 2/6.
Benjamin Brackets for sub panels, 6/- per pair.
Preferred Midget Variable Condensers, 3/9 each.
Bakelite Grid Leak Mountings, 1/3 each.
Spaghetti, Rubber, 1d. per foot.
Spaghetti, good quality, 6d. per length.
Spaghetti with Braided Covering

in red, blue, green, and black, 8d. per yard.

Loop Aerial Cotton Covered Braided Wire, 3d. yard.
Loop Aerial Silk Covered Wire, 4d. yard.

Loop Speaker Cord, 9d. per yard.
Loop Speaker Cord, Silk, 1/- per yard.
A Battery Cords, Red and Black, 2/3 each.
B Battery Cords, 3 Conductor, 3/6 each.
30 ft. Loud Speaker Cord, with pins, 7/6 each.
A and B Battery Cords, with clips, 7/6 each.
Speaker Cords, 5 ft., 2/4 each.
10 ft. Loud Speaker Cord, with pins, 4/9 each.
5 ft. Phone Cords, 2/3 each.
6 ft. Phone Cords, 3/9 each.
Pigtail Wire Connectors—
3in., 2d., each.
6 in., 3d. each.
8 in., 3d., each.
12 in., 4d. each.
Mendon Fixed Dubilier Condensers, 0005, 2/9.
Mendon Fixed Dubilier Condensers, 0005, with grid leak clips, 3/-.
Mendon Fixed Dubilier Condensers, 002, 3/6.
Mendon Fixed Dubilier Condensers, 001, 3/-.
Thorola Audio Transformers, No. 850, 2/7.
Thorola Audio Transformers, No. 851, 20/-.

See next week's Issue for a further list of these Specials.
INSPECT OUR WINDOW DISPLAY NOW!

Harringtons LTD

Wholesalers and Retailers
Photo. and Radio Warehouses

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Katoomba Katoomba Street
Melbourne .. 266 Collins Street
Brisbane 93 Queen Street
Adelaide 10 Rundle Street
Wellington, N.Z. .. 42 Willis St.
Auckland, N.Z. .. 140 Queen St.

ON THE AIR

QUINLAN OPERA SINGER.

From the Studio of 2BL on Monday, April 5th, Miss Helen Jean Beegling will conclude her series of fascinating talks in connection with movie life in America. On the same evening Mr. Frank Marshall, B.Sc., will continue his deeply interesting talks on the Scientific aspects of X-Radiation. Signor Alberto Marini, the distinguished tenor who was very successful in the Quinlan Opera Company will sing two brackets of two songs and Miss Madge Helmrich, whose exquisite contralto voice transmits so beautifully will also be heard. It will be remembered that Miss Madge Helmrich is the sister of the even more distinguished, Dorothy, whose mezzo soprano voice has gained her so splendid a position in the musical world of Europe.

ORPHAN'S WAIL.

On Tuesday, April 6th, the Orphan's Wail will be broadcast from the Warringah Hall. This delightful entertainment increases in popularity and as the artist is invariably first class the listeners-in have reached a point of watching expectantly for the broadcasting of their performances. Miss Pauline Harford Foster will figure on the Studio programme and Broadcasters Trio will also be heard.

BEDTIME STORY HOUR CHANGED.

Both grown-ups and the younger folk will be interested in the announcement coming from station 2BL in regard to the alteration of the Children's Bedtime Story Hour. On Tuesdays, Thursdays, and Fridays, instead of commencing at 6.30, the Bedtime Stories commence at 6 p.m. and finish

Continued from page 17

tests between two receivers, as the conditions change so rapidly from night to night, and even from one item to another, that a quick change is absolutely essential.

By adding a further double-pole switch it is possible to operate the loud speaker on either one of the sets, with the same action of throwing the blades to the left or right hand position. When jacks and plugs are used, however, the little inconvenience of changing over the plugs is probably not worth the extra expense.

In conclusion, we would like to point out that the cost of three double-pole switches is far less than the price of a new valve, so that the above unique method of switching is well worth every reader's consideration.

at 6.45. On these nights, the Bedtime Stories are followed by 1 of an hour's dinner music which is presented by Broadcasters Dinner Orchestra. This alteration is being made in order to meet the wishes of a very large number of listeners-in who are anxious to be provided with music during the course of the most important meal in the day. Very attractive programmes of suitable music are being arranged by Mr. Horace Keats, under whose direction, the Dinner Orchestra is, with the object in view of supplying this very real need. Mr. Horace Keats whose splendid piano playing is such a feature of 2BL's Studio programmes is an exceed-



Miss Heather Kinnaird recently won a scholarship at the Conservatorium with her beautiful contralto voice. She is a favourite artist at 2BL.

FOR SALE: All American Super-Heterodyne kit, less than 24 hours actual use, £6/10/-; 2 All American Audio Transformers, 3½ and 5 to 1, same use, 17/6 each; 3 radio, 1 detector, 2 audio Cossor Wuncells Am. base, same use, 7/6 each; 8 Kellogg 6 ohm Rheostats, 4/- each; R.E.L. vernier dial, 7/6. J. G. CARROLL, 1 Grosvenor St., Moonee Ponds, Victoria.

FOR SALE: Wireless gear; Rheostats, Potentiometres, Valves, Condensers, etc. Tel. B 3239.

WANTED:—All kinds Secondhand Wireless Sets Parts, Speakers, etc. Best prices given. JACK RAPKEN, 16 George Street West. MW 1201.

PHILIPS VALVES

As a result of years of painstaking effort in the field of scientific research, backed by a factory organization world famous for the magnificent quality and reliability of its products, PHILIPS LAMP WORKS are now manufacturing the following remarkable series of radio Valves:—

A.110—"THE ONE-CELL VALVE."

Detector and Amplifier.
Filament Consumption, 1.0/1.2 volts; 0.08 amp.
Plate Voltage, 20/20V.

"A.110 consumes less current than any other valve yet produced, and makes it possible to operate a set for many weeks on one dry cell. The Filament is not coated with Thorium Oxide, as in the ordinary Dull Smirler, but is made under a specially patented process, and as long as the marked voltage is not exceeded the filament will keep the same characteristics throughout the life of the Valve." Standard American or English Cap. Price 17/6.

A.306—IMPROVED 100 TYPE.

Detector and Power Amplifier.
Filament Consumption, 3 volts; 0.06 amp. Plate voltage, 20/100.
A.306 has similar characteristics to the well-known 100 type, and gives wonderful volume and range, 2 or 3 Dry Cells, in series, only being necessary to light the filament. Ideal for portable work. Standard American, English, or 100 Cap. Price 17/6.

B.406—"THE NEW WONDER VALVE."

H.F. Detector and Power Amplifier.
Filament Consumption, 3½ to 4 volts; 0.1 amp.
Plate Voltage, 20/120.

Truly the most wonderful Valve yet produced; gives all the volume and range of the 201A type, with the remarkably low filament consumption of only 0.1 amp. (100 milliamps). Can be used with a 4-volt accumulator or 3 Dry Cells in series. Price 17/6.

C.509—IMPROVED 201A TYPE.

H.F. Detector and Power Amplifier.
Filament Consumption, 5 volts; 0.25 amp. Plate Voltage, 20/120.
Valves of the 201A type stand high in the public favour—their characteristics are so well known as to need no comment here. The name of Philips stands behind the C.509 Valve, and denotes that quality which commands them in discriminating Radio enthusiasts throughout the world.
Standard American or English Cap. Price 17/6.

PHILIPS VALVES ARE
OBTAINABLE FROM ALL
RADIO DEALERS.



ing versatile musician with particular ability in regard to Orchestral conducting. A recent performance of Schubert's Unfinished Symphony under Mr. Keat's baton was a performance of exceptional merit and on the same programme Mr. Keats introduced the Opera Künihild by Kistler, conducting the prelude to the third Act. This opera which is almost Wagnerian in its thematic construction has delighted the listeners-in and Mr. Keats is eagerly inquiring for more compositions from Kistler's pen. After his recent holiday, during which Mr. Keats toured N.S.W. in his famous Baby Citroen, this versatile musician has been full of energy.



The Bambalina Girls, who have played and sung their way into the hearts of the wireless public with their versatility upon the banjo, melopiano, and song. They are at present delighting thousands of listeners-in to 2BL.

A MINSTREL SHOW.

Wednesday, April 7th, will be a sort of gala night, when Mr. Hartly Court will present from the studio of 2BL a Minstrel Show of outstanding excellence. Mr. Hartly Court's performances to date have been intensely interesting and numerous letters have been received which indicate how popular this form of entertainment is. On the same programme, Miss Pauline Harford Foster will be heard in Operatic numbers with Trio accompaniment. Mr. Prentice will speak on Foreign Affairs and the Embassy Jazz Palais will provide dance music for those who desire to trip the light fantastic.

SCIENTIFIC LECTURES.

The scientific lectures that have been presented

from the Studio of 2BL under the general heading of "The Romance of Engineering" are being found of interest by a very large section of the listening-in community. Mr. C. P. Thorsby, B.E., B.Sc., will be heard again on Thursday, April 8th, and on the same evening it is anticipated that a particularly fine concert arranged by the West Sydney Boy Scouts will be broadcast.

THE PRENTICE TRAVELOGUE.

On Friday, April 9th, Mr. Leslie McCallum the well-known baritone will figure on the programme of 2BL, and Miss Grace Saville, contralto, will also be heard in repertoire numbers. Mr. McCallum by the way has very recently returned from a most successful tour of New Zealand where his singing has been enthusiastically received and his artistic

Will exchange UX.120 valve and socket and 2 radio frequency transformers, A.W.A. type and a Bradleyohm 25, range 25,000 to 250,000 ohm for a Filco resistance, range 10,000 to 100,000 ohms; and a Filco-stat 30 ohm resistance and a Mica fixed condenser .0014 to .0064 and 2-2 mfd. fixed mica condensers. J. MAURER, Earl Street, Roseville.

FRENCH, SPANISH, ITALIAN, GERMAN.

Day and Evening Tuition. Privately and in Classes. BERLITZ CONVERSATIONAL METHOD, without translation and grammatical drudgery. Prospectus on application.

PRINCIPAL: MONSIEUR MAURICE BYEN,
Bachelier es Lettres (Paris),

POST OFFICE CHAMBERS, 333 GEORGE ST.
'Phone: BW 6523.

"Learn Foreign Languages, for in the near future you will be able to 'listen-in' to the whole world through the new fairy—wireless."

GEORGE FIELD

297 HUNTER STREET, NEWCASTLE
(Phone: 1185), and at Hamilton

Your mail orders despatched same day at lowest ruling prices. Write for lists.
SPECIAL OFFER. 5 watt Transmitting Valves guaranteed in perfect condition. 17/6.

THE LARGEST AND OLDEST RADIO
SUPPLY HOUSE OF THE NORTH.

DULL EMITTER VALVES

4 Volts
.06 Amp.

8/6

Fitted with
English base

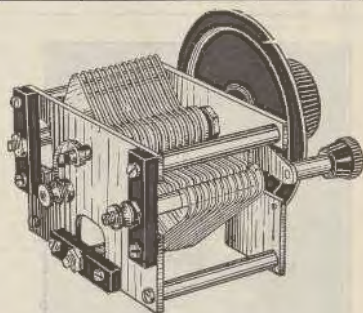
These valves are of a very high standard and are all tested before sale in the Jewel Tube Tester. As these valves sell usually at 15/- and as there are only a limited number available

SEND OR CALL NOW

LOW LOSS CONDENSERS

The Certified .0005 Plain 12/-

Ditto with Dial and Vernier - - 15/-



	£	s.	d.		£	s.	d.
Midget Low Loss Condensers: 5 plate	3	0		Potentiometers: 400 ohms, Ajax ..	3	0	
Valves: Philips B.406, "The Wonder Valve," each ..	17	6		Buswire: Round, tinned in straight 2ft. lengths, per doz.			11
Sockets: Standard American, 1/11; or 199 ..	1	6		Terminal Boards: Complete with 7 terminals ..			2 6
Sockets Standard English base mounting ..	1	3		Rubber Ear Cushions: per pair ..			2 7
Rheostats: Ajax, 6 or 30 ohm ..	2	1		Headsets: K & C Special, last a life time, pair ..			15 6
Rheostats: The Super Rheo, 30 ohms	3	6		Push Pull Transformers: The Crescent, per pair ..			1 15 0
Amperites: 199 or 201A type ..	7	6		Wooden Rotors: For vario couplers, etc., 3 inch, each ..			7
Dials: Black, 2in. 1/-; 3in. 1/5; 4in.	2	4		Aerial Wire: 3/20 Copper, per 100 ft.			2 6
Dials: Genuine Bakelite De Luxe 4 inch ..	3	9					

Bring your Radio problems to "Insulator" Mr. W. H. Hamilton, who will solve them FREE. Friday evenings only at our Sydney Store.

Country Clients please note we do not keep you waiting; and where possible your order is despatched same day as received.

"Yours for Lower Prices."

The ECONOMIC RADIO STORES
28 Royal Arcade SYDNEY
569 Hunter St. West NEWCASTLE
Phone M 3049 Phone, Newcastle 1622



Miss Myrtle Hobbs is one of the delightful sopranos whose items are keenly appreciated by broadcast listeners. She is to be heard per medium of Station 2BL.

performances fully appreciated by large audiences. On the same evening the Travelogue party will be initiated by Mr. Prentice into the mysteries of the gambling at Monte Carlo. It is more or less an open secret that this versatile individual spent a long holiday in the South of France and in Italy on the proceeds of a raid on the said gambling tables and it is therefore to be anticipated that he will speak with considerable enthusiasm.

BAMBALINA GIRLS.

On Saturday, April 10th, Bringsa, the authority on the Australian Aborigines will continue his talks and the Bambalina Girls playing a Melo Organ and a banjo and introducing solo numbers will be heard. The Bambalina Girls present a delightfully modern, refined and sparkling performance which is met with a full measure of appreciation on the part of the listeners-in. The Misses Amy Ostinga and Daisy Mangan will be heard in duets and solos and as these artistic ladies are thoroughly suited to each other vocally and temperamentally the effect is bound to be excellent.

CHRISTIAN SCIENCE SERVICE.

On Sunday, April 11th, station 2BL will broadcast at 11 a.m. the Christian Science Service from the First Church of Christ, Scientist, Riley Street. At 3.30 p.m. a Band Concert from the Ocean Beach, at Manly, when the Manly Municipal Band under the direction of Mr. J. Pheloung will be transmitted. In the evening, a Lecture-Recital from the King's Hall by courtesy of the Independent Theosophical Society will be put on the air. This

Society is acknowledged to be one of the definite cultural centres in Sydney and these lecture-Recitals stand very high in popularity as far as Sunday transmission is concerned. In a Concert from the Studio, Miss Leonore Gotsch, whose magnificently trained soprano voice is always a joy to listeners-in will be heard in a splendid programme of songs. Miss Gotsch stands very high indeed amongst the artists broadcasting in Australia at the present time. Possessing all the advantages of a continental training, Miss Gotsch has a remarkably large repertoire of songs, ranging from Dramatic Operatic Arias to the exquisite Leeder of Schubert and Schumann.

GOOD FRIDAY SERVICE.

The morning session will be taken from St. Andrew's Cathedral by 2FC, when the sermon will be given by the Venerable Archdeacon Davies. A Band Concert in the afternoon and a Sacred Concert from the Crystal Palace Theatre at night, at which the following artists will appear. Miss Rene Maxwell, soprano, Mr. Andre Navarre, baritone, Joseph Holm, tenor and the first appearance of Signor Alberto Marini an Italian tenor with a continental reputation. He will appear in Tenor Solos and Duets with Signora Aida Bulmas.

FOR IMMEDIATE SALE

- 1 Mullard 40W. Tube—New.
- 1 H.T. Transformer. 1000V—0—1000V. Cost £7/10/-. Tapped 250 turns upwards.
- 1 Fil. Transformer. 10 volt Sec. Cost £5/-/-.
- 1 50 Henry Choke—suit two 50s or one 150 watt tube. Cost £13 and a great job. Adjustable air gap.
- 1 Plate meter—0-200 ma. Jewell.
- 1 R.F. Meter. 0-12 amps. Jewell.
- 4 "S" tubes; used about 40 hours altogether. (1000 volt type).
- 2 Giffillan double-spaced variable condensers (23 plate).
- 2 4 m.f. T.C.C. condensers—Stand 1750 volts. Cost £1/17/6 each.
- 1 Schnell Short Wave Receiver. Cost £15 to build.

Everything guaranteed in perfect condition.

Will sell separately or altogether. No reasonable offer refused. These are bargains, so don't miss them. Owner rebuilding station.

Apply JAMES K. HERD, Main Street, Bacchus Marsh, Vic.

AFTER SALE BARGAINS

Our great extension Sale finished on 29th inst., and we have now completed the extension in our premises, our new address being corner Pitt & Goulburn Streets. We are still offering for a limited period a few AFTER SALE BARGAINS. The goods are well known stock lines and carry our usual guarantee. Only limited stocks are available, therefore we recommend that you call or forward your orders promptly to avoid disappointment. **SHIP BY POST** by making use of our Mail Order Department which is under the supervision of a Mail Order Department despatched within 24 hours. We pay carriage on goods within N.S.W., excluding Territories, Wires, Insulators, Valves, Lamp Speakers and V.P.S. Parcels.

AERIAL WIRE					
100 Yds. 3/6	1	3			
250 Yds. 5/6	1	3			
Aluminium	4	0			
SENDING POSTS AND TERMINALS					
250 Yds. 3/6	1	3			
500 Yds. 5/6	1	3			
Small 2 P. with lock, each	1				
Large with wood screw, each	1				
CRYSTALS					
Magellan, Australia, Aero Galson					
Intonite, Galena Berlin, each	1				
Alonite, Melzobrite, Pleasantly	1				
Magellan, each	1				
CONTACT PLUGS.					
N.P. with nuts, per doz.	1				
CONDENSERS, Fixed.					
Aero, 500, 1000, 1500, each	1				
Peach, 200, each	1				
Aero, 500, each	1				
Minimex, 500 variable capacity	1				
Aero, 1000 with lock	1				
Aero, 100	1				
CONDENSERS, Variable.					
Electron Mercury, 500 with dial	1				
500 Valve Type, each	1				
CONDENSERS, Movable.					
300	1				
500	1				
1000	1				
1500	1				
2000	1				
3000	1				
5000	1				
Electron Mercury, 500 with	1				
variable	1				
Water 500	1				
K & U 500	1				
Universal Advance, 500	1				
VALVE Lamp Speaker	1				

EASY TO BUILD—EASY TO USE

The Wondersome HOME CONSTRUCTION RECEIVER is easy to build and easy to use, as the plans and building instructions we supply with each order are so clear and explicit that you cannot fail to understand. Letters of appreciation are continually arriving from customers from all parts of the Commonwealth singing the praises of the excellent results being obtained with the WONDERTONE HOME CONSTRUCTION RECEIVERS. The accessories include everything ready for assembling, such as Stained Maple Cabinet, Bakelite Tuning, drilled and engraved, Valves, A and B Antennae, Headphones, Solder, Screws, and Actual Equipment.



Illustration of a complete "Wondersome" Valve Set.

BUILD UP WONDERTONE HOME CONSTRUCTION RECEIVERS.

Qty (x) 7/6	Complete, ready to build	Assembled and wired ready for use
1 Valve	£ 7 8 0	£ 9 6 0
2 Valve	£ 10 5 0	£ 11 10 0
3 Valve	£ 12 2 0	£ 14 0 0
4 Valve	£ 13 12 0	£ 15 12 0
5 Valve	£ 15 0 0	£ 17 0 0
Accumulator Type.		
1 Valve, with 10 ampere NiCad accumulator	£ 10 0 0	£ 10 10 0
2 Valve, with 10 ampere NiCad accumulator	£ 12 0 0	£ 13 0 0
3 Valve, with 10 ampere NiCad accumulator	£ 13 10 0	£ 15 0 0
4 Valve, with 10 ampere NiCad accumulator	£ 15 0 0	£ 16 10 0
5 Valve, with 10 ampere NiCad accumulator	£ 17 0 0	£ 18 10 0

TO OUR COUNTRY VICTORS—regarding the only in the Eastern Division an award a gold medal, indicative of our best work up with your radio problems, we offer you expert advice without any obligation whatsoever. Our service is free.

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Type A.R. Valves



Now Reduced to

4 volt, 0.75 amp.
Bright Emitter. Get
some to-day—two
or the old price of
one.

5/-

Leading Dealers
Sell Them

Edison Swan Electric Co. Ltd.

58 Clarence Street . . . SYDNEY

—Fison

WAVE TRAP & METER

Price £3/15/- Complete

We have just landed a shipment of them. High grade General Radio Wave Traps for making your set more selective and cutting out interference from other stations. Attachable without alteration to the Set. Also for use as an accurate wave meter for setting your receiving set to any desired wave length. Price, complete .. £3/15/-

"King Quality"

5 VALVE NEUTRODYNE

Radio Sets

The most popular of all. Featuring simplified control, and guaranteed to bring in Adelaide, Brisbane, Hobart, Melbourne and any station in Australia at loud speaker strength. Wave length 200 to 550 metres. Without accessories. Price, £25

We have just landed complete stocks of the famous high grade General Radio apparatus. Pay a call to our Wireless Shop and see them for yourselves. All accessories are included. Prices are very moderate.

RADIO DEPT. 22 YORK STREET

DAVID JONES'



Miss Nash, an artist who plays an important part in keeping 3LO so popular.



Tom Broderick, a popular artist at 3LO, Melbourne.

RACING AND SPORTING.

Easter Saturday Programme.

The racing and sporting session from 2FC during the morning and afternoon, with a popular programme at night with new items from the Crystal Palace Theatre, Dance music from the Wentworth, and a short act of the farce comedy "Give and Take" from the Criterion Theatre by arrangement with Mr. Harry Green and J. C. Williamsons Ltd. The Studio artists will include Mr. George Searle, entertainer, Miss Irene J. Soubrette and Mr. R. A. Bartlemann, baritone.

ALL SAINTS' CHURCH.

The morning service on Easter Sunday will be taken by 2FC from the All Saints' Church,

Woollahra, with an organ recital in the afternoon. The evening service will be taken from St. Stephen's. The Studio programme will include solos and duets by Dorothy Ewbank, soprano; Bryson Taylor, tenor; Violin solos by Lionel Lawson and Orchestral numbers by the 2FC Orchestra.

RANDWICK MEETING.

The Randwick Autumn Meeting will be fully covered by 2FC by Talks each night giving track work at Randwick, and anticipations for the different races, and on Easter Saturday, Monday and the following Wednesday, the 2FC special staff, comprising six members, will visit Randwick from 7.30 to 8.0 o'clock each night, and give special descriptions of racing, dressing, attendance, and incidents of the day.

AUSTRALIAN AND NEW ZEALAND TRANSMITTER.

A full up-to-date list of Australian amateur transmitters was published in "Radio," January 6th, 1926. New Zealand amateur call signs appeared in "Radio," March 17th, 1926.

A few copies are available and may be had for 7d. post free each from "Radio," 12/16 Regent Street, Sydney.

SELL IT.

Don't keep that unused radio gear lying round the house!

Thousands of radio enthusiasts read this paper regularly.

They may want the very things you have no further use for.

A half inch advertisement (about 25 words) costs 3/6. Try one in the next issue.

Mail your Advertisement NOW to The Editor, "Wireless Weekly," 12/16 Regent Street, Sydney.

Gives you more programmes



The REAL Long Distance Valve

DESIGNED specially for powerful long-distance radio reception. Gives you the means to pick up those weak and elusive signals and amplify them to reality.

Secure the valves that are associated with all the great trans-world records.

MULLARD Double Red Ring VALVES

Type D.3 for 2-volt accumulator EACH 15/- Type D.06 for 2 or 3 dry cells
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Mullard

THE · MASTER · VALVE

MULLARD VALVES CAN BE OBTAINED FROM ALL RADIO AND ELECTRICAL DEALERS

Advertisement of the Mullard Wireless Service Co. Ltd., Balham, London, S.W. 12, ENGLAND (Arks B)

FROM HERE AND THERE

THE ALL AUSTRALIAN RECEIVER.

("W.W." February 19, 1926.)

In response to our request for reports from those who built this receiver, Mr. L. J. Mondon, of Murray Street, Hobart, writes:—

"I built this set according to instructions, but with a slight alteration in that, instead of placing the three coil mounting on the panel—which in my opinion detracts from the appearance of any set—I placed same on the baseboard. I have found that a fixed condenser across the phone terminals greatly improves the quality of tone. Needless to say I am very pleased with the set and when you consider the disadvantage we in Tasmania have to contend with in covering distance, you will agree with me that the performance of this hook-up is very creditable indeed and I can recommend it both for its performance and simplicity of tuning. The results obtained so far are as follows: 7ZL, 3LO, 3SW, 2BL, 2KY, 4QG, 5CL, and I may say that 2FC and 6WF could be tuned in if I cared to use the high coils for them. The stations above were logged on coils 35, 50, and 50. The local station, 7ZL can be tuned in without any aerial. There are other stations on the dial, which I have not been able to clear up so far, though I hope to get them when conditions are better. The set works well on low wavelengths, but not knowing the Morse code I am not greatly interested, except for telephony among amateurs."

GOOD RECEPTION.

Morse lessons from 2WW are being received regularly by Paul Ekeoff, Chiltern, Victoria.

L. P. Kirby, of Pokataroo, also claims that he is receiving 3LO on a crystal receiver.

2BL'S CHANGE OF ADDRESS.

Slowly settling down after the move to the new studios in Bligh Street, Broadcasters (Sydney) Limited were able to effect the change without any loss of time in transmission. This particularly difficult feat was accomplished by the engineers working practically through the whole of the night. The dismantling of the plant to be removed commenced at 11.30 p.m. and by 3 p.m. on the following day, the service was resumed as usual. The new Studios are particularly artistic in the matter of decoration and it is anticipated that their acoustic properties will become famous in the radio world. Every modern suggestion in connection with radio work has been carefully considered and many in-

novations introduced. The installation and occupation of the new premises have been under the direction of Mr. J. Maclardy, Managing Director and Mr. Ray Allsop, Engineer-in-Chief.

BROADCASTING AVERTS INTERNATIONAL CRISIS.

Mr. Eric H. Palmer, of the Freed-Eisemann Radio Corporation, who is making a study of European broadcasting sends us a most interesting account of how broadcasting was responsible for averting a serious crisis:—

Sir Asa Salter, writes Mr. Palmer, was "listening-in" on his home set in Geneva when he heard from 2LO, London, announcement that the Greeks were marching on the Bulgars. He immediately communicated with Sir Eric Drummond.

No official notice of the situation had been given the League of Nations and therefore it could not act, as an institution, but the Greek Charge de Affaires in Switzerland was apprised of the matter. The necessary steps to enlist League co-operation were taken instantly and by a margin of two hours a telegraphic message was sent to the frontier which brought about the intervention — the first action taken by the League in actually averting warfare.

Speculation will never cease as to what the consequences might have been if the report had not been picked out of the very air.

This is the first time that "the inside story" of this extraordinary case has been published. That broadcasting played its part was hitherto not known.

WHAT IT FEELS LIKE TO BROADCAST.

Ever wondered what you'd feel like in front of the mike?

Miss Helen Jean Beegling, who talks so entertainingly upon life at Hollywood, sums it up like this:—

"Hello, everybody! The editor wants to know how I felt the first time I faced the microphone. I don't think I was what you would call actually nervous. I felt that my voice would go over the air all right, but I was naturally wondering if you would all be interested in and appreciate my talks. It was certainly a bit uncanny in that room, not a soul there, and yet I knew that I couldn't sneeze, cough, or even sigh without hundreds hearing it. Not exactly a comfortable feeling! And for some unknown

BURGESS—"THEY'RE ON THE SPEEJACK'S"—BATTERIES



Read
the details of
the Amateur
Exhibit at the
Town Hall, on
May 3-8

They appear
on the opposite
page.



HOWELL'S SALE & EXCHANGE

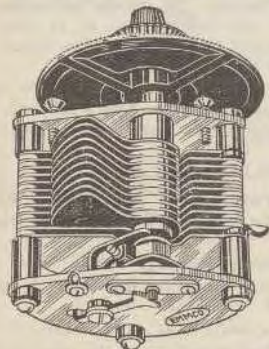
Large Variety Loud Speakers from 35/- to £8.
Hear them on music.

	s.	d.
Jefferson Star Transformers	17	6
30 ohm Rheostats	2	9
Egg Insulators, per doz.	3	0
Bull Nose Insulators, per doz.	3	0
12 Point Inductance Switches	2	6
Single Jack	1	9
Double Jack	2	0
Tunatron 201A Valve	9	9
7-22 Aerial Wire, per 100 feet	3	0
3 inch dials, each	9	9
Standard 201A Sockets	1	6
3 Coil Holder	7	6
.0005 Condensers	7	6

HAVE YOU TRIED THE HOWELL REINARTZ?
THERE'S NOTHING BETTER.
LET US REWIRE YOUR SET.
WE GUARANTEE RESULTS.

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RADIO PRODUCTS

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Manufactured by Electricity Meter Mfg. Co., Sydney
**AUSTRALIAN MADE GUARANTEED LOW LOSS
CONDENSER.**

All Capacities with Direct Vernier.

Built like a Watch.

Most Minute Adjustment.

Absolute Insulation.

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Straight Line Wave Length. Square Law.

Most up-to-date Low Loss Condenser Made.

Emmco Jacks, Single	at 2/6
Emmco Jacks, Double	at 3/-
Emmco Jacks, Switch	at 4/6

SEE THEM AT YOUR DEALERS

reason I felt I absolutely, positively, **must** cough. Had an overwhelming desire to do it. Felt that I just couldn't speak one more syllable if I didn't, that all the saliva in my mouth was running dry (to be quite candid). Why I should feel this way I know not, unless it was that at a moment like that to cough was one of the few things I shouldn't do. Next visit to the studio I remembered how I felt, and took a glass of water in with me, which I forgot all about, so it really was pure imagination, after all. Please write and tell me how you like my talks, as my aim is to interest and please you."

GERMAN BROADCAST SUBSCRIBERS.

German broadcast subscribers increased during November last by 53,028 to 966,804, or 1,768 new subscribers daily. The greatest increase was in Berlin with 23,257 new subscribers. Berlin transmitting zone now numbers 417,749 listeners. Munster-Dormund-Elberfeld transmitting zone secured 10,613 new subscribers, and has a total of 71,798 listeners-in. Hamburg has 5,393 new subscribers. Breslau has 4,920 new listeners, chiefly within the range of the newly-opened station at Gleiwitz.

RUSSIAN PROGRAMMES.

Broadcasting programmes in Russia consist of opera transmissions, concerts, short plays, lectures, news and meteorological and astronomical information. The concerts are of a very high standard, as Russians are born musicians, and high class instrumental music can be received every night. Among the lighter musical items, the balalaika orchestras, similar to the items recently broadcast from 2FC, figure prominently, as well as the national instrument, the concertina. Declamation is the strong item of every programme, as Russian poetry especially lends itself to it, and the average Russian is a good elocutionist. Lectures are given on all sorts of subjects by prominent scientists, and talks on wireless are the order of the day. So far, Russia is the only country to use broadcasting for extensive political propaganda purposes and naturally there is no danger of advertising being sandwiched in between the programme items.

HEARING ABOUT ONE'S SELF.

William Le Queux, while travelling in Switzerland, met with an accident on the Eiger Glacier. Next evening, while listening in on a set at Interlaken, he heard the report of the accident broadcasted from 2LO, London. There's no hiding where there's broadcasting.

AN AMATEUR EXHIBIT

RADIO-ELECTRICAL EXHIBITION.

From Monday, May 3rd, until Saturday, May 8th, the Sydney Town Hall will be given over to a combined Radio-Electrical Exhibition, which, it is believed, will be the largest thing of its kind ever held in Australia. Already the whole of the available floor space has been allotted, and arrangements are well ahead to make this Exhibition a huge success.

Amongst other sections, a feature will be an amateur exhibit organised and displayed by "Wireless Weekly," and to make the scope of this as wide as we possibly can, we invite entries from all radio enthusiasts. The sum of £20 will be allotted in prize money, and the items have been drawn up so that amateurs and broadcast listeners may participate. A small entrance fee has been decided upon, and competitors' apparatus should be delivered at the office of "Wireless Weekly," 12 Regent Street, not later than Monday, April 26th, 6 p.m. A special committee will act as judges, and their decision shall be final. Certificates will be awarded to winners of first and second prizes, and also to other competitors whose apparatus is placed on the stand at the Exhibition. Intending competitors should notify us at once in writing, and forward the amount of the entrance fee. Any one competitor may enter for more than one particular item.

GET BUSY ON THIS RIGHT AWAY.

LIST OF ITEMS.

- 1—The Best Low Power Transmitter. 1st prize, £3; 2nd prize, £1/10/-. Entrance fee, 2/6.
- 2—The Best Designed Short Wave Receiver (tuning from 20 metres upwards). 1st prize, £2; 2nd prize, 10/-. Entrance fee, 2/.
- 3—The Best Home Made Piece of Apparatus. 1st prize, £3; 2nd prize, £1. Entrance fee, 2/6.
- 4—The Most Novel Crystal Set. 1st prize, £2; 2nd prize, 10/-. Entrance fee, 2/.
- 5—The Most Selective Crystal Set. 1st prize, £2; 2nd prize, 10/-. Entrance fee, 2/.
- 6—The Best Multi-Valve Set (the main features of this to be selectivity, sensitivity, attractive design, efficient layout, and good loud speaker reproduction). 1st prize, £3; 2nd prize, £1. Entrance fee, 2/6.

START IN NOW ON YOUR SET.

DRY CELLS FOR EVERY PURPOSE

ALWAYS ASK FOR

Diamond Radio Batteries

MORE THAN A MILLION SUPPLIED ANNUALLY.

TELEPHONE CELLS.

TELEGRAPH BATTERIES.

"Cost
More
To
Build."



"Cost
Less
To
Operate."

"A Radio Set is
no better than its
Battery."

"Diamond Bat-
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Sets Better."

Wireless A B & C Batteries

Produced Expressly for Radio Transmission Reception

Ignition Batteries

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BATTERY		
	15Vt. "Coil"	2/6
A	15 " "Buzace" h. amp	3/0
	15 " "C" wall type	5/6
	15 " "Dominion"	4/6
	15 " "Navy Special"	3/0
B	60 " Large Type	25/0
	45 " 10 1/2 x 7	20/0
	45 " 8 x 7	20/0
C	45 " Biazon	2/9
	45 " Lge Special	12/0
	60 " Ignite	15/0

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All Leading Radio and Electrical Stores

Every Cell is Guaranteed.

Made by Australians, in Australia, for Australians.

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Factory Representatives:

REG. ROSE & CO.

"Kembla Buildings," Margaret Street,
Sydney. Phone, B3872.



1.5 Volt Buzzer.
High Amperage
35 amp 5hr. Circuit

Manufactured by

WIDDIS DIAMOND DRY CELLS
PTY. LTD.,
West Melbourne, Vict.

POTTED WIRELESS

SCHOOL FOR AUTHORS NEEDED.

What would the popular novelists do without wireless as an aid to fiction? Like manna from the heavens, wireless has descended upon the novelists as an endless perennial stream upon which float the beautiful fairy barks loaded with the imaginative but sadly misinformed efforts of the wielders of the pen. Quoting from a book written by a popular author, he goes on after this fashion:—

"Lord Bolingbroke stood facing his beautiful temptress upon the bridge of his yacht. The air was pregnant with the tension of the last few wonderful moments, when suddenly there was a crackle of blue flame at the masthead." "Ah," said Lord Bolingbroke, almost excitedly, "a wireless message is arriving, I must go to the wireless cabin." Details of the transmitter which was able to raise a crackle of blue flame at the masthead of a ship a couple of hundred miles away were not given, otherwise we might have felt ourselves a little nearer to the solution of the problem of the transmission of power by wireless.

A remarkable feat performed by the hero of another novelist was the transmission of a message to the heroine by means of his galena crystal set. The agitated lady, listening on her own "zincite-hornite," heard the hero's deep manly voice giving her timely warning of the villain's plotting.

Why waste money on valve transmitters when you can get along just as well on a crystal transmitter? There is wonderful scope here for some of our transmitting amateurs.

A perfectly respectable English magazine quite lately published a story in which a member of a gang of crooks set up a secret wireless and succeeded in warning his confederates of their peril. According to the writer "He sprang to his wireless, and tapping the vernier rapidly, sent a message which was read clearly by Mackenzie, who was in Paris, although nobody else could hear." Surely Mr. Fisk would be happy to get some further particulars concerning this wonderful set? Another writer quite calmly makes the electrons fly into space. This takes a lot of doing, but it may be possible to train 'em. In another book, the hero "put the coherer to his ears," while in a burst of enthusiasm, an otherwise rational author, describing the thrilling scenes attending an S.O.S., breathes the startling information that the valves opened and shut with lightning like rapidity." We'd

love to give those valves a closer inspection. The same gentleman said naively "the lad made the whole of his wireless set with his own hands, even the valves"—a better theory would be that he stole them.

Here is another truly remarkable set which a writer solemnly informs the world was a super-set invented and owned by an international crook which, though contained in a cigar-box and having only "one hard valve," was the most perfect instrument known. With this invention, "any station throughout the world could be heard, while its transmission range by Morse was over two thousand miles." We certainly hope this crook will reform and give his secret to the human race.

"Gerald, with his hand upon the transmitting key, could, in his tense excitement, feel the electric waves pulsating through his whole body." Must have got across a power line somewhere. Even this amazing yarn is surpassed by the heroine who "spoke into the loud speaker and her voice was carried over the ether to Paul, who was listening at his set at Granford." Granford, by the way, is forty miles away.

Pure bunk, of course, as millions of people know, but it surely is high time that before throwing aside the modern flapper, the airships and submarines in favour of wireless, the popular novelists should at least acquire a superficial knowledge of a subject which to the uninitiated is chock full of pitfalls.

CUPID ON THE AIR.

On Saturday, 20th March, Captain S. Toombs, Secretary of the Radio Telegraphists' Institute celebrated the wedding of a chip off the old block at St. Clement's Church, Marrickville. The bride, Miss Peggy Toombs is now the wife of Mr. Joe Hawkins, who was for years a well known and popular member of the marine staff of Amalgamated Wireless A/sia Ltd., and who is now connected with the X-Ray Department of Australelectric Limited. After the ceremony a reception was held at the Anzac Memorial Hall, Marrickville. We wish the happy couple every success in the future.

FOR SALE—2 Masts, 50 ft. and 30 ft., ready to erect. Snap this up. Going for half price.

Apply C.W., c/o "Wireless Weekly."

Around the Traders

CERTIFIED LOW LOSS CONDENSERS.

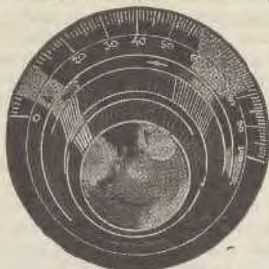
The Certified Low Loss Condensers are claimed to have the lowest loss of any, which is due to the fact that they incorporate aluminium plates of the highest purity and greatest possible stiffness with the highest grade and smallest possible volume of hard rubber insulation, properly located. They have extremely low minimum capacity and the simplest possible vernier movement with an accuracy ample for the most critical tuning and adaptable to all plain condensers. The pig-tail connections are soldered to the rotor shaft.

These very efficient condensers are obtainable from the Economic Radio Stores, Royal Arcade, Sydney.

THE KURZ KASCH ARISTOCRAT "E-Z-TOON" VERNIER DIAL.

This dial is moulded in genuine Bakelite—and is the handsomest and most efficient dial of its type we have had the pleasure of reviewing.

It is a four inch dial—ratio 50-1 with 2 5/8 inch tapered Vernier knob, and 2 inch tapered knob



for ordinary tuning. The Kurz Kasch patented split bushing fits any length of shaft. No cogs or gears—no back lash or lost motion. Simply and quickly installed—it requires no drilling on panel and entails no other changes in the set.

Of rigid construction there is nothing to break, wear out or get out of order. Wholesale agents, United Distributors Ltd.

THE AMERICAN BRAND, LOW LOSS CONDENSER.

This efficient and well constructed piece of apparatus is produced by the Pearl Radio Corporation of America in three types—plain, vernier and the straight line frequency type. They are of the approved low loss design, having a grounded rotor, pigtail connections to the moving plates which are of aluminium, and bakelite insulation. The plain type is suitable for use in all circuits but the vernier condenser has the unique feature of having geared vernier, which gives a reduction of 100-1, and which

enables the plates to be moved extremely slowly, giving extra fine tuning on the shorter waves. The straight line frequency type is specially designed to give the same frequency variation for the same dial movement, and also gives very fine tuning.

These condensers are shown at The Wireless Shop, 6 Royal Arcade, Sydney.

THE DUBILIER MICA CONDENSER.

(Type No. 600.)

If you want absolute efficiency in your wireless set you must have efficient parts. To keep



the efficiency high the electrical losses in every part must be reduced to the absolute minimum. Losses in the condensers and other parts of a radio receiver, though they do not give evidence of their



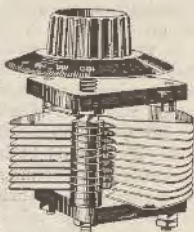
The RAPINET Batteryless Fault-Finder

THIS indispensable scientific instrument indicates instantaneously, without the aid of a Battery, whether your connections on the circuit are good or defective; whether you have a short or a break. Its uses for Electrical purposes are innumerable. Price, 3/6 each. Unmistakably praised by leading Wireless Authorities.

The RAPINET CONDENSER

This Masterpiece Square Law Self Vernier Condenser can be used for all capacities by increasing or decreasing the airgap by the rotating centre spindle. When dial is turned the moving plates not only move in and out of the fixed plates, but also form a micro-adjustment by the action of the axis moving up and down the centre spindle.

Insist on having "Rapinet" Specialties. From most dealers everywhere, or direct from us. Post free.



RAPINET LIMITED

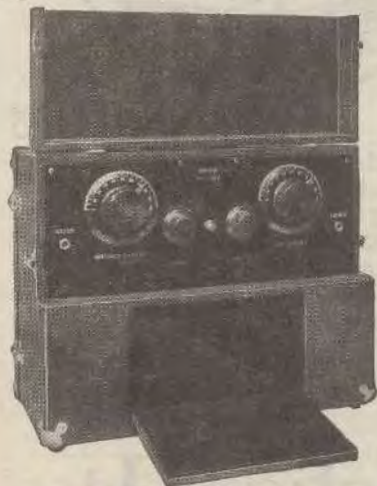
39-47 Croton Road, Earlsfield, London, SW. 18

existence as readily as they do in a transmitting set, are none the less detrimental to the proper functioning of your receiver.

Now obtainable on the market from Amalgamated Wireless A/sia Ltd., is the Type 600 Dubilier condenser which is constructed with mica as shown in the illustration. The condenser itself is enclosed in a moulded insulating case which carries the terminal connections so that the highest insulation is secured. Although designed for use in receiving circuits, this condenser will withstand the application of a testing voltage of 1,000 volts.

THE HETROLA PORTABLE.

In such countries as Australia where we live half our lives in the open, the portable wireless set is sure to meet with popularity, particularly the Hetrola, which is at present being displayed by Messrs. Parsons and Whitemore. This receiver is built on the principles of the famous Branston Super Reflexed circuit, incorporating seven valves, and will, it is claimed, bring in the distant stations on the loud speaker with surprising volume and clarity. The handsomely finished carrying case is only 18 x 14 x 8 inches and weighs only 35 pounds when completely equipped with batteries. Each part of the receiver has been brought as close to perfection as possible and such details as the exact placing of grid and plate leads, the correct wind-



The Hetrola.

ing of the transformer coils, each wound to a rigid standard, together with the matching and harmonizing all component parts, has certainly produced a super receiver that is capable of a super performance.

H. & H.

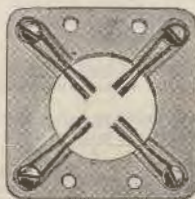


W198 [Porcelain]



W197 [Bakelite]

Porcelain & Bakelite Sockets



It is well known that valves are "delicate." They cannot operate to the best advantage when subject to jars and vibrations. Increase the efficiency of your valves by putting them in H & H sockets, and cut down valve noises. All sockets have "Pussyfoot" cushions; even the mounting screws have rubber collars.

In appearance—handsome; in efficiency—highly rated by both amateurs and professionals all over the world.

Note the special contacts: There is a positive bond between valve prongs and the socket contacts. These make a firm positive wiping contact. It is dust proof and noise proof. The valve guide pin readily fits the socket slot. Just press down the valve gently and easily. The socket prongs go home snugly in the phosphor bronze spring contacts.

COST NO MORE THAN ORDINARY SOCKETS.

For "Low Loss" work use the H & H Porcelain Sockets.

H & H Radio goods are obtainable at all leading stores, and include:—

Sockets (see No-Loss Porcelain Socket)	Jacks and Plugs
Rheostats	Potentiometers
Variable Condensers (Low Loss Type)	Dials and Knobs
Transformers (Audio)	Battery Switches
Push-Pull Transformers	Lever Switches
	Etc., Etc.

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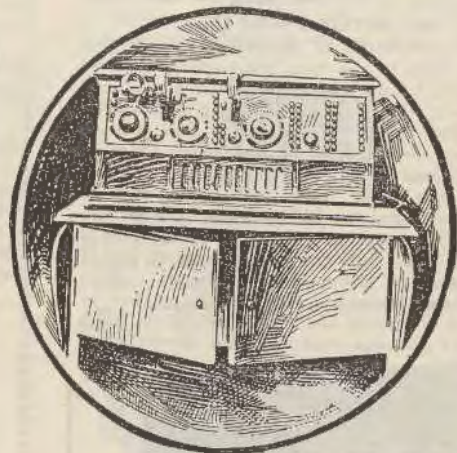
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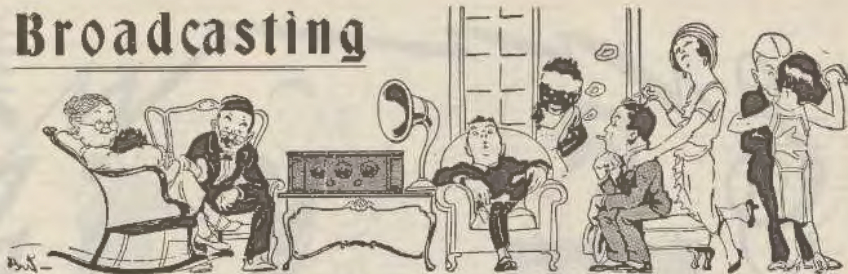
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FRIDAY, APRIL 2.
Afternoon Session.

- 10.30—Service broadcast from St. Thomas' Church of England, North Sydney.
- 8—Concert appropriate to the Season of Easter.

SATURDAY, APRIL 3.
Afternoon Session.

- 2—G.P.O. Clock and Chimes; Special Sporting Information broadcast direct from Sun Office.
- 5.15—G.P.O. Clock and Chimes; Close down. Early Evening Session.
- 8—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra under the direction of Mr. Cec. Morrison.
- 8.30—Sporting Resume from Sun Newspapers; Uncle Jack and the Kiddies.
- 7—A Talk to the Kiddies by "Brings."
- 7.45—Late Stock, Hides and Market Reports by courtesy of Australian Mercantile Land & Finance Company.

Evening Session.
8—Concert appropriate to the Season of Easter.

SUNDAY, APRIL 4.

- 11—"Th. Dabo's" Messe Pontificale" with string Orchestral accompaniment, broadcast from St. Patrick's Church, Churchhill. Soloists: Nellie Chadwick, soprano; Mary Bourke, contralto; Arthur Champion, tenor; Chas. Snodgrass, baritone. Organist, Mr. W. H. McCarthy. This will be the first time this work has been heard with orchestral accompaniment.
- 5.30—Organ Recital, broadcast from Chalmers Presbyterian Church.
- 4.30—Concert from the Studio.
- 7.15—Chalmers Presbyterian Church; Minister: Rev. D. F. Brandt.
- 8.30—From the Studio: Dorrie Ward, soprano; W. E. Lewis, baritone.

MONDAY, APRIL 5.
Afternoon Session.

- 2—G.P.O. Clock and Chimes; Special Sporting Information, broadcast direct from "Sun" Office.
- 5.15—G.P.O. Clock and Chimes; Close down. Early Evening Session.
- 8—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra under the direction of Mr. Cec. Morrison.
- 8.30—Sporting Resume from Sun Newspapers; Uncle George and the Kiddies.

- 7.30—"What's On," a guide to the visitors and citizens of Sydney.
- 7.45—Late Stock, Hides and Market Reports by courtesy of Australian Mercantile Land & Finance Company.
- 7.50—Close down.

Evening Session.

- 8—From the Studio; Signor Alberto Martini, baritone; Madge Helmarich, contralto; Nura Hill, soprano. Ambassadors' Salon Quartet, under the direction of Mr. Claude McElyon. Dance music until midnight, supplied by Ambassadors' Dance Orchestra, under the direction of A. Haunmet.

TUESDAY, APRIL 6.
Afternoon Session.

- 3—G.P.O. Clock and Chimes; Weather Report and Social Notes from The Sun.
- 3.15—Music from the Studio.
- 3.30—G.P.O. Clock and Chimes.
- 3.45—Music from the Studio.
- 4—G.P.O. Clock and Chimes; Music from the Studio.
- 4.30—G.P.O. Clock and Chimes; Serial Story entitled This World of Ours.
- 4.45—Music from the Studio.
- 4.55—Late Market Reports from The Sun.
- 5—G.P.O. Clock and Chimes; Sun News Service.
- 5.15—G.P.O. Clock and Chimes; Close down. Early Evening Session.

- 6—G.P.O. Clock and Chimes; Sporting Resume from "Sun" Newspapers; Uncle Jack and the Kiddies.
- 6.45—Broadcasters' Dinner Orchestra.
- 7.45—Late Stock, Hides and Market Reports by courtesy of Australian Mercantile Land & Finance Company.
- 7.50—Close down.

Evening Session.

- Orphan's Hall, broadcast from Warringah Hall, Neutral Bay.

WEDNESDAY, APRIL 7.
Afternoon Session.

- 3—G.P.O. Clock and Chimes; Weather Report and Social Notes from The Sun.
- 3.15—Broadcasters' Trio.
- 3.30—G.P.O. Clock and Chimes; Special Operatic Talk by Mr. J. M. Prentice.
- 4—G.P.O. Clock and Chimes; Broadcasters' Trio.
- 4.30—G.P.O. Clock and Chimes; Serial Story entitled This World of Ours.
- 4.45—Broadcasters' Trio.
- 4.55—Late Market Reports from The Sun.
- 5—G.P.O. Clock and Chimes; Sun News Service.
- 5.15—G.P.O. Clock and Chimes; Close down. Early Evening Session.

- 5—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra under the direction of Mr. Cec. Morrison.
- 8.30—Sporting Resume from Sun Newspapers;

Uncle George and Uncle Jack with the Kiddies.

- 7.45—Late Stock, Hides and Market Reports by courtesy of Australian Mercantile Land & Finance Company.
- 7.50—Close down.

Evening Session.

- 8—From the Studio; Broadcasters' Minstrel Show under the direction of Mr. Harley Court; Lance Jeffree, tenor; Mr. J. M. Prentice will speak on "Foreign Affairs" and reply to any telephone question on the subject. Dance music supplied by Professor Bolot's Embassy Jazz Orchestra, under the direction of M. S. Bennett, broadcast from Embassy Palais.

THURSDAY, APRIL 8.
Afternoon Session.

- 3—G.P.O. Clock and Chimes; Weather Reports and Social Notes from The Sun.
- 3.15—David Jones' Tea Room Trio.
- 3.30—G.P.O. Clock and Chimes;
- 3.45—Music from the Studio.
- 4—G.P.O. Clock and Chimes; David Jones' Tea Room Trio.
- 4.15—Music from the Studio.
- 4.30—G.P.O. Clock and Chimes; Serial Story entitled This World of Ours.
- 4.45—Music from the Studio.
- 4.55—Late Market Reports from The Sun.
- 5—G.P.O. Clock and Chimes; Sun News Service.
- 5.15—G.P.O. Clock and Chimes; Close down. Early Evening Session.
- 6—G.P.O. Clock and Chimes; Sporting Resume from "Sun" Newspapers; Uncle Jack and the Kiddies.
- 6.45—Broadcasters' Dinner Orchestra.
- 7.45—Late Stock, Hides and Market Reports by courtesy of Australian Mercantile Land & Finance Company.
- 7.50—Close down.

Evening Session.

- Band Concert; Boy Scouts' Meeting broadcast from Peterborough Town Hall. Mr. C. F. Thornby, B.E., B.S., will speak on "Engineering" from the Studio.

2KY

WEEKLY BROADCASTING PROGRAMME.

TRADES HALL.

Call Sign, 2KY. Wavelength, 280 metres.

2KY Broadcasting Station will be closed down on Good Friday, 2nd April, Easter Saturday, 3rd April, and Easter Monday, 5th April, for Easter Holidays, and will re-open on Tuesday, 6th April.

TUESDAY, APRIL 6.
Afternoon Session.

- 8.30—A varied musical and vocal pro-

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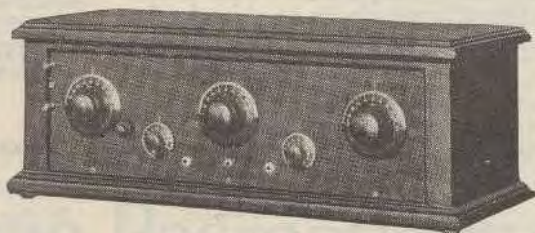
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grams will be transmitted, closing down at 4.45 p.m.

Children's Hour.

6.30—The Man in the Moon.

Evening Session.

7.45—Latest News Items; Mr. McKillop, Tenaway Comedian; Miss Durraignin, soprano; Cec. Morris and his Bluebirds' Jazz Orchestra; Lectorate, A Study in Evolution; Mr. Geo. F. Mannel; Miss Zara Nilsson, soprano; Mr. McDougal, Hawaiian Steel Guitar; Mr. Cliff Case, comedian; Mr. Bob. Storris, banjoist.

WEDNESDAY, APRIL 7.

Afternoon Session.

2.30—A varied musical and vocal programme will be transmitted, closing down at 4.45 p.m.

Children's Hour.

6.30—The Man in the Moon.

Evening Session.

7.45—Latest news items; Miss Eileen Charters, soprano; Miss Dean, pianist; Mr. Don Ellis, harmonica; lecturers, interesting topics, industrial and political, Mr. J. S. Garden; Mr. K. Webster, baritone; Mr. Percy Brown, monologues; Mr. Sullivan, tenor; Miss Thompson, soprano; Miss Lily Wallace, whistler.

THURSDAY, APRIL 8.

Afternoon Session.

2.30—A varied musical and vocal programme will be transmitted, closing down at 4.45 p.m.

Children's Hour.

6.30—The Man in the Moon.

Evening Session.

7.45—Latest news items; Messrs. Hayden and Price, concert duet; Miss Tibbie Smith, monologue; Mr. Eric Goldrick, Hawaiian steel guitar; Lectorate, Australas Fools, Mr. Thomas; Lectorate, the Abnormal Methods, Mr. Manuel, Cec. Morris and his Bluebirds' Jazz Orchestra.

4QG

QUEENSLAND RADIO SERVICE.

Wavelength, 385 metres.

FRIDAY, APRIL 2.

Midday Session.

The complete morning service at St. John's Anglican Cathedral, Brisbane, will be relayed by 4QG.

10.25—Tune-in.

10.30—From St. John's Cathedral: Office of morning Prayer from the Book of Common Prayer; the Psalms being No. 22, and the Lessons, Genesis xiii., 1-18, and St. John xviii.; Hymn 352; There is a Green Hill Far Away; Sermon by the Dean of Brisbane (Canon F. de Wit Baty); Hymn 168; When I Survey the Wondrous Cross; Blessing. Close down.

Night Session.

The special Easter Service, arranged by the Sandgate Methodist Church, and held in the Sandgate Town Hall will be relayed.

7.35—Tune-in.

7.30—From the Sandgate Town Hall: Hymn: When I Survey the Wondrous Cross; Prayer; Brief address; Anthem: Gentle Holy Saviour (Gounod); Cantata: Olivet to Calvary (Mason).

der), Soloists: Miss Ivy Plane (soprano), Mr. John Siesle (tenor), Mr. Bryth Evans (baritone). Notes: "Olivet to Calvary" recalls simply and recently the scenes which mark the last few days of the Saviour's life on earth, and some of the reflections suggested thereby. The rejoicing of the multitude with hosannas and palms, the view of Jerusalem from the steep of Olivet, the last lament over the beautiful city, the scene in the Temple, and the lonely walk back over the Mount at night, form the chief features of the first part.

Part II, opens with the Supper of the Passover, at which Jesus washes His disciples' feet and gives to His friends the new commandment of love for one another as the sign of true discipleship. From this the scene passes to the infinite pathos of the Garden of Gethsemane, the sudden appearance of the hostile crowd, Jesus forsaken by His disciples, His utter loneliness among ruthless foes, the insult before Pilate in the Judgment Hall, the Passage of the Cross, the tragedy and triumph of Calvary.

9.30—Close down.

SATURDAY, APRIL 3.

No Midday Transmission.

The Children's Hour.

A Children's Bedtime Story Session is held each Monday, Wednesday, and Saturday evening. At a later date this session will be made a nightly feature, but in the immediate present, while transmission is being effected under temporary conditions, it is held three times weekly.

6.25—Tune-in signal.

6.30—The Children's Hour; Nursery Rhymes and Music; Bedtime Stories by "The Sandman."

7.15—Close down.

Night Session.

8—Tune in to the Tivoli Theatre.

8.5—From the Studio: Soprano solo: Dear Love, My Love, Mrs. Robert Bell; baritone solo: Russia (Adams), Mr. Chas. O'Mara; Duo Art Selection (by request); Let me call you Sweetheart; contralto solo: Who Knows? (Ernest Ball), Miss Ivy Parker; Aeolian Vocalium selection: Hawaiian Instrumentalists: Mimi Mani (di Coppola); soprano solo: St. Susan Rose (Ardill), Miss Mabel Malouf; baritone solo: The Floral Dance (Moss), Mr. Stuart Partridge; violin solo: Heire Kati (Hubay), Mr. H. Scott MacCallum; soprano solo: Dream Boat (Novello), Mrs. Robert Bell; baritone solo: Glorious Devon Russell, Mr. Stuart Partridge; pianoforte solo: Intermezzo in Octaves (Leschitzky), Mrs. Hilda Woolmer; Soprano solo: Ave Maria (Mascagni), Miss Mabel Malouf.

8.30—Further information officially supplied by the Commonwealth Weather Bureau.

8.55—Announcements.

9—From Lennon's Hotel: by courtesy of the proprietors of Lennon's Hotel, an hour and a half's dance music by Miss May Dobbyn's Victrola Orchestra will be relayed from Lennon's Hallroom.

10.30—From the Studio: The Daily Mail News Service; Close down.

SUNDAY, APRIL 4.

Morning Session.

The complete morning service from St. Stephen's Roman Catholic Cathedral will be relayed.

10.25—Tune-in.

11—Music Motet: Base Dies (Gladstone); Processional: Ecce Sacerdos (Wiegand), Vidi Aquam (Gulbing); Intraul, Gradual, Sequence, Communion, Georgian arranged by Tuccer; Mass in honour of the B.V.M. de Lourdes (Geller); Offertory: Propus; Turra sromit (Hanna); Organ solo: Easter Hymn (arranged Pearce). Close down.

Afternoon Session.

The complete conference service of the Associated Churches of Christ will be relayed.

2.45—Song Service. Conductor, Mr. A. Bennett; Organist, Mr. D. Torrance. Anthem: The Wonderful Story, United Young People's Choir.

3—Congregational Hymn: To God be the Glory; Prayer: Mr. T. F. Stubbin of Beulah; Choral item: The Stranger of Calliole, United Young People's Choir; Scripture reading: Revelation 20, 1-6; Evangelist: U. Hanger, of Toowoomba; President's Introduction, Evangelist H. Bavaard, of Rosewood, Pres. Assoc. Churches of Christ; Offering for Preachers' Provident Fund; Offertory, Mr. D. Torrance; Heculit: Ring in the Truth, Evangelist H. G. Payne, of Albion; Congregational Hymn: The Crowning Day; Loterence, organist: The Christ that is to be preached by Evangelist F. T. Saunders, of Melbourne; Congregational hymn: When I Survey the Wondrous Cross; Conference Notice: Evangelist A. J. Fisher; Choral item: Be-Loy to Jesus, United Young People's Choir; Benediction. Close down.

Night Session.

The complete evening service from St. Stephen's Roman Catholic Cathedral will be broadcast.

1.25—Tune-in.

1.30—Music Motet; Base Dies (Gladstone), Jubilata Dies (Loxton), O Salutaris (Scherer); Tantum Ergo (Scheifer); Divine Praises (arranged Francis); Organ solo: Grand Chorus (Grey).

At the conclusion of the Church Service the concert provided in Wickham Park by the Greater Brisbane Municipal Concert Band (under the leadership of Mr. E. Jackson) will be relayed. Overture: Stradella (Flotow); Gounet solo: For All Humanity (Mascagni), Mr. A. Blockwood; Song: Ora Pro Nobis (Piepoloni), Mrs. Con Thomas; Selection from Cavalleria Rusticana (Mascagni); Hymn: Abide with Me; Romance: By the River; song: Ave Maria (Copner), Mrs. Con Thomas; The Lost Chord (Sullivan); Gloria: 12th Mass (Mozart). Close down.

MONDAY, APRIL 5.

No Midday Session.

The Children's Session.

A children's bedtime story session is held each Monday, Wednesday, and Saturday evening. At a later date this session will be made a nightly feature, but in the immediate present, while transmission is being effected under temporary conditions, it is held three times weekly.

6.25—Tune-in signal.

6.30—The Children's Hour. Nursery rhymes and music; bedtime stories by "The Sandman."

7.15—Close down.

Night Session.

8.5—From the Studio: Soprano solo: Sullin' Through (Penn), Miss Eileen McLennan; Motetist's Corone: A talk by Mr. W. J. Donohoe; Group of banjo numbers by Mr. N. Gould; tenor solo: Maire My Girl (Aitken); Mr. John Steele; Elocutionary number: The Dream of the Desert (Goway), Miss Foy Todd; contralto solo: Beloved, It is Born (Ayward), Miss Vera Parker; Group of banjo numbers by Mr. N. Gould; Ten minutes of Melody by "The Sparklers"; tenor solo: Duns (McCall), Mr. John Steele; A Humorous Interlude by Mr. W. Kenny; contralto solo: Sometimes I seem to Hear you (Phillips), Miss Vera Parker.

8.50—Weather information officially supplied by the Commonwealth Weather Bureau.

8.55—Announcements.

9—A Musical Novelty by The Musical Shirkley. Duo Art Selection: Hilo March (Pele), a quarter of an hour's music and mirth by Ship and Adrian.

Continued on page 42

RADIO PANELS

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The Crystal Mascot

People who pin their faith on to mascots are an amusing sect. There is no end to their absurdities, from those of the nigger who carries a rabbit's foot to those of the motorist who rides confidently behind a stuffed figure of Felix. Somewhere between these two extremes may be classed the wireless enthusiast who shoves a crystal into his circuit and sits back with a sigh of satisfaction at having ensured "that clarity of reproduction and freedom from distortion that characterises crystal detection." Of course, he has not ensured anything of the sort. The crystal merely acts as a rectifier, not as a re-modulator, no even as a pre-modulator. That is to say, the crystal will not restore to their pristine purity musical sequences that have been thrown out of step by previous stages of forced amplification, nor will it feed into following stages of audio amplification such magic tones as will be proof against massacre at the sacrilegious hands of faulty coupling and ill-adjusted valves.

A crystal, in other words, will only give out what is put into it, and once it gets into bad company with valves, transformers, batteries, and other undoubted sources of distortion, it will hand on the distortion as faithfully as if it were the purest music. In fact, we may nowadays even go so far as to accuse the crystal, when under the whip of very strong signals and in the special conditions of a complicated circuit, of doing a little bit of distortion on its own account. It is well known that a crystal responds more readily to strong than to weak impulses, and when both are present, as in a modulated wave, the responses will not be in consonance with the impulses. In plain words, the crystal will distort. This, of course, is rank heresy. Even the greatest expert worships the mascot of the crystal, while the confirmed advertiser does the poor little bit of rock absolutely to death.

The confiding public gapes and swallows all the muck that sometimes comes, for instance, from a much advertised circuit, simply because there's a crystal in it somewhere or other. Nevertheless, it is about time the sensible among us recognised that once we precede or follow a crystal with any form of amplification we inevitably endanger "crystal clarity." If, for example, from a one valve crystal reflex we get music loud and clear and undistorted, as we are quite likely to do if we make and handle the set aright, then the credit is due to be equally divided between both the valve and the crystal circuits, and not given as it usually is to the crystal alone.

The point is sometimes made that if the crystal

in such a circuit were replaced by a wire, then distortion would be more likely to occur. This is only true if volume in both cases were pushed to its limits. If the output in both cases were equally loud, i.e., if the detector valve were operated entirely as a detector, it would function just as well as a crystal, but the valve has the additional advantage that in skilled hands its amplifying powers can also be drawn on to give fuller volume and greater range without any more distortion than the best of crystals will give under the most favourable conditions. The expert who listens-in to music from a powerful local station and in order to eliminate distortion due to faults of reception employs a crystal set, is really rushing headlong into the very pitfall he professes to avoid. A very strong modulated wave is the most likely of any to be distorted by a crystal, but faithfully handled by a valve.

Of course, once we introduce regeneration and reflexing and heterodyning and intervalve coupling, and all the rest of the ways and means of amplifying the simple input, we are simply looking for trouble with a magnifying glass, and we are liable to strike it, crystal or no crystal. The mere presence of a crystal in a multi-stage receiver is no guarantee whatever of distortionless reception. It is interesting, it is in some cases cheap, it is frequently an added source of annoyance, but as a mascot it is a ghastly failure. Let us keep the crystal in its place as a detector, pure and simple, and by all means make use of it in that capacity in preference to a valve when detection of moderately strong signals only is required, but when signals are very weak or very strong or are rich in harmonics of varying strength, let us accustom ourselves to suspect even the crystal of occasional distortion and accordingly to select it with care, to avoid overloading it, and to adjust it at intervals, just as carefully as if it were a valve and not a magic lump of impeccable mineral.

RUSSIAN SHORT WAVE WORK.

M. Petrov, writing in a recent issue of a Russian radio publication, describes some very interesting experiments carried out between Moscow (RDW), and Nijni-Novgorod and Tashket, a town in Transcaucasia, not far from the Caspian Sea. Moscow was transmitting on a band of wavelengths from 33 down to 20 metres and established regular communication with Tashkent on 24 metres. The 24 metres wavelength was selected as the best for the purpose, as reception on 20 metres at night was somewhat weaker than that on 24 metres, although on the latter wavelength atmospheric were more prominent.

Continued from page 39

- 9.30—From the Tivoli Theatre: Half an hour's music by the Tivoli Operatic Orchestra.
10—From the Studio: The Daily Mail news service. Close down.

TUESDAY, APRIL 6.

Midday Session.

- 12.55—Tune-in signal.
1—Market Reports and News Service supplied by the "Daily Standard"; No Stock Exchange.

Night Session.

- 8—Tune-in to the Tivoli Theatre.
8.5—From the Studio: Soprano solo April Morn (Bolton); Miss E. Henderson; cornet solo: Air Valse, My Pretty Jane (Hattman), Mr. J. W. Burgemeister; Hawaiian Instrumentalists: Hawaiian Hotel, The Hawaiian Trio (Meers, Gardner, Bleeck and Gardner); contralto solo: Cantata in the Air (Loy Smith), Mr. J. W. Burgemeister; Hawaiian Instrumentalists: Palikau Blues (Louie and Ferrara), The Hawaiian Trio (Central solo: Love's old Sweet song (Malloy), Miss Hilda Cooper.
8.50—Weather information officially supplied by the Commonwealth Weather Bureau.
8.55—Announcements.

- 9—From the Centennial Hall: By courtesy of the Lessee, an hour's programme of dance music by the Centennial Hall Orchestra will be relayed from the Hall. The Orchestra will play: Waltzes Riviera Rose (Frederick); Land of my Sunset Dreams (Hall); Honey Honey (Nichols); I Miss My Sweet (Wells); One Sweet; Mimi (Conrad); Don't Get Some Money (Rube); Fox Trot: Meet Me in the Spring (Gilbert); Drifwood (Kahn); No Wonder (Davies).
10—From the Studio: The Daily Mail news service. Close down.

WEDNESDAY, APRIL 7.

Midday Session.

- 12.55—Tune-in signal.
1—Market reports supplied by the Council of Agriculture; Stock Exchange information supplied by the Committee of the Brisbane Stock Exchange; weather information supplied by the Commonwealth Weather Bureau; "Daily Standard" news service. Close down.

The Children's Session.

- A children's bedtime story session is held each Monday, Wednesday, and Saturday evening. At a later date this session will be made a nightly feature, but in the immediate present, while transmission is being effected under temporary conditions, it will be held three times weekly.

- 8.25—Tune-in signal.
8.30—The Children's Hour. Nursery rhymes and music; bedtime stories by "Little Miss Brisbane."
7.15—Close down.

Night Session.

- 8.5—From the Studio: Waltzes Louisiana (Wallace and Fred); Land of My Sunset Dreams (Hall) The Classics Orchestra (leader, Mr. Percy Brown); soprano solo: Oh that We Two Were Maying (Nevis), Mrs. Robt. Bell; Loretta to Farmers, arranged by the Council of Agriculture; Fox Trot: Show Me the Way to go Home (King), Moonlight and

Rose (Blank and Maret), The Classics Orchestra; bass solo: The Minor (Sutor), Mr. Stanley Tambling; One Step: If You Knew Suzie (De Sylva), yearning (Davies and Burke), The Classics Orchestra; baritone solo: A Soldier Song, Mr. Charles O'Mara; Waltz: The West a Nest and You (Yocell and Hill), The Classics Orchestra.

8.50—Weather information officially supplied by the Commonwealth Weather Bureau.

8.55—Announcements.

9—Waltzes: Pal of My Cradle Days (Pianaterra), Colorado (Hirsch and Dillon), The Classics Orchestra; soprano solo: At Dawning (Caldman), Mrs. Robert Bell; Fox trot: Bambolina (Yonmas and Slohand), Where the Laxy Danies Grow (Friton) The Classics Orchestra; bass solo: Out on the Deep (Lobel), Mr. Stanley Tambling; Fox Trot: I Love You (Thompson), The Classics Orchestra; baritone solo: Swinging along the Road to Henry, Mr. Charles O'Mara; One Step: Mandalay (Burnett), California Hero I Come (Johnson), Don't Bring Lulu (Rose), The Classics Orchestra.

10—The Daily Mail News Service. Close down.

THURSDAY, APRIL 8.

Midday Session.

12.55—Tune-in signal.
1—Market reports supplied by the Council of Agriculture; Stock Exchange information supplied by the Committee of the Brisbane Stock Exchange; weather information supplied by the Commonwealth Weather Bureau; "Daily Standard" news service. Close down.

Night Session.

8—Tune-in to the Tivoli Theatre.
8.5—From the Studio: Ten Minutes of Humour by Mr. W. F. Kenny; cornet: Caprice, Miranda (Percy Code), Mr. J. W. Burgemeister; soprano: A Riddle (Rubenstein), Miss Mionie Norris; Instrumental Duo: Andante (Lemare), Miss Jeffries (piano), Mr. R. Jeffries (Mandolin); soprano: At Dawning (Caldman), Miss Inelda Colthup; Bookman's Rhapsody: Latest Literature, Mr. W. A. Bruden (Manager Meland's Bookstore); cornet: Carnival of Venice (Levy), Mr. J. W. Burgemeister; soprano solo: Could I Forget (Arnold), Miss Mionie Norris; Instrumental Duo: Angelus Domi (Gren, Zanic Water), Miss Jeffries and Mr. Jeffries; soprano: In Nerley Wood (May Beale), Miss Inelda Colthup.

8.50—Weather information officially supplied by the Commonwealth Weather Bureau.

8.55—Announcements.

9—From the Band Room: An impromptu programme of music by the Greater Brisbane Municipal Concert Band, under the leadership of Mr. E. Jackson.

9.55—From the Studio: The "Daily Mail" news service. Close down.

3LO

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GOOD FRIDAY, APRIL 2.

Service from St. Paul's Cathedral.
10.30—Sentences: Exhortations: Absolution; Holy Communion; The Lessons: Genesis 22, 1-18; Benedictus; and Lesson: St. John 18; Benedictus; The Apostles' Creed; Versicles and

Responses: Ferial; Collects; Anthem: Come into Him (Gounod); Sermon: The Arch-bishop; Hymn: 106 (A & M); When I Survey the Wondrous Cross; Blessing.
11.45—Close down.

Evening Session, 6 to 7.15.

6—Children's Hour. Stories by Mary Gum-lal; Focus: The Lamb; Prayers for Mercies; For the British; user: A simple story of the Cross (with artistic illustrations); for the bigger ones: Good Friday, and what it should mean to us.
6.30—Close down.

Night Session, 7.20 to 11.

8—A special musical programme is being arranged.

SATURDAY, APRIL 3.

11—Harold Rodgers, pianoforte solo: Fazer Lantana (Gosnell Smith).
11.30—Sonora (Kaban): Walata Maori (Hill), Ave Maria (Reilly), song by Rosina Buckman.
11.45—Harold Rodgers, pianoforte solo: Lat Walata (Burton); Moon Madia (Kasner), Capriccio (Wachs).
11.50—Sonora (Reilly): Tea Teaz (Raby), O Murching Rodgers (Jensen), sang by Frances Alda.
11.55—Harold Rodgers, pianoforte solo: Longing (Lange), Sparking Casades (Williams), Rustling Woods (Braunser), Bismalid (Lange), Heather Bells (Hoskater).
12—Time signal: British official wireless news from Rugby; Reuter's and the Australian Press Association cables: "Argus" and "Herald" news services; shipping intelligence.

12.45—Stock Exchange information.

12.50—Meteorological information; weather forecast for Victoria, Tasmania, S. Australia, and N.S.W.; ocean forecast: river reports.

1—Time signal.

1.1—The Studio Orchestra: Humoresque (Karlsdoff), Prelude (Lindqvist).
1.15—The Studio Orchestra: Pianoforte solo: Prelude in A Flat Major (Chopin).
1.15—Leslie Beardall, tenor: For I fear a Lover's Flute (Caldman), Mountain Loves (Squire).
1.23—The Studio Orchestra, fox trot: Holl Hop-pin Blues (Ness).
1.27—Dorothy Roabang, viola solo: Ragrets (Hassman).
1.31—Station Trio: Allegretto (Beethoven).

1.40—Leslie Beardall, tenor: Romanian Night Song (Lohr), I Hear a Thrush at Eve (Caldman).

1.47—The Studio Orchestra, selection: The Quaker Gul (Knoxton).

2—Close down.

2.25—Result of Two Year Old Handicap, Epsom Races.

2.43—Result of Epsom Plate, Epsom Races.

Afternoon Session, 3 to 5.

3—Time Signal.
3.1—E. Spry's Orchestra, fox trot: Five Foot Two (Henderson), Ukabala Lady (Whiting); Waltz: After the Dawn (O'Hagan), Wonderland Dreams (Abbott).
3.30—Result of Bush Steeplechase, Epsom Races.

3.35—Veronica Cox, soprano: A lovely evening in Summer (Greig), The Swan.

3.38—E. Spry's Orchestra, Novelty fox trot: Show me the Way to go Home, (King), vocal chorus, Smith and Rooke; fox trot: Singing on top of the World (Henderson), You Sir, That's My Baby (Donaldson).

4—Veronica Cox, soprano: Lullaby (Scott), Open Thy Blue Eyes (Massenet).

4.5—Result of Epsom Handicap, Epsom Races.
4.15—E. Spry's Orchestra, Waltz, Melody: Merry Widow (Lehar), Valse (Lehar), Mighty Lak's Rose (Nevis), Dreamy Melody (Kochler-Magnum-Naser).

BURGESS—"ASK ANY RADIO ENGINEER"—BATTERIES.

4.30—Result of Epsom Purse, Epsom Races.
 4.31—E. Sny's Orchestra: When you step with Marieite (Coghlan-Redstone).
 4.45—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cables; sporting results.
 5.—Time signal. Close down.

Evening Session, 5.45 to 7.15.

5.45—All sporting results, local, country and interstate.
 6—Children's Hour: Stories by Mary Gumbel. Poems: The Baitshop, A baby's Lullaby; Stories for the brightest ones, The Story of Easter; for the biggest ones, Socrates, the Hero of Trank.
 6.45—"Argus" and "Herald" News services; Reuter's and the Australian Press Association Cables.
 6.53—Weather synopsis; shipping movements.
 6.57—Stock Exchange information.

7.2—Fish Market reports by J. R. Borrett Ltd.
 7.4—Fruit Market reports by The State Fruit Advisory Board.
 7.6—Market reports by the Victorian Producers' Co-operative Co. Ltd.

Night Session, 7.20 to 11.

7.15—Mrs. Drummond Esperanto and Foreign Travel.
 7.40—Dr. J. A. Leach, How Birds are Nourished.
 8—Harold Rodgers, organ solo: Andante in F (Merkel).
 8.5—The Wedding Feast of Hinowita; Words by Longfellow, Music by Coleridge Taylor; Recital, Margaret Kerr, pianoforte, Harold Rodgers, soloist, Syd. L. Exton.
 8.45—Professor F. Sarcotti, violin solo: Air on the G String (Bach), Gavotte (Bach-Kreutzer), Preludium and Adagio (Paganini-Kreutzer).
 9—Alma Horlock, soprano: Mid the Bush of the Corn, Slumber Song (Schubert).

9.5—Second Act of "Lilac Time"; transmission from the Theatre Royal by permission of J. C. Williamson Ltd.; solo, Serenade, Claude Fleming, Dance, Killdeer and Ballet, Solo, Light out of Heaven, John Ralston, Sextette, When Skies are Blue, Harriet Bennett, Mascotte Ralston, Mabel Gibson, Claude Fleming, Edmund Shearar, William Perryman, solo, Opaid and I, Harriet Bennett, Duet, Flower Duet, Harriet Bennett and John Ralston, Duet, Yodel Song, Marie la Verre and Arthur Stigant, Finale, Harriet Bennett, John Ralston and Claude Fleming.

10.20—Syd. Exton, Tenor: Sylvia (Speaks), The Dream (Rubenstein).

10.27—"Herald" and "Argus" News Service.

10.54—Professor Sarcotti, violin solo: Romance (Weinowski), Lotus Land (Cyril Scott), On Wings of Song (Mendelschm-Achton).

10.49—Alma Horlock, soprano: I never Knew, To a Miniature.

10.56—Harold Rodgers, organ solo: Andante (3rd Sonata), (Mendelssohn).

11.—Close down.

OMISSION OF PROGRAMMES.

We regret very much that, owing to our being forced to go to press earlier than usual, due to the Easter Holidays, we have been compelled to omit the programmes of 3LO, 3AR, and 5CL.

BE KIND TO ANIMALS WEEK.

Listen in to This.

The R.S.P.C.A., which is well known for its commendable work of preventing cruelty to animals, proposes to hold a "Be-Kind-to-Animals" week from April 19th to 24th. On April 18th, "Human Sunday," clergy of all denominations will make reference to the Society's work, and 2FC will broadcast Dean Talbot's sermon on kindness to animals from St. Andrew's Cathedral at 11 a.m. On April 19th, at 3 p.m., listeners-in will hear the opening of "Be-Kind-to-Animals" week by the Governor-General and Lady Stonehaven, accompanied by a special musical programme from the Sydney Town Hall. On April 21st, at 3 p.m., a novel broadcast will take place from the Dog's Home, Waterloo.

D.X. CRYSTAL RECEPTION.

A broadcast listener in Toowoomba, Mr. W. Luke, has been listening-in consistently to 3LO, 2BL and 4QG on the Knock-Out Crystal Receiver, which he built himself from the description in "Wireless Weekly." Seven miles from Mr. Luke's place is 4GR, a fourteen watt station and this station is received on four pairs of headphones at the one time. 4QG who is 70 miles distant, comes through at comfortable strength on two pairs. These results certainly speak volumes for the efficiency of the crystal.

A FINE AMATEUR RELAY.

When radio amateurs are on duty at their receiving and transmitting equipment it makes little difference which way a message starts round the world, it is sure to arrive at its destination. This assertion is borne out by the recent experience of Hiram Percy Maxim, president of the American Radio Relay League. A message for the president from an English member of the League started its journey eastward and by relays was finally worked through to this city.

F. A. Mayer of Wickford, England, owner and operator of station G-2LZ started his message to Mr. Maxim through station PI-1HR, the amateur station of Lieut. H. P. Roberts, Fort McKinley, Rizal, Philippine Islands. Lieut. Roberts passed the message along to Ernest O. Noch, owner of station 6BJX in Los Angeles. The Pacific Coast amateur in turn managed a long distance jump by passing the message on to its rightful owner, Mr. Maxim at the later's home station in Hartford, 1AW.

"A ROSE BY ANY OTHER NAME —"

A speaker before the Radio Society of Great Britain recently, discussing the Heaviside layer theory, parodied the old remark about the authorship of Homer, when he said that if we abandoned the Heaviside layer, we should only have to invent the same layer with a new name.

BURGESS—"THEY'RE ON THE 'LEVIATHAN'"—BATTERIES

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Bring your troubles to me.
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I will remodel or re-wire your receiver, making every valve give of its best. Let me modernise your receiver.

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1/9 each.	2/6 each.		

"WETLESS" Condenser Clip, 2/- each.

No need to solder condenser when using this condenser clip: capacities can be changed in a few seconds.

Invaluable to the Experimenter.

Remember, the "WETLESS" Fixed Condenser has the highest grade Ruby Mica Dielectric, not paper. So SPECIFY "WETLESS."

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We have just opened a shipment of desirable parts for the Home Radio Builder.

Variable Condensers, .0005, with metal end plates	9/6	Fixed Gridleaks, in various values . . .	1/-
Dials, 3in. Dials for the above	1/3	Fixed Condensers, Mica insulation—	
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Push Pull Transformers, The Crescent, per pair	35/-	Vornier Adjusters, Rubber shod	1/2
		Valves, "Fotos" Dull Emitter, with English base, each	8/6
		Base Mounting Sockets, suit the above . .	1/3

Country Customers: We have a same day service. Give us a trial.

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CHURCH BY RADIO.

Hillston Presbyterians.

A radio church service was held last week at the Presbyterian Church, Hillston. The service was transmitted by wireless from the Melbourne station 3LO, and received on Rev. Stewart Robertson's 5-valve set. The service transmitted was broadcast from the Central Methodist Mission, Melbourne, and was received with remarkable clarity and fair volume. Those present were much impressed and expressed their pleasure that they were thus able to unite in this way with far away brethren of another denomination and enjoy the excellent singing and solos.

A feature of the experiment was that no outside aerial was used but in place of the usual aerial a clip was fastened to the iron roof of the building, which acted as an aerial; another clip fastened to some wire netting surrounding the building supplying the earth connection.

The evening service was not so successful on account of, as Mr. Robertson now considers, the fact of change of temperature allowing the various sheets of iron to contract and give imperfect and varying contact between each other. An ordinary wire aerial would have been alright.

The experiment was made with a view to utilising this latest development in the service of the church "outback." The set was entirely of Mr. Robertson's own construction.

During the same afternoon the broadcasting of the P.S.A. meeting of the Central Mission, Melbourne was heard with great clarity, and every word of the Rev. A. R. Osborne's address "a Serious National Problem" was heard with ease.

The evening service was from St. Paul's Cathedral, Melbourne.

The whole experiment, says the Hillston Spectator, originated in the fact that Mr. Robertson was unable to hold his usual service at Booligal and being in Hillston all day suddenly decided on the practical experiment. The set was taken over and put in action in fifteen minutes.

You can have "Wireless Weekly" mailed direct to your home for twelve months for—13/6.

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SUPER HETERODYNE

Universally acknowledged the world's greatest and BEST RECEIVER. JUST ARRIVED. The Branston seven valve Super Het. Complete Kits, partially assembled. Highest grade tested parts, saves time and ensures success.

Assembled.

- 1 7 x 21 drilled panel.
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- Baseboard 20 x 9 1/2 inches.
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- 1 3 Stage Long Wave R. F. Unit.
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Order early to avoid disappointment; Price £27/10/-

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Wireless and the League of Nations

FUTURE DEFINED

By ERIC H. PALMER.

Editor's Note: Mr. Eric H. Palmer, of the Freed Eisemann Radio Corporation, who has been making a study of European broadcasting, contributes in this issue, a very interesting article).

Statesmen of the world are striving not only to bring about lasting peace among the peoples of mankind, but with broader vision than ever before in history are seeking to effectively promote the age-long crusade against ignorance, bigotry, and disease, aided by the right-thinking, public-spirited private citizens of every country, whose wealth is being contributed to the great cause.

It was my privilege and pleasure to hear such encouraging words at the beautiful palace in which the experts of the League of Nations are studying these problems, in conjunction with representatives of all member-nations and with distinguished economists, scientists, and philanthropists of the United States.

Of especial interest to me, as semi-official representative of the American radio public in connection with the recent international tests, was the statement of Sir Eric Drummond relative to the vastly increasing importance of radio in carrying on the great work, which regardless of all political considerations meets with universal approval. Sir Eric truly remarks:

"All we can say at the moment is that we are at the beginning of a new era whose potentialities we can hardly guess!"

Sir Eric dictated a statement of tremendous interest to the radio listeners (and probably everyone else) in every country. Before doing so he pictured his own thrills in hearing song and story over the ether and appearing before the microphone. In one instance he reached the Lapps in Northern Sweden.

This is what the Secretary-General had to say on the general subject of wireless communication: "Radio and the League of Nations are both in their youth. They were born at approximately the same time, and are growing and developing on somewhat the same lines. Assuredly their fruitful co-operation will make for the peace of the world.

How rapidly civilisation has travelled! Only a few centuries ago Columbus took three months to reach America. A century ago it took weeks to send news to the Far East. To-day information

can be put on the air in London, received in New York, re-transmitted and heard in London in the space of seconds.

It is not easy, even for those who serve the cause of peace, to realize the enormous new force that now makes for better understanding between peoples, on which peace ultimately must depend. Before it, distances and time almost cease to have importance. People hear of each other and know each other. Before such contacts, war recedes to a distant background. The full development of radio must render international co-operation, and therefore the task of the League, infinitely easier.

Up till now, the League of Nations has perhaps hesitated to take up any position with regard to radio. The science is so new and the developments so rapid that there has been a natural tendency to wait until the situation becomes clearer. Despite this, however, the League is following developments with the utmost interest and sympathy.

The first incident involving the good relations between nations, in which radio played its part with the League of Nations, was in connection with the recent Greco-Bulgarian frontier crisis. At that time, hours before word had appeared in the Press, wireless information was picked up in Geneva which gave League officials the first intimation they had had of the seriousness of the crisis and allowed certain preparations to be made which measurably advanced the peaceful action of the League. The value of a few minutes of time in such a crisis can be fully appreciated if I say that the necessary telegrams, sent because of League intervention, instructing the opposing forces to cease any hostile action, arrived less than two hours before the moment when a clash would have occurred.

The League's second use of wireless is in the establishment, for the first time in history, I believe, of an almost instantaneous information service whereby the outbreak of plague or other serious epidemic disease in any Far Eastern port is immediately made known to all neighbouring administrations, who are thus put on their guard against any ships from the danger areas. Under this system, all Far Eastern port authorities send in regular reports of diseases to a central League bureau created at Singapore with the aid of the Rockefeller Foundation. These reports are each week brought together into one; telegraphed to

the French wireless station at Saigon in French Indo-China and from there broadcast throughout the Far East and wirelessly to France, telegraphed to Geneva, and in turn distributed through the European ports. Thus an opportunity is afforded to check the spread of disease almost from its source.

Thirdly, this year for the first time, certain speeches at the Assembly of the League of Nations were broadcast throughout Europe. The Prime Minister of France, Monsieur Painleve, made his opening speech not only to the Assembly, but to many thousands of people who listened in other countries. Sir Austen Chamberlain, British Foreign Secretary, was also broadcast and there can be little doubt that as the years go on more and more of the debates will go out over the air.

One problem which occupies us at the moment is the provision of proper wireless transmitting facilities for the new Assembly Hall. This building, which is being planned for a capacity, the representatives of 65 nations with some 1,000 journalists, will undoubtedly be the centre of some of the most important international debates. Every effort is to be made, therefore, to make it thoroughly modern in all respects, particularly as regards loud speakers, acoustics and radio.

The future of radio is a matter on which speculation can run wild. I myself, however, can foresee the day when many League conferences and debates will be put forth on the air; when many important declarations will go forth from Geneva; one can even imagine that extraordinary sessions of the Council might be held by direct radio between statement in different capitals. We can really hardly estimate the change that may be made in international relations if people in various countries become accustomed not only to the thoughts but even to the actual voice of the statesmen of other countries. All we can say at the moment is that we are at the beginning of a new era at whose potentialities we can hardly guess."

MARKETS BY RADIO.

Curious Law Case.

A court action in connection with live stock reports commenced in Chicago is of interest here. The Chicago Live Stock Exchange went against a cattle salesmen firm which broadcasts current market quotations daily from the stockyards.

The firm was noticed to be getting preference with the cattle shippers and a great increase in business. The court action was on the right to use radio as an advertising medium. The result has not reached us yet.

The practice of the Sydney and Melbourne broadcasting stations is to collect their own infor-

mation regarding market prices from the newspapers, the agents' reports, and their own officials. Thus they accept the full responsibility for the information given in the broadcasts which they send throughout Australia, and it is received by Stockowners agents, farmers, graziers, and others with complete confidence.

TIME BY RADIO.

Setting the Clocks.

In the Mandated territory of Papua, the surveyors use radio to obtain time for fixing longitude. W. A. Chadwick, a member of the Institute of Surveyors of New South Wales, found that with his receiving set he could pick up the time signals from Honolulu and Japan to within one-tenth of a second. Fixing longitude depends upon accuracy of time, and one-fifth of a second is considered good. Mr Chadwick was able to discard the use of his chronometer, finding it more satisfactory to rely on radio.

Ordinary people are content to get the time to within half a minute. This they do by listening to the clock as broadcast daily from the studios.

COMMUNICATION WITH SHIPS.

In order to provide better communication with the ships off the French coast, the Dunkirk Chamber of Commerce has lately established two wireless reception and transmission stations, one in a building in the port and one on one of its pilot boats. Both installations are adapted for wireless telephony as well as telegraphy.

MADRID WIRELESS UNION.

It is announced that the Union de Radioyentes de Madrid is studying a proposal to institute courses of lessons in playing musical instruments and singing for children of members.

The best pupils would be asked to play or sing for the broadcasting station, which would encourage the pupils and introduce them to the public.

U.S. EXPORTS.

The American Department of Commerce at Washington recently published figures showing exports of 8,936,565 dollars worth of wireless apparatus from the United States during 1925.

This figure compares well with exports of approximately five million dollars for 1924. It is stated that American wireless exports now constitute twelve per cent. of the total foreign electrical trade of that country.

German View of European Broadcasting

(This article, kindly translated from "Der sächsische Funk," by Dr. W. L. Woolnough, presents a most interesting view of the future of European Broadcasting.)

Is it Possible to set up New Transmitting Stations in Germany?

This question, which is of extraordinary importance in the realm of German broadcasting, is treated of by Postmaster General Harbich. As is well known, the International Broadcasting Conference in Geneva decided upon the wavelengths for the various countries, and thereby determined the number of transmitting stations possible.

Twenty transmitting stations are conceded to Germany, 19 to England, 12 to France, 10 to Sweden, Czecho-Slovakia, Austria and Hungary get 5 a piece, Finland 4 Spain 9 and the remaining countries 1 to 3.

This allotment is not made upon any political grounds, but upon the basis of the populations and areas of the countries, keeping in view the technical necessity for preventing mutual interference.

Already we have reached in Germany, the number of high-power stations it is possible to operate. With long waves, e.g., between 500 and 2,000 metres, the margin between the wave bands of individual transmitting stations must amount to 10,000 cycles, i.e., plus or minus 5,000 on either side of the fundamental wavelength. With still longer wavelengths, e.g., 2,000 metres only about seven or eight stations can operate simultaneously. There is also the possibility in the future, of installing stations with shorter wavelengths; but, at present, too little research on this subject has been carried out to permit of their use for broadcasting. If we assume the wavelength band for European broadcasting stations to lie between 200 and 600 metres, we can operate, in the whole of Europe, about 100 stations. If we use waves shorter than 200 metres we have another 154 stations possible, but that is the absolute limit for European broadcasting stations.

Experiments with short waves between 100 and 150 metres, particularly in large towns, has shown that absorption is very strong; and consequently, even in moderate towns, the reception of the various stations is well differentiated. On the other hand, in open country, the reception of long waves between 1000 and 2000 metres (Konigs-wusterhausen, 1300 metres) appears to be extraor-

dinarly satisfactory, so that the increased use of such wavelengths is in contemplation. For this reason, local programmes seem to be ruled out of court; because, as we have shown, only a few such transmitters can operate simultaneously. The available wave bands are used satisfactorily only when reception free from interference is ensured by sharp control of the assigned wavelength. For this purpose, a central bureau is established in Berlin which operates with Eppen's wave meter, and with the piezoelectrically illuminated resonators of Professor Giese. During broadcast transmission, each station will be kept under observation, and if it departs ever so slightly from its assigned wavelength, it will be warned telegraphically to correct it. The apparatus used is capable of detecting an error of 3/100 per cent. with accuracy. It has been found that foreign stations often show very considerable variations in wavelength; e.g., Vienna, 15 metres, equal to 20,000 kilocycles; Prague, between 5 and 11 metres, 10,000 kilocycles; Brunn, between 10 and 18 metres, 20,000 kilocycles. That such aberrations interfere with the entire European interchange is quite obvious, and the importance of this central European regulation will be recognised by all states. On the basis of international arrangement well defined wavelengths are reserved for individual services, so that their use by other broadcasting transmitting stations is out of the question. Thus 210 to 240 metres is for telephony at river mouths, 600 to 800 for coastal stations, 700 for the Navy, 750 for Government Railways, 800 for the Pilot Service, 900 for airships, 940 to 970 for Lightships, 1000 to 1050 for the Dutch broadcast service, 1100 for the meteorological service, and so on. Of the higher wavelengths 2525 metres is reserved for the Press, 2525 for the W.T.B. and 2900 for the Telegraphic Union.

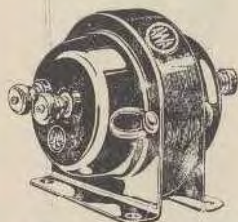
RUSSIA FORGING AHEAD.

Those people who conceive Russia as a chaotic nation will be surprised to learn that she has sixteen active broadcasting stations. Note the power used in comparison to other countries. There are four 2 k.w. stations, three of 4 k.w., one 8 k.w., 2 10 k.w., one 25 k.w., one 50 k.w., and four of medium power.

TURKISH STATIONS.

The Turkish Government has decided to have their Angora and Constantinople broadcasting stations installed by French firms. Amongst the competing foreign companies mentioned were Radio Corporation, Marconi, and Telefunken. Turkey—the French boast—is the "fourteenth country which has exercised such a preference."

RANGE AND VOLUME



A.W.A. Audio Transformer

A.W.A. Audio Frequency Transformer

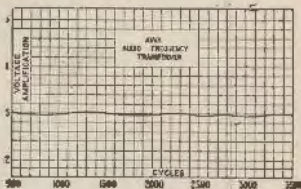
Ideal for Low Loss Work

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

Low self-capacity and the special

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

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

MODEL D3

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



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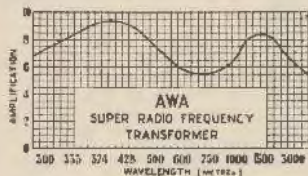
No switching or other mechanical device is used in the A.W.A. Super Radio Frequency Transformer.

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

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

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

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



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SYDNEY.

Dear Sirs,

I am so pleased with your Special Four which I only tried out last night that I must write to you at once to let you know how this beautiful receiver is working. After coupling the set up at about 8.15 p.m. last night I turned the dials and the first station I heard was 5CL, Adelaide, then came 3LO, 3AR, 2BL, 2KY, 7ZL. I think that is something worth writing about.

You may use this letter as you wish and hope you will sell many of them as I think it is the best set I have had out of my seven sets I have owned so far. It beats my five valver.

Wishing you every success, I remain,

Yours truly,

Signed. R. SLOAN,

CROYDON.

You can own a Set like this for

£2/17/6 deposit and pay the balance at 8/9 weekly

Total Price

£26/10/0

Complete with Batteries, Valves, Phones and Aerial Gear

RADIO-W'LESS MANUFACTURING CO.

289 GEORGE STREET. SYDNEY