

WIRELESS WEEKLY

Registered at the G.P.O., Sydney, for

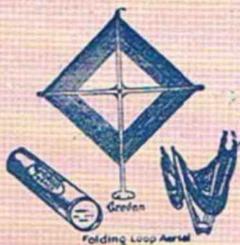
transmission by post as a newspaper.

VOL. 7. No. 2.

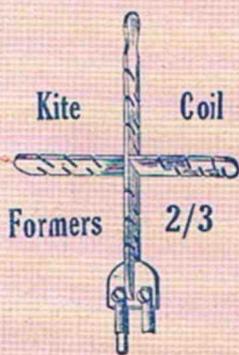
FRIDAY, NOV. 6, 1925.



"Grodan" Radio Appliances



39/6 Each



Kite Coil

Formers 2/3

The Latest
Inductance Device



6d. Per Packet

There is a use for "Ecs"
in every Set. Price 9d.



Grose & Daniell

Note New Address:
HOLDEN ST., REDFERN
SYDNEY

Kindly Write for Catalogue

FEATURE:

An Excellent
Short Wave
Receiver

DE FOREST - The Quality Valve

De Forest Valves
17/6 each
Everywhere



Filament, 3 Volts .06 Amp.
Detector, 16 to 45 Volts.
Amplifier, 70 Volts to 150 Volts
Fits Standard American Socket.

De Forest Valves
were the first
made.

Lee De Forest in-
vented the valve,
so you can rest
assured that De
Forest Valves are
the best.

DON'T BE MIS-
LED.

DE FOREST is
the "QUALITY
TUBE," and is
correct in design
and manufacture.



Filament, 5 Volts $\frac{1}{2}$ Amp.
Detector, 12 to 22 $\frac{1}{2}$ Volts.
Amplifier, 90 to 180 Volts.
Fits Standard American Socket.

INTERNATIONAL RADIO Co. LTD.

200 Castlereagh Street, Sydney.

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

£21 COMPETITION

Have you entered our competition yet?

The closing date for our Best portable Set Competition is drawing near. The Competition closes definitely on Friday, November 6th, and the Adjudication will take place on Friday, 20th.

If you have not already entered, do so at once. You have as much chance of carrying off the prize as any other competitor.

It is our aim to promote the popularity of Radio by offering a set that combines extreme portability with excellent reception. We will gladly give every assistance possible to competitors.

CONDITIONS.

Preference will be given to sets employing a Frame Aerial. Selectivity, volume, quality, weight, compactness and general features of portability are, of course, an important consideration.

There is no limit to the number of Valves to be used, and it should be noted that only sets employing Phillip's Valves will be eligible. These valves must be purchased at this Store, where an entry form will be given.

We would suggest the use of B6 and D6 Valves for the fact that they render unnecessary the use of B batteries, thus reducing the weight of the set. Additional points given to sets using these valves.

To those desiring it, charts and expert advice will be given. Any problem you may have, our Experimental Staff will only be too glad to advise you.

START YOUR SET TO-NIGHT

Start planning your set to-night. You have as good an opportunity of winning this prize as any.

NOTE.

We reserve the right to purchase the winning set, but all sets, it is clearly understood, are the sole property of the competitors.

COUNTRY CUSTOMERS.

Our Same Day Mail Order Service guarantees immediate attention to your inquiries and orders. All goods are carefully packed.

"You Have My Word for It."

E·R· Cullen Late A.I.F.

RADIO and ELECTRICAL STORE

96 Bathurst Street.

Telephones—City 869 and 2596

COL-MO LITTLE GIANT SETS



ATLAS LOUD SPEAKER, £4/10/-

DO THE JOB YOURSELF AND SAVE MONEY.

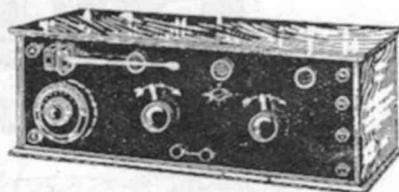
ONE-VALVE SET: Complete with Cabinet, £2/15/0.

TWO-VALVE SET: Complete with Cabinet, £4/10/0.

THREE-VALVE SET: Complete with Cabinet, £6/5/0.

SALE OF GENUINE PARTS.

Clearing off a number of lines at cost.



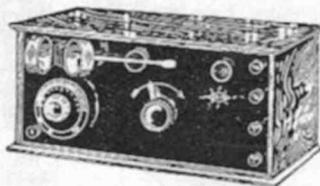
The Little Giant Sets are sold complete with all accessories, including aerial wire. The three valve Little Giant is complete with all Accessories and Atlas Loud Speaker.

One Valve Set	£7 10 0
Two Valve Set	£12 10 0
Three Valve Set	£20 0 0

THE LITTLE GIANT ALWAYS LIVES UP TO ITS NAME. A GIANT IN TONAL QUALITIES, EFFICIENCY, AND SIMPLICITY OF OPERATION ARE FEATURES NOT SURPASSED IN LARGER HIGH-PRICED INSTRUMENTS.

Col-Mo Ready to Wire Sets

GENUINE RADIO SETS THAT WILL WORK



Our Ready-to-Wire Sets are complete with wiring diagrams. No previous experience necessary to wire a COL-MO Ready-to-Wire Set.

WIRING TAKES TIME, AND TIME IS MONEY.

CALL AND INSPECT

COLVILLE-MOORE

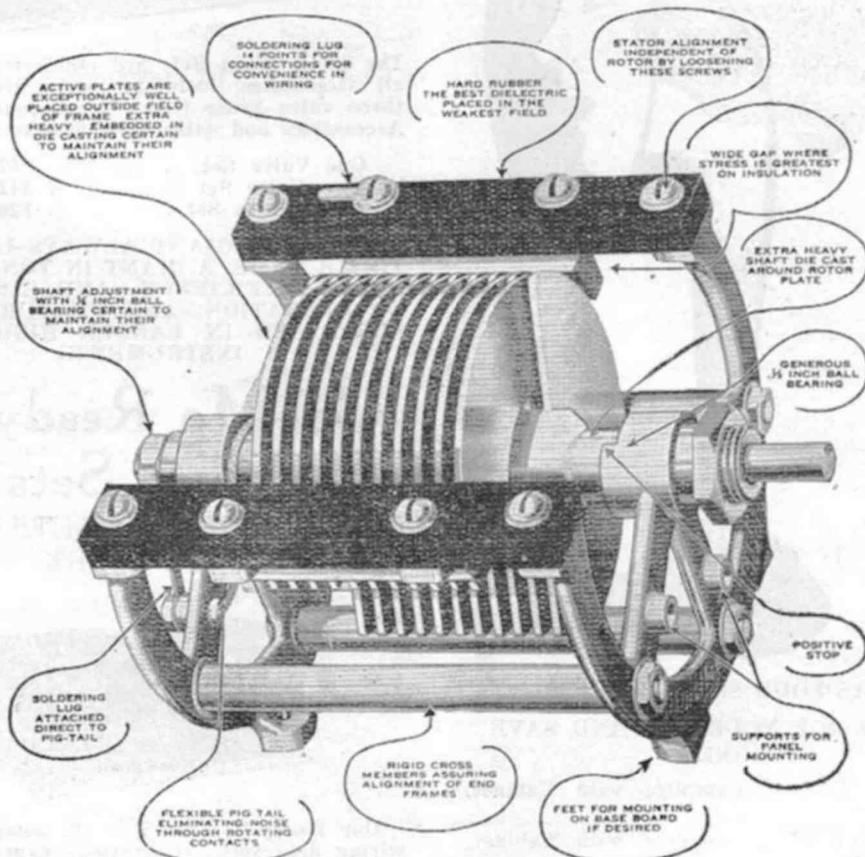
Wireless Supplies Limited

10 Rowe Street, Sydney

BUELL

E. J. Flewelling

RADIO APPARATUS DE LUXE



11 Plate, 30/- Each 23 Plate, 32/6 Each

A FEW WORDS ABOUT OUR SERVICE.

All these lines are guaranteed for 12 months
If your dealer is out of stock, ask him to ring us (MA. 1744), and we will deliver within the city area in 10 minutes.

All Dealers, or—

RADIO DISTRIBUTORS

Broughton House, King and Clarence Sts., Sydney

Our 3-Valve Sets

ready for immediate use., complete with Valves, Accumulator, 2 B Batteries and Dulcivox Loud Speaker £19/-/- Terms arranged. A very selective 3 coil set with vernier adjustments and De Luxe mountings.

As above, but without vernier adjustments and ordinary mountings, £17/-/- Terms arranged

Cabinets from £1 to £25

Duolateral Coils

	Unmounted.	Mounted		Unmounted.	Mounted
20 Turns .. .	1/5	2/10	100 .. .	2/1	3/8
25 " .. .	1/5	2/10	150 " .. .	2/3	4/-
35 " .. .	1/6	2/11	200 " .. .	2/6	4/4
50 " .. .	1/7	3/-	250 " .. .	3/3	4/8
75 " .. .	1/10	3/4			

SLINGSBY & COLES

482 Pitt Street

Under the Railway, opp. Marcus Clarks

Wm. Lambert Hamilton

Radio Specialist

Bring your troubles to me. What I will do for you.

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

I will build you a set to suit your local conditions.

I will answer any enquiries immediately.

My charges will be moderate.

I will buy your components for you at ruling city prices and despatch them to you within 24 hours of receipt of order. I will advise you as to the quality of the goods. This service is free.

I am at your service in any radio wants.

City address:

VICKERY'S CHAMBERS,
82 Pitt Street,
SYDNEY.

Phone: B4543.

Private address:

16a Ness Avenue,
Dulwich Hill.

HOWELL'S Sale & Exchange

HOWELL REINARTZ CIRCUIT.

Complete Set of Parts,

£4 2 6

Accessories .. . £3 14 0

Complete .. . £7 16 6

Only best of parts used.

Let us re-wire your set to the most popular Howell Reinartz.

Bring your troubles to us. We will advise you in the best possible way.

19 Barlow Street
SYDNEY

PHONE : M A 1133

OPEN TILL 9.30 FRIDAY NIGHT

Up to the Minute
Progress in Radio

QST

A Magazine Devoted
Exclusively to the
Wireless Amateur.

Published Monthly.

Subscription, 20/- per
annum, post free.

Obtainable at all Bookstalls

Distributor for Australia:

Phil Renshaw

DALTON HOUSE,

115 Pitt Street, Sydney

Box 2816, G.P.O., Sydney.

RADIO on Easy Terms.

NO INTEREST.

All sets complete with De Forest valves, phones, A and B battery and Aerial.

Single Valve .. . £9 10 0

Deposit .. . 0 18 6

Weekly .. . 0 3 3

Two Valves .. . £13 15 6

Deposit .. . 1 7 6

Weekly .. . 0 4 9

Three Valves .. . £21 0 0

Deposit .. . 2 0 0

Weekly .. . 0 7 4

Four Valves .. . £25 0 0

Deposit .. . 2 10 0

Weekly .. . 0 8 8

Five Valves .. . £29 10 0

Deposit .. . 3 0 0

Weekly .. . 0 10 0

OPEN ON FRIDAY NIGHT.

Radio W'less Mfg. Co.

289 George Street,

Opposite Hunter Street.

B5747.



WIRELESS WEEKLY

Phones: Redfern 964 and 930.

Official Organ of the New South Wales Division of the Wireless Institute of Australia, with which are incorporated the Affiliated Radio Societies and the Australian Radio Relay League.

Editor: A. W. WATT

The Editor will be glad to consider Technical and Topical Articles of interest to Australian Experimenters. All Manuscripts and Illustrations are sent at the author's risk, and although the greatest care will be taken to return unsuitable matter (if accompanied by stamps), the Editor cannot accept responsibility for its safe return.

Subscription Rates.—Twelve months (52 issues), 13/-. post free. Six months (26 issues), 6/6, post free. Single Copies 3d. each, or post free 4d.

Advertising.—Advertising Rates may be had on application to the Advertising Manager. Copy must be in the hands of the Editor by the Friday preceding each issue. If copy is not received in time, the previous week's advertisement will be repeated.

"Questions and Answers." All requests calling for technical advice or drawings MUST be accompanied by postal note or stamps to the value of 1/-. A maximum of four questions is allowed.

Agents in Great Britain.—The Colonial Technical Press Ltd., Dudley House, Southampton Street, Strand, W.C. 2.

All accounts should be made payable to Publicity Press Ltd., 12/16 Regent Street, Sydney.

"Wireless Weekly" is fully protected by copyright, and nothing that appears in it may be reprinted, wholly or in part, without special permission. The use of our articles or quotations from them for any purpose whatsoever is never authorised.

Published by Publicity Press Ltd., 12/16 Regent St., Sydney, Australia.

CONTENTS

	Page
Wireless Institute.	8
Club Notes	9
Amateur Notes	14
Esperanto News	14
Obtaining Maximum Efficiency with Crystal Set	17
An Easily Controlled Receiver for Short Waves	19
Jottings from 2BL	23
What They Write	28
Broadcasting	33
Basket Weave Winding Form	40
Further Notes on a New Condenser Adjustment	48

ADVANCE, BATHURST!

ONLY a week ago Bathurst was merely Bathurst, with nothing particular to distinguish it from other inland towns, save fairly ancient historical associations, a particularly live Advance Bathurst League, and beautiful environments.

To-day, the city of the plains has lined up with the capital cities of Australia, and with true ideals of service to the community, established a broadcasting station, an achievement which automatically places Bathurst ahead of other country towns so far as modern ideas are concerned.

Although the installation of the broadcasting station is primarily due to the initiative and business acumen of a leading citizen, there can be no doubt that his decision to branch out into this new field was influenced by the fact that the people of Bathurst were ready to link up with a modern, but to them entirely new departure, and were prepared to get behind this station which in one month will do more to boost Bathurst than twelve months' concerted effort along other lines.

It is obvious that a broadcasting station represents the finest possible publicity medium for any

town anxious to lift itself out of the rut of being just a country town, because, besides keeping the name of the town continually before those already interested, it reaches the notice of thousands who never even gave the place a thought.

Aside from the commercial benefits which must accrue to Bathurst through blazing its name far and wide across Australia, the broadcasting station affords an opportunity to present the musical and artistic talent of the town to listeners-in even in the city of Sydney. Another aspect is that as the problem of the average country town is to keep its population on the increase, and the drift is always to the big cities, the activities of the new station, 2MK, will go a long way towards not only keeping people there, but to attracting strangers.

Just as 2FC and 2BL are inevitably linked with Sydney, so will 2MK be linked with Bathurst, which is now on the wireless map of the world.

If the first broadcasting programme transmitted is an indication of what may be expected in the future, then Bathurst will very quickly find a niche in the hearts of listeners-in situated all over the State.

A. W. WATT.

And now —

Brandes

The Name to Know in Radio

Introduce the Table-Talker

Original in the real beauty of its performance, original in its ingenious construction, original in its remarkable price. The horn is so contrived that every note registered is encompassed and emitted with absolute purity — there is no discordant echo from its walls. The full-toned accuracy of reproduction is consistent with the mellow note which is the chief characteristic of the famous Brandes Superior "Matched Tone" Radio Headphones.

Retail Price . **63/-**

Tune with Brandes
"Matched Tone" Radio Headphones
Then listen with
Brandes "Table Talker"

Trade
Only

INTERNATIONAL RADIO CO. LTD.

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

HEADQUARTERS
Royal Society's House
5 Elizabeth St
SYDNEY, N.S.W.

Wireless Institute of Australia

N.S.W. Div. Inc.

Incorporating the Affiliated Societies and The Australian Radio Relay League



W.L. Carter, Hon. Sec.
Box 3120 G.P.O. Sydney
Phone B2235
A.H. Perrett, Publicity Officer.

New Transmitter.

The new transmitter of the New South Wales Division of the Wireless Institute of Australia is now practically completed. The official opening has been arranged for Monday evening, Nov. 9th when a distinguished gathering will perform the official opening ceremony. The new transmitter, which will be worked under the call signal, 2W1, will be on the air on Monday, November 9th, and various speeches will be broadcasted. The wavelength will be 200 metres on this occasion, and the speeches will commence at 8.30 p.m. sharp.

Mr. James Malone, the friend of every wireless experimenter in Australia, and Chief Manager, Telegraphs & Wireless, will address a message of extreme importance and interest to all experimenters on this occasion, and every radio enthusiast is invited to tune in on the allotted wavelength, 200 metres, on this occasion, and listen to the interesting remarks of Mr. Malone and others.

Messages will also be transmitted to the headquarters of the other State Divisions, as an inauguration of the activities of the Traffic Branch of the Wireless Institute of Australia. Don't forget the date, time and wavelength. Reports as to the reception should be forwarded as soon as possible to the Honorary Secretary, Box 3120P., G.P.O., Sydney.

Boosting Your Club.

What are you doing to boost your club? It has been formed for the benefit of those who are interested in radio in your district, and there may be many who have a keen interest in the wonders of wireless who are unaware that there is a club within easy walking distance of their home. It is well within the point of possibility that some of your friends may be only too anxious to link up with a body of enthusiastic experimenters, and you should lose no time in spreading the good news around. You should make it a point to interest those in your neighbourhood in the doings of your club. Let them see that you are a live body of experimenters. Your efforts should not stop here, however, but should include practical assistance to all and sundry who may be in difficulties with their

set. A little friendly advice given in the right spirit will not usually be taken amiss, and it will be possible to show the novice or inexperienced person many ways by which reception of their set can be improved. Even though he may have but a casual knowledge of wireless at the start, there is always a possibility, which in most cases amount to a probability, that he will eventually turn out a most enthusiastic "ham." Hence you should lose no opportunity of making the doings of your club widely known. If your club possesses a badge, you should make a point of always wearing it, and a pennant, with the club's initials on it, flown at the masthead at the week-end will invariably draw attention to the fact that you are a member of an organisation which is alive to all the possibilities which lie before it. Consideration of matters such as these is urged upon all club officials.

Then there is the question of affiliation with the Wireless Institute. This is undoubtedly one of the most advantageous steps that can be taken in connection with club work. Affiliation links the club in with all the other clubs in New South Wales and the Wireless Institute itself. It also carries certain advantages and privileges; as participation in the MacLurean Cup Competition, the right for members to attend certain "All Clubs' Nights," or meetings of the Institute; the privilege of being present at the annual dinner, and the co-operation of a number of live experimenters throughout the State. These things should enable a live club member to do a great deal towards pushing the interest of his club, and incidentally also the interests of radio in this State.

Change of Address.

All members of the New South Wales Division of the Wireless Institute of Australia, members of clubs affiliated with the Institute, and all who have occasion to correspond with the headquarters of this division, should particularly note the fact that a slight alteration has been made in the box number of the Wireless Institute. All correspondence should, in future, be addressed to Box 3120P. G.P.O., Sydney. Care should be taken to place the box number on all envelopes and not to address them

to the Royal Society's House, 5 Elizabeth Street, Sydney, as this will involve delay in delivering the correspondence. Don't forget the number and the suffix, Box 3120P, G.P.O., Sydney.

Round the Clubs

The asterisk denotes clubs affiliated with the Wireless Institute of Australia (N.S.W. Division).

THE LEICHHARDT AND DISTRICT RADIO SOCIETY*

(Licensed Experimental Transmitting Station 2LH)

Members of the Leichhardt and District Radio Society held their 149th general meeting at the club-room, 176 Johnston St., Annandale, on Tuesday, October 27th.

The attendance was, as usual, excellent, and the principal business of the evening was the delivery of Lecture No. 9, of the 4th Syllabus, Mr. William J. Zech being entrusted with the work of this occasion. The lecture was entitled "The Condenser and Its Uses," and the subject was thoroughly dealt with by Mr. Zech, who explained the construction, action and uses of the various types of condensers made use of in the carrying out of wireless experimentation. At the conclusion of the lecture the usual batch of questions was dealt with after which a vote of thanks was carried by acclamation.

Another important matter dealt with at the meeting was that of a proposal now afoot to place the Australian Radio Relay League upon a sound footing, and the Society is doing its utmost to assist in this very desirable state of affairs being brought about at the earliest possible moment.

Next Tuesday evening the Society will hold its 151st general meeting, when an experimental evening will be held, and should prove interesting and instructive.

The Society holds its meetings at the club-room, 176 Johnston St., Annandale, every Tuesday evening commencing at 8, and inquiries regarding its activities may be made thereat, or by communication with the Hon. Secretary, Mr. W. J. Zech, 145 Booth St., Annandale, from which copies of the Syllabus Card may be obtained upon application.

CONCORD AMATEUR RADIO CLUB*

(A-2GD*)

The above club met on Thursday night last, 29th October, at the club rooms, "Euripides," Wallace Street, Concord. Meeting was opened at 8.5 p.m., the chair being occupied by our worthy President, Mr. J. V. Stephenson. It was very gratifying to

see a roll up of the whole of the members on the books of the club.

The main business of the night was the election of officers for the ensuing 12 months, it being the annual general meeting. The following gentlemen were duly elected to the under-mentioned offices:

President, Mr. J. V. Stephenson.
Vice-President, Mr. E. Wetton.
Secretary-Treasurer, Mr. W. E. Barker.
Publicity Officer, Mr. P. Tretten.
Auditor, Mr. Cawthron.
Club Delegate, Mr. C. E. Morton.
Committees, all other members.

The Treasurer's report was received with cheers, and members generally were agreeably surprised at the healthy financial state of affairs. The few well worded remarks of our President as to the ability and zeal shown by the Secretary-Treasurer during the past 12 months were well deserved. A motion that the fees be reduced from 2/- per month to 1/- per month was defeated. Mr. C. E. Morton also spoke very highly of the services rendered by our President, and stated that we were indeed fortunate in having a man who was a real live factor at all meetings. Mr. Stephenson was re-elected unopposed.

The President then welcomed back to the fold two members who have been absent for the past seven weeks owing to illness, Mr. C. E. Morton and Mr. P. Fretton. Mr. Morton was congratulated on having obtained his A.O.P. Certificate, and the call sign 2MH. It is rumoured that he has already discovered how to "blow" 5 watters.

Enquiries as to the club activities and addressed to the Secretary at the club rooms will receive prompt attention.

Meeting closed at 10.30 p.m. for transmission tests. Please QSL if you heard 2GD.

STRATHFIELD AND DISTRICT RADIO CLUB

The usual meeting was held at the club room on 28th inst., and a general discussion took place on the notes read at the meeting by the Delegate, taken on the night of the special meeting on the 23rd. The Secretary outlined the procedure of the meeting after which he called on the delegate to read the notes he had prepared which were thoroughly discussed.

Mr. Norstrom, a visitor from the Leichhardt Club, kindly prepared and read an interesting paper on the A.R.R.L. and it was found that unfortunately, Mr. Burman's little talk would have to be postponed till the following meeting.

All communications regarding membership, etc., will be promptly attended to by the Honorary Secretary, 1 Mills Crescent, Burwood.

Have you got your Philco yet?

GRACE BROS.

for Dependable Quality in

Wireless Supplies

Radio Department — George Street West Building

	£	s.	d.
3 Coil Vernier H.C. Mountings at	0	12	6
2 Coil Vernier H.C. Mountings "	0	6	6
Rheostats, 30 ohms, one hole mounting "	0	4	9
Mica Fixed Condensers "	0	1	6
Mica Fixed Condensers, with Clips & Leak "	0	3	0
Low Loss Porcelain Sockets "	0	2	9
Audio Transformers "	0	8	6
Coupling Plugs "	0	1	9
Coil Plugs "	0	1	3
Variable Condensers, .001 "	0	9	6
Variable Condensers, .0005 "	0	6	6
Phone Plugs (take 2 pair Phones) "	0	2	3
Accumulators. 4V. 40.A. "	1	4	6
Accumulators. 4V. 60.A. "	1	12	6
Accumulators. 6V. 40.A. "	1	16	0
Accumulators. 6V. 60.A. "	2	8	0
Accumulators. 6V. 80.A. "	3	1	0
Marco Jacks. O. Circuit "	0	1	6
Marco Jacks. D. Circuit "	0	1	10
Marco Jacks. S. Fil. "	0	2	0
Marco Jacks. D. Fil. "	0	2	6
Push Pull Battery Switches "	0	2	6
Loud Speakers, Large Adjustable Model "	1	10	0

Ball Bearing Low Loss	} 0005 Plain . 12/-
Condenser with dial	
	} .0005 Vernier 17/-

Transmitting Valves "	1	5	0
Rectifying Valves "	0	17	6
Direct Coupled Airway Motor Generator, 240V. A.C. to 300V. D.C. "	10	0	0
Power Transformers, 240V. to 1,000, with Tapping for Filament "	4	15	0

"Sure to Get it at Grace Bros."

GRACE BROS. LTD. Broadway Sydney

RADIO ON THE ROAD

Surveyor carries his Set

ENTERTAINMENT IN CAMP.

People who live in the open air have to make their own amusement, and they have various ways of doing it.

"I have a portable four-valve receiver in the Tenterfield district," wrote a Staff Surveyor of the Lands Office to one of the Sydney Radio broadcasting companies this week. "When I camp, I suspend the aerial between two trees; my earth is a piece of galvanised iron six inches below the surface. The whole thing is temporary, and is erected in half an hour each night.

"Your transmission comes in at loud speaker strength, and one night recently I was listening to the Secretary for the Federal Treasury, relayed from Melbourne. His speech came through excellently. By way of testing the result I just took down my aerial and tried a wire fence instead; the result was still excellent. The air line from Sydney to my camping places averages from 320 to 380 miles."

SOUTHERN SUBURBAN RADIO CLUB.**(Adelaide).**

At the 9th General Meeting of the above club held on October 19th, the President, Mr. K. Wadham (5KW), presided before an excellent attendance of members.

The minutes of the previous meeting were read and confirmed.

It was decided that the secretary write to the Harley Davidson Motor Cycle Club re their invitation as published in the Mail to visit them at their clubroom at Sellick's Beach.

Will Club Secretaries kindly arrange to let us have reports of their meetings at the earliest possible moment? On account of late arrival, sometimes publication is impossible until the next issue of "Wireless Weekly."

Suggestions for giving publicity to the club were then asked for. A picture night in the near future was the first and a big dance and frolic to be broadcast by 5CL at intervals has been decided upon to take place at the beginning of December.

A letter from the Blackwood Club was read congratulating the Club on the success of, and manner in which the committee conducted, the recent radio train picnic to Belair.

It was decided that, as a lattice mast would

More Bargains at 2UW

We have purchased the entire stock of two Sydney firms who have gone out of the Wireless business, and are disposing of this stock at half price (except a few Propr. lines), and in some cases much less. This stock includes English Valves, Condensers, Complete Sets, Transformers, Variometers, Vario Couplers, Accumulators, Loud Speakers, etc. Also, Edison Diamond Disc Recreation Phonograph and X-Ray Transformer. Gear may be seen any time day or night at New Address—

140 Balfour Road, Bellevue Hill

(Leave Tram at Bundarra Road.)

Tel.: FM 2111.

Regular programmes re-commence again at end of next week.

BURGINPHONES**Australia's Best By Test**

You can buy a Burgin-
phone Five Valve Re-
ceiver for—

£101/10/0

You can also buy a
Burginphone Five Valve
Receiver for—

£17/10/6

BURGIN ELECTRIC

Co. Ltd.

340 Kent Street, Sydney

Enquiries are invited

WETLESS

Duo-Lateral Coils

"WETLESS" DUO-LATERAL COILS are wound by a special process of constant tension on the wire ensuring uniformity throughout. The self-capacity is extremely low, and the wire used is of the highest grade, the result being very sharp tuning, low high frequency resistance, and maximum signal strength.

"WETLESS" DE-LUXE MOUNTED.

The Mounted Coils have Black Celluloid strip inside Coil former, and the outside of Coils is protected with a layer of Celluloid strip, and only

Genuine Bakelite De-luxe Plugs are used,

being bound to the Coils with

Waxed Thread

and connections to plug soldered. If you are wanting high-grade Coils you cannot do better than select these.

SIZES TO SUIT ALL AERIALS.

Coil No.	Wavelength.		Unmounted.	Mounted
	Min.	Max.		
20	74	210	1/5	6/5
25	96	272	1/5	6/5
35	130	350	1/6	6/6
50	180	370	1/7	6/7
68	250	530	1/8	6/8
85	310	660	1/10	6/10
100	330	1030	2/1	7/1
120	350	1240	2/2	7/2
136	380	1400	2/3	7/3
150	430	1590	2/3	7/3
170	480	1800	2/5	7/5
200	700	2090	2/6	7/6
250	920	2150	3/3	8/3

Wavelength Calibrations by Mr. C. D. MacLurean, with parallel Condenser minimum capacity .00005 M.F. to .000 M.F. maximum.

If YOUR DEALER cannot supply you, send postal note direct to MANUFACTURER, post paid.

J. Wetless
Bexley — N.S.W.

Phone: Kog. 1155.

Australian Made.

run into a considerable sum of money, the club put up a single 80 foot pole.

Many enquiries have been made to those members who have pennants flying at the top of their masts as to what they represent.

When the business was over the president welcomed some members of the Port Adelaide Radio Club.

Mr. E. Gunner ("King Electron" of 5CL) was then called upon to deliver his lecture on "Broadcasting and Land Lines." He spoke on the difficulties encountered in land lines, especially those to Murray Bridge.

The description of the amplifiers and the route of the lines through the P.M.G. to the station proved very interesting.

Mr. Gunner was asked many questions and was accorded a hearty vote of thanks by the members. He also offered to give the club another lecture, this being on "Television." This should be very interesting and the club cordially invite visitors.

At the next meeting to be held at the club on Monday, November 2nd, Mr. R. M. Barker (5BK-5RM) will talk on his experiences in U.S.A. and on X-Ray work.

Particulars re the club can be obtained from the Hon. Secretary, Mr. J. E. Rowling, 67 Leicester Street, Parkside.

W. B. ANTHONY, Publicity Officer.

CROYDON RADIO CLUB * (2YB)

On Saturday, October 24th, the members of the Croydon Radio Club entertained the Leichhardt Radio Club. In welcoming the visitors, the President, Mr. C. W. Slade, stressed the fact that more of these inter-club gatherings should be organised in order to promote a better co-operative spirit than has been so far evident among many amateur bodies.

A very interesting talk was given on various experiences in an aeroplane and submarine, and Mr. Nigal Love gave a very interesting explanation and discussion of the construction and equipment of the machine and the method of synchronising the machine guns which fire between the blades of the propeller.

Mr. William J. Zech, in thanking the President and members for the enjoyable evening afforded to his Club, stated that for some time past several members of the Leichhardt Club had been consistently visiting other clubs.

Mr. Slade next dealt with the growth of wireless in the navy and a number of interesting war incidents were related.

Please address all communications to the Hon. Secretary, A. N. Fitch, "Rhos," Hay Street, Croydon.

Notes from Queensland

Broadcasting Political Speeches.

THE first political speech to be broadcasted in Queensland was at the opening of the State Parliament in Brisbane on July 28th last. It is believed that this was the first time that an opening of Parliament was broadcasted in Australia.

The second speech was broadcasted by 4QG from the Exhibition Hall, Brisbane, when the Prime Minister of Australia, Mr. S. M. Bruce, gave his policy speech on October 12th.

On October 15th the speech of Mr. M. Charlton, leader of the Federal Opposition, was broadcasted from the Central Hall, Brisbane, by station 4QG.

On both occasions the transmission was effected without a hitch.

Looking at the listeners' standpoint, it is hard to say whether they prefer speeches to the regular concerts, but as political elections do not appear very often, a little of the time devoted to broadcasting can be utilised by politicians to state their policies to the people.

Unpleasant Local Conditions.

Now that summer is approaching, listeners in Queensland turn with envy to their wireless cousins in the Southern States, who may be affected somewhat with static, but nothing to compare with tropical Queensland.

Much sympathy must go to the listener in Northern Queensland, who has to depend solely on the programmes given by 4QG or by the stations in the other States. Then some report that they cannot tune-in 3LO, because of the interference from the Japanese station J-OAK. Although the lot of listeners may be this way, the dealers in Queensland must suffer more from it.

Despite very bad local conditions now prevailing in Brisbane, I was surprised to receive 2UE the other Saturday night. The strength of the transmission from this station is remarkably good for a "B" class station, and the programmes are also O.K.

Novel Advertising.

A novel experiment, as well as advertisement, was held by the Radio Manufacturers Ltd. in Brisbane. The director of the company, Mr. W. Glanmore-Jones, accompanied by Mr. J. W. Robinson, manager of 4QG, carried out a very interesting test with one of the sets of the company installed on an aeroplane.

The 'plane, as it flew over and around the city, received 4QG very well. While in the air Mr. Glanmore-Jones distributed many thousand advertising leaflets.

The finder of the specially marked slip was awarded a crystal set by the company.



He Listened-In on a Crystal Set

And had a lot of fun.
He enjoyed the programme from
the local station.

He Longed for Distant Stations

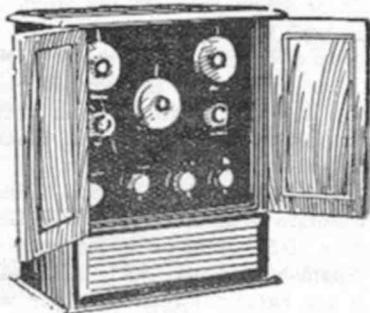
He wanted a multi-valve set,
He tested lots of makes
And finally decided, so ———

He bought a RADIOPHONE

The four-valve
Long-range receiver
Made by Edison Swan.

Now he gets them all

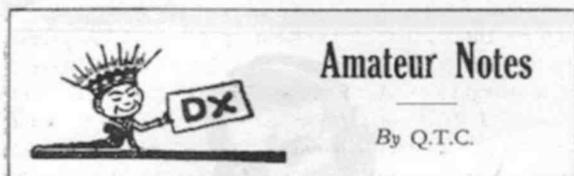
He tunes in ———
3LO, 5CL, 2FC, 6WF, 7ZL, 3AR,
2BL
And all the amateurs, perfectly.



FOR Selectivity and Long Range Reception
this set surpasses most 4 Valve Sets on
the market. Price, including H. T. Battery
only, excluding Valves . . . **£37/10/-**

Edison Swan Electric Co. Ltd.

Sydney 58 Clarence Street
Melbourne 368 Little Collins Street
Brisbane 32-34 Adelaide Street
Adelaide 102 Gawler Place



Amateur Notes

By Q.T.C.

U-9MC, A. H. Cain, Roodhouse, Illinois, U.S.A., is probably one of the most famous of Yankee-land's seventeen thousand transmitters. A short time ago, when sigs. from our cousins across the "puddle" were breaking through so very finely, 9MC was right in front of the van. Never yet have I heard this station turning out poor signals—in fact, from any point of view they approach the ham's ideal. The antenna is perched on top of two 80 feet pipe masts, and is a five wire flat top T, 50 feet long. In conjunction with this an eighteen wire fan counterpoise is used. Two 250 watt tubes are used in various circuits. With 2000 volts D.C. on the plates, plus a current of 210 milliamperes, the juice in the aerial circuit varies between 5 and 8 amps. With 19,000 volts A.C. and 230 milliamps, the aerial current is between 8 and 10 amps.

Chilean 9TC, Major Raven-Hart, Los Angeles, Chile, in a card recently addressed to me, asks all the Aussies to look out for him on 48 metres. He particularly stresses Chas. Maclurcan A-2CM, and Frank Leverrier, A-2BK. Note it up, o.m., and let the Major know that we are alive next time his signals perk through the ether.

Have been logging FXI quite a number of times of late. He comes in about R4; signals are very steady and the operator is an artist of the key. His QRA is Fort Shafter, Honolulu. I believe that it is an army station.

CH-1EG has worked the U.S.S. "Pillsbury," in Chinese waters. The Pillsbury, NUQG was QSO with a power of 50 watts on 40 metres.

The Spanish stations, AR1, AR2, AR6, AR9 and AR10 are rapidly stretching their waves over the world. These stations use the prefix E, making EAR1 — many people think that these are their call letters, but AR1, etc., is the correct title.

Anyone hearing O-JSP or O-JAI please QSL to Mr. A. S. Innes, 47 Rockey Street, Bellevue East, Johannesburg, South Africa.

Esperanto News

DEVELOPMENTS IN GERMANY

A new phase in broadcasting was entered upon in Germany when the proceedings of the 14th German Esperanto Congress at Magdeburg were

transmitted by Leipzig and Dresden stations. Hitherto no attempt had been made to broadcast the sessions of any large gathering of people, and consequently German Esperantists are very proud of their achievement.

In introducing the subject to listeners-in from the congress hall, Dr. Erwin Jaegar, president of "Mirag" (Mitteldeutsche Rundfunk, A-G.), one of the foremost wireless companies in Central Europe, and president of the Committee for the Advancement of an International Language by Radio, said that in broadcasting this session it was a serious effort of his company to further popularise Esperanto throughout Germany and he hoped that many similar opportunities would present themselves in the near future.

During the session, which lasted an hour and a half, various speakers described their experiences in conducting wireless lessons, among them being representatives from Hamburg and Königswusterhausen stations, German Radio Esperanto League, and International Radio Association.

Interesting figures were given by the chairman of the German Esperanto Institute concerning the present state of the movement. According to information collected by the Institute, 273 groups existed in Germany, of which 127 were workers' clubs, with an attendance exceeding 10,000 persons, while no less than 10,000 children had received instruction at school.

At the conclusion, Dr. Steche, president of the Congress, thanked the directors of "Mirag" for having placed so excellent a medium in their way of not only reaching Esperantists who were unable to attend the congress, but of allowing the public to hear at first hand how their conferences are conducted and what they had to say.

Sheaves of telegrams and letters were subsequently received from listeners-in testifying to the success of the experiment.

Generally speaking, radio publications in Germany are very favorable to Esperanto, and this is reflected by the number that regularly feature notes and news about Esperanto. Noteworthy amongst these are: "Der Deutsche Rundfunk," Berlin; "Der Sächsische Rundfunk," Dresden; "Süddeutscher Rundfunk," Munich, and "Radio Welt," Berlin. For the benefit of those unable to understand the names of these journals it might be mentioned that the word "Rundfunk" means broadcast.

By the foregoing it will be seen that a strong impetus to the international language movement is being given by radio interests in Germany and this is contributing largely to the greater expansion of the idea in other countries.

The Wireless Institute of Australia

S.A. DIVISION.

THE seventh annual meeting of the South Australian Division of the Wireless Institute of Australia was held on the 7th October at the Adelaide University. The meeting opened with Mr. R. B. Caldwell in the chair, and the minutes of the previous meeting were read and confirmed.

The following officers were elected for the ensuing year:—President, Mr. J. M. Honnor, A.S.A.S.M.; Vice-Presidents, Messrs. R. B. Caldwell and T. M. Bagshaw; Hon. Secretary, Mr. C. E. Ames; Hon. Asst. Secretary, Mr. F. E. Earle; Hon. Treasurer, Mr. K. H. Milne; Council, Messrs. H. L. Austin, C. B. Churchward, W. W. Honnor, W. B. Barlow, and J. Vardon; Publicity Officer, Mr. H. L. Austin.

A letter was received from the Secretary of the Federal Executive, asking for the views of this divi-

sion on the matter of payment of delegates' expenses for the Federal Convention, also for the appointment of a delegate to the Federal Executive Council. The matter of delegates' expenses was discussed at some length, and it was decided to recommend that each division should pay its own expenses. Mr. C. E. Ames was appointed delegate to the Federal Executive.

The subject of interference between the local and interstate broadcasting stations was introduced and caused a good deal of discussion, as it has been found that with 5CL on full power it is impossible for anyone living within several miles of this station to tune-in 3LO or 4QG while 5CL is transmitting. The Secretary was instructed to communicate with the Federal Executive, asking them to consider the advisability of re-allotting the wavelengths of the "A" class stations with greater spacing between the various wavelengths.

A vote of thanks and hearty acclamation were accorded Mr. R. B. Caldwell, the retiring President.

Six Wonderful Bargains!!!!!!

	£	s.	d.
Fallon Condensers, .001, with Knob and Dial	0	11	0
Paceant Rheostats, with Knob	0	4	3
"Radiotron" 200 Detectors	0	13	6
"Marconi R" Valves	0	10	0
"Nutron Solodyne" Double Grid Valves	0	6	0
Aerial Wire, per 100 feet	0	2	0
<hr/>			
Cardwell Transmitting Condensers	5	8	0

RADIO HOUSE

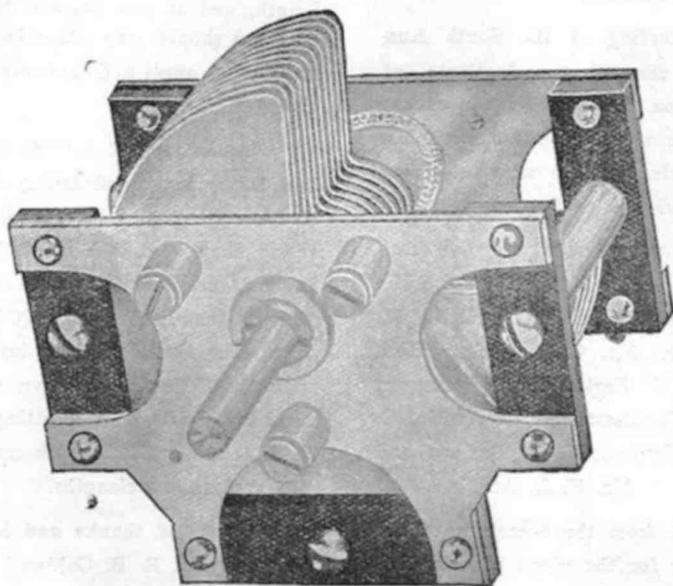
Operating Radio 2UE

619 GEORGE STREET, SYDNEY.

'Phone: City 1487.

"Yours for Lower Prices"

The
Artcraft
Low Loss
Condenser



.00025

.000E

15/-

LOWEST LOSSES :: LOWEST PRICES

Make Your Crystal Set Work a Loud Speaker

Buy these Parts and Build a Two-Valve Amplifier.

	£	s.	d.	
1 Baseboard	0	1	6	Parts £2/10/2
1 Panel	0	2	6	
1 Rheostat	0	2	3	Accessories £3/2/6
2 Sockets, 3/-	0	6	0	
2 Transformers, K. & C., 17/6	1	15	0	
1 Set Terminals	0	2	3	
6 Lengths sq. Buswire	0	0	8	

WE CAN SUPPLY CHEAPER GOODS IF REQUIRED.

OTHER SPECIALS

	s.	d.
Rheostats: "Ajax", 6 or 30 ohms	2	3
Engraved Binding Posts: per card	2	0
Rubber Ear Cushions: per pair	3	0
Indoor Aerials: Spring Pattern	6	6
Potentiometers: 400 ohm	3	3
Dials: 2in, 1/2; 3in., 1/6; 4in de luxe	2	10

THE ECONOMIC RADIO STORES

28 Royal Arcade, Sydney

Phone B 5891

Near Palace Theatre

Obtaining Maximum Efficiency with Crystal Set

AN ARTICLE FOR THE BEGINNER.

By "Wireless Weekly."

IN spite of all the attractions of the valve receiver, with its greater power, longer range, and fine tuning, the crystal receiver has a certain fascination of its own. The greater charm of the crystal lies in its wonderful efficiency of rectification. The valve, even if it is used for rectification alone, requires two separate sources of power to be supplied to it. Except for carborundum and one or two others, crystals need no outside batteries of any kind, yet they actually rectify more efficiently than the valve. Their only drawback is that so far no one has discovered any means of making them amplify. Some day, perhaps, we shall discover that by means of relays or, possibly magnetic fields of force we can amplify at either radio frequency or audio frequency without the use of valves.

Crystal receivers used in these days are generally speaking, seldom given a fair chance to work well. Many of the commercial types are badly designed and the wire used is far too small. But even if the set is perfect it is often badly treated by its owner, who fails to realise with what tiny currents he has to deal.

In seven cases out of ten a rough-and-ready aerial is erected, the earth connection is poor, and unsoldered connections are used throughout, with the result that nothing is heard except the high power broadcast stations near-by or perhaps the commercial Morse stations. With the crystal detector one has no margin of current to play with. The total amount delivered to the phone windings, even under the best of conditions, is so small that none of it can be wasted.

The Detector.

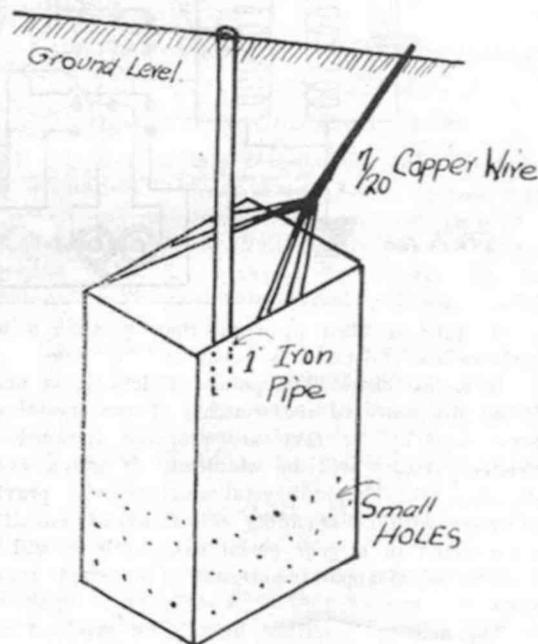
The detector should always be mounted on ebonite, radion or bakelite, and care should be taken that the wires joining the crystal cup and wire contact to the terminals do not run parallel to each other at short distances apart. If they do they will produce capacity effects which will seriously impair the working of the detector.

Inefficient Circuits.

From data obtained from readers, it is evident that the single circuit crystal receiver is very inefficient, and many letters have been received asking for advice on how to eliminate one or other of the broadcast stations. Our advice is to adopt the double circuit type of tuner in the form of a loose coupler, using Honeycomb or Spider-web coils.

With both these types of tuners the degree of coupling between the aerial and detecting circuits can be varied, so that maximum selectivity is obtained. The aerial, of course, has a great deal to do with the results obtained from a crystal set. It should be of stranded copper wire, and it is important that it should be as high as possible. According to data derived from different reports, it has been found that best long distance reception is obtained with masts, etc. The length should not exceed 100 feet, including the lead-in.

A word about the lead-in will not be amiss at this stage. Remember that even highly insulated



wire will part with some of its current, especially in wet weather, if it is simply brought in through the window, making contact on its way perhaps with brickwork, wood, or possibly iron.

There are many types of simple and satisfactory lead-in tubes obtainable at a very moderate figure. A hole of just the right size should be bored in the window frame and the lead-in tube inserted.

Earthing Arrangements.

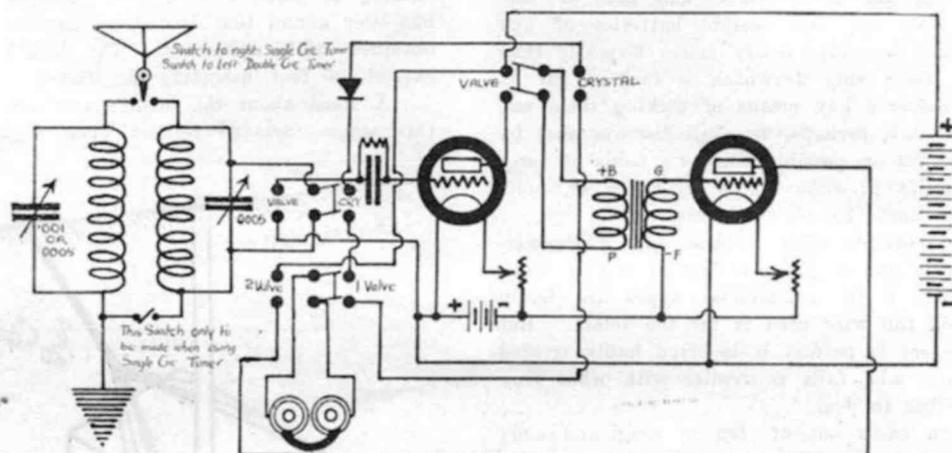
With the crystal set a good earth is absolutely

Philco Drynamic for less worry and better results.

essential. Few people realise how great a resistance even a comparatively good earth connection offers to the passage of currents. A water pipe is excellent, provided that the earth wire can be made not more than 15 feet long. If the water pipe is too far away to permit the earth wire being shorter than 15 feet, the earth connection should be soldered to a petrol tin and a hole 2 feet to 3 feet deep dug immediately under the lead-in. The tin is placed in the hole and filled with water. A metal pipe, whose top end has been slightly belled so as to form a funnel, is then placed in the tin. If very small holes are made in the tin the water in it will leak out and moisten the ground all round it. As long

useful, indeed, for experimental work. For the comparative results obtained we advise you to experiment yourself. We are certain, however, that you will be pleased with the capabilities of the crystal receiver here shown.

First carefully study the circuit diagram (Fig. 2), and you will see that the following combinations are obtained:—The single pole double throw switch in the aerial circuit, together with the single pole switch in the earth lead, provide a quick means of changing from a single circuit to a double circuit tuner. The three double pole double throw switches give (1) with all three switches in the right-hand position the crystal detector is in use without am-



as the tube is filled up from time to time a wet earth of low resistance is assured.

It is just these little points of detail that make all the difference to the working of the crystal detector receiver. If they are properly attended to, excellent results will be obtained. If given every advantage the simple crystal receiver will provide its owner with never-ending entertainment, but if it is connected to a poor aerial and earth it will be a source of disappointment and of constant annoyance.

The hook-up described here is an excellent one, and by means of switches the user may use a crystal or valve detector with or without an audio amplifier. The necessary changes in connection are quickly made by means of the double-pole double-throw switches. One word of speech or one note of music may be listened to using the valve, and the next word or note may be listened to using the crystal for detector. (This is the only method practicable for actual comparisons.) The audio amplifier may also be used for amplifying the crystal or valve detector. Such a circuit arrangement is very

plification (2) with the top right-hand one in the left-hand position and the bottom left-hand one in the left-hand position one stage of audio amplification is added to the crystal detector; (3) with the top left-hand switch in the left-hand position and the right-hand switch in the left-hand, the lower switch then gives, to the right valve detector, to the left one stage of audio added to the valve detector.

Trace the circuits out for yourselves. You will find it very interesting. Those who wish may add further switches for regeneration when the valve is used as a detector. The following materials are required to make up this receiver:—

1 Panel, 18in. x 6½in.

1 Two-coil holder.

6 Spider-web formers.

A small quantity of 20, 22 and 24 gauge enamel wire.

2 Valves and holders to suit.

2 Rheostats to suit valves used

Continued on page 31

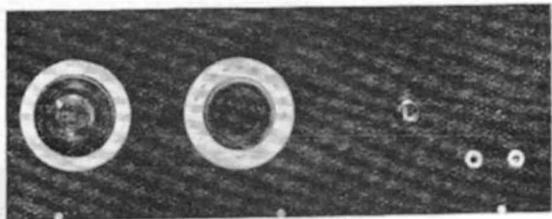
The "New System" Phone is matched in tone.

An Easily Controlled Receiver for Short Waves

By W. A. STEWART.

THE conventional three coil circuit has proved itself to be very effective on the short waves, but it has its limitations, and anyone who has used one will know that it is very critical and the tuning is extremely sharp. On the 20 metre band one degree on a .00025 condenser means quite a difference in wavelength. Then we come to the matter of moving coils, which usually result in poor connections, and do not offer a ready means of calibration, as they are too uncertain in operation.

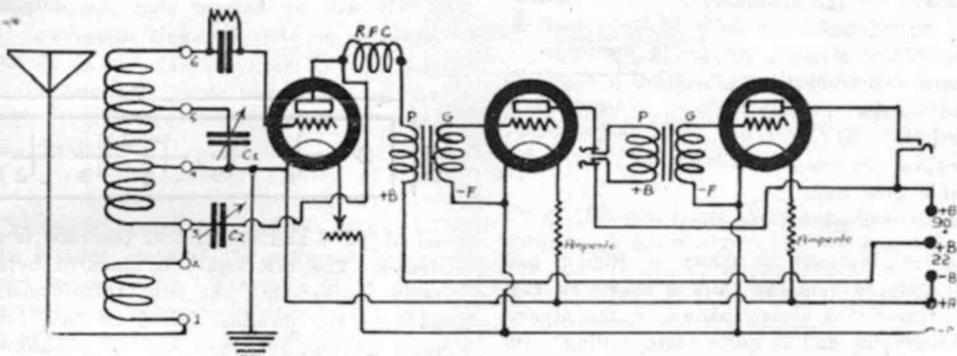
The set about to be described is a Reinartz Circuit with the usual parallel feed, but it has quite a few novel features. It will tune from 15 to 200 metres by means of interchangeable coils (the only effective means of covering a large waveband), and is not a bit critical. It has but two controls, neither of which are critical in operation. When properly adjusted it is possible to vary the dial of the tuning condenser through 12 degrees of movement,



The radio frequency choke R is necessary to prevent the radio frequency energy from going round through the transformer, instead of through the feed back coil. The tuning condenser C1 is a good condenser of the low loss variety, and has a maximum capacity of .00025. The feed back condenser C2 is also of good quality, but has a capacity of .0005.

The salient features of this unique receiver are that the tuning is easy, being comparatively broad (when compared with the average tuner); no moving coils to make noises in the set, and freedom from noise.

No matter what size aerial is used, the tuning on the tuning condenser will always remain constant, the aerial having no effect on the set. The regeneration control is very simple, and there is none



and only make a difference in wavelength of one metre, yet it is quite selective.

The circuit is shown in Fig. 1, and is just the ordinary Reinartz arrangement, and is familiar to all. However, a little explanation of the different parts will not be amiss. Coil D is the aerial coil, and is adjusted until there are no "dead spots" anywhere on the tuning condenser dial. The main tuning coil (A B C) is composed of three coils, so that there are always four coils in the set at any one time for any band of wavelengths. The coil A is the feed back or tickler coil, the coil B is the grid coil, and the coil C is the grid coupling coil.

of that annoying "plop" when the set starts to oscillate, or when it stops oscillating; in fact, this control can be left set, and it then brings the number of controls down to one, which makes it very simple to manipulate.

On looking at the circuit it will be seen that connections for three valves have been shown; a jack is provided so as to use two or three valves at will, but, of course, one could be provided to give one valve if required.

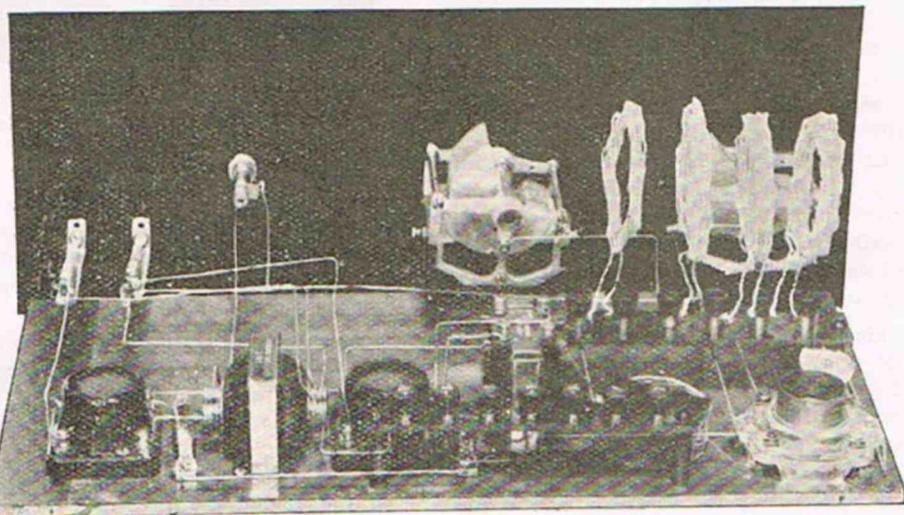
The following parts will be required:—

- 1 Panel, 20in. x 7in. x 1/8in. or 3/16in.
- 1 Baseboard, 19in. x 9in.

It's probably your "B" Battery. Get a Philco.

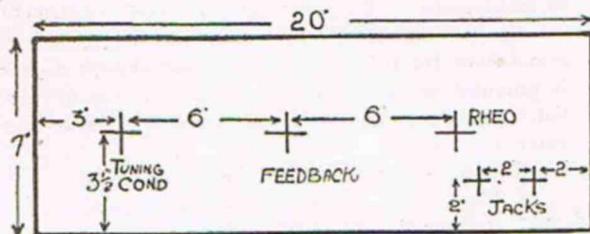
- 1 .00025 Variable condenser.
- 1 .0005 Variable condenser,
- 1 .0005 Fixed grid condenser.
- 1 Standard socket, Pyrex, porcelain, or good quality bakelite, for detector tube.

automatic filament control, which automatically looks after the filaments of the two amplifiers. They are mounted between the sockets and the transformers, and keep the leads short, and also give very even control of the filaments of the amplifier tubes,



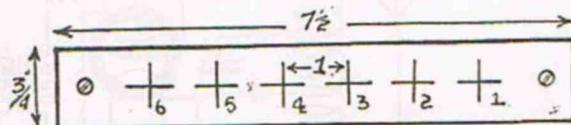
- 2 Standard sockets (these need not be as expensive as they are for the amplifiers).
- 2 Audio transformers.
- 2 Jacks, 1 double and 1 single circuit.
- 1 Rheostat (Bradleystat, Marshallstat, or any type of good vernier rheostat).
- 2 Amperites.
- 2 Amperites.
- 1 Variable grid leak.
- Terminal strips, screws, etc., busbar.

The panel is laid out as shown in Fig. 2, and the terminal strip to hold the coils is shown in Fig. 3. The arrangement is clearly shown in the accompanying photographs, and is quite plain sailing. On the panel are mounted the two condensers, the rheostat, and the two jacks. On the baseboard we have the sockets, transformers, terminal strips for the coils and battery connections, the radio frequency choke, and the two amperites. The amperite is an



where critical filament control is not needed.

It will be noticed that the detector socket is mounted, so that the only connection between ter



terminal No. 6 and the grid of the tube is the grid condenser. The R.F. choke is mounted between the detector socket and the first transformer. With regard to the terminal board to hold the four coils, there are six terminals spaced as shown. Terminal No. 1 goes to the aerial terminal, No. 2 connects to terminal No. 3, which connects to the moving plates of the feed back condenser ((C2), the fixed plates of which connect to the plate of the valve. Terminal No. 4 connects to the moving plates of the tuning condenser (C1), and also to the earth terminal and filament plus. Terminal No. 5 connects to the fixed plates of this condenser. Terminal No. 6 connects to the grid condenser, which in turn connects to the grid terminal of the socket.

The radio frequency choke must be mounted close to the plate terminal of the socket, and should be kept as far away as possible from other leads, particularly the grid leak. One lead of the choke con-

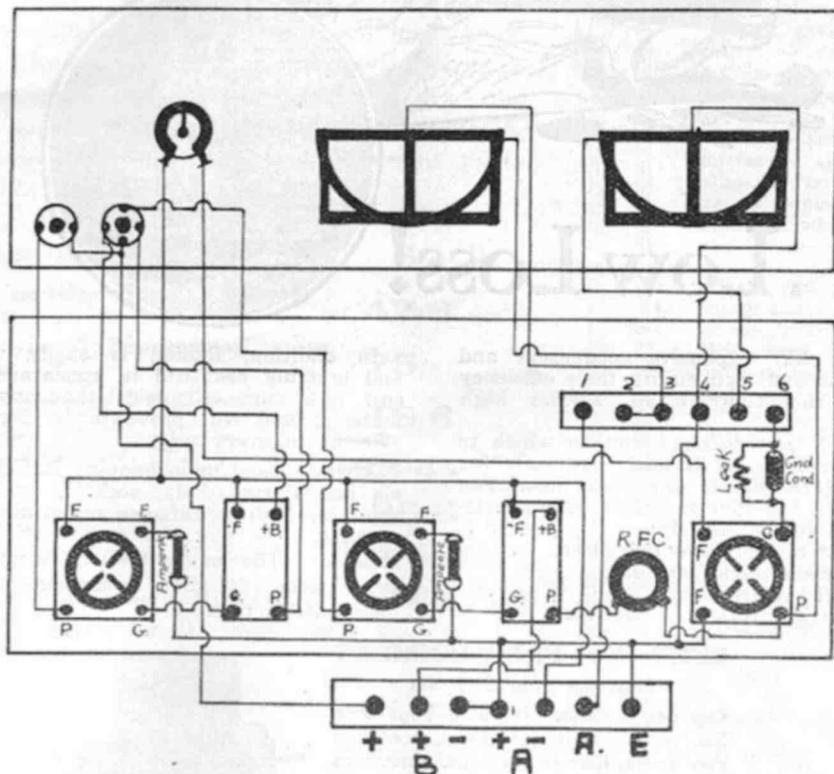
nects to the plate of the tube direct, and the other goes to the terminal marked "P" on the first audio transformer. With regard to this choke, it is not very critical, and in the illustration a 75 turn honeycomb coil is used, but a straight wound coil of about 100 turns on a former of two inches in diameter will be found more satisfactory; still, this is a matter for experiment. The rest of the wiring is quite simple, being the conventional two valve amplifier circuit. When the wiring is completed it is only a

Two coils of six turns.

Two coils of ten turns.

Two coils of thirty turns.

With this selection of coils it is possible to select and tune in quite narrow bands, such as 70 to 85 metres. Suppose we want to tune in this band we put in the following coils:—A, 10 turns; B, 6 turns; C, 30 turns; and D, 10 turns. With these coils in position we can just cover the band, which gives us a tuning range on our condenser dial of 12



matter of inserting the necessary coils to get results. The coils are the ordinary "Lorenz" basket weave pattern and are constructed as follows:—On the circumference of a three inch circle space eleven pins at even distances, and the wire is wound around one and then two spokes are missed, this being continued until the required number has been wound on. The coil is then securely tied with thread to keep the turns in place. In all you will require a dozen coils to cover the wave bands from 15 to 200 metres. The numbers of turns are as follow:—

Two coils of two turns.

Two coils of four turns.

degrees variation for a difference of one metre in wavelength, and this is something that no other set can do. This fact is accomplished by having the piece of coil marked C between the tuning condenser and the grid condenser. The set oscillates quite as well on both short waves and comparatively long waves. On the 20 metre band a little experiment may be necessary to find what combination is best suited for the job, but once found the manipulation is simple.

The set as designed is purely a short wave re-

Continued on page 31

With "Philco" your set will go.



Low Loss!

WHY buy expensive condensers and coils and then nullify their efficiency by mounting on an inferior high loss panel?

RADION is the foundation on which to build your set. It is made expressly for radio and far excels any other insulating material in the four essential characteristics of wireless, namely:

- 1.—Low angle phase difference.
- 2.—Low dielectric constant.
- 3.—High resistivity.
- 4.—Low absorption of moisture.

In addition, Radion is easily worked and is truly beautiful in appearance. In cost, it is more economical than any other material and will prove to be far more efficient in every way.

Always insist upon genuine Radion Panels and Parts (dials, sockets, knobs, insulators, etc.). Inferior material cannot possibly give you the same satisfactory results. The name Radion stamped on every piece is your assurance of complete satisfaction.

SEND FOR FREE BOOKLET

"Building Your Own Set"

Our new booklet, "Building Your Own Set," giving wiring diagrams, front and rear views, lists of parts and directions for building the most popular circuits, will be sent free upon request to



International Radio Co., Ltd.

200 Castlereagh
Street, Sydney.

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

The Supreme Insulation

RADION

PANELS ~ DIALS ~ SOCKETS ~ KNOBS

Jottings from 2BL

FROM 2BL come hints of special arrangements for an Armistice Day celebration. A special morning session will be run, at which there will be addresses by prominent representatives of the Navy, Army, and Air Force. Broadcasters' Instrumental Trio will provide popular military airs as well as music suitable for the occasion, and at noon there will be broadcast the unveiling of a plaque erected in the vestibule of the Town Hall as a thank-offering to the women of New South Wales for activities during the war. The session will run from 10.45 a.m. to 12.15 p.m.

A special feature of the programmes from 2BL is the prominence given to orchestral music. There are now three orchestras regularly featured—Broadcasters' Miniature Orchestra, directed by Mr. Horace Keats; Hoyt's Imperial Orchestra, directed by Mr. Lionel Hart; and the Ambassadors' Combined Orchestra, under the baton of Mr. Charles Aves. These are, of course, additional to the Pavilion Dinner Orchestra and the Dungowan. With resources such as these every form of orchestral music can be presented. Mr. Hart is a composer of merit, and many

musical director, and was employed as conductor on a vessel plying between Trieste and New York. In this way Mr. Keats became an expert in the graceful music of the Mediterranean. Since coming south Mr. Keats has conducted for J. C. Williamson in New Zealand, was pianist and conductor with the Phillipini Opera Company, and has held other musical positions. His work as conductor of Broadcasters' Miniature Orchestra has been splendidly received, and many listeners-in have said that the performances have given pleasure. Perhaps the greatest item yet played was Wagner's *Seigfried Idyll*. Much similar music is in preparation.

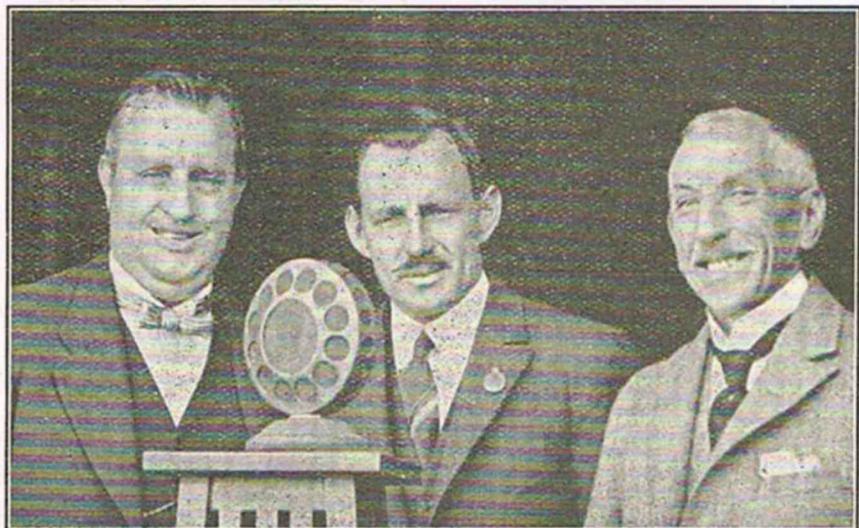
For the programme of November 9th, Miss Florence Yates, a very distinguished contralto, has been selected, and the same evening there will be heard Mr. Cyril James, baritone. Both are exclusive artists at 2BL.

On Tuesdays of each week a special programme is organised by Messrs. Carnegie and Son Ltd., and broadcast by 2BL. For November 10th the chief artists are Mr. Norman Janson, rapidly achieving fame as "Sydney's favourite baritone," and Miss Pauline Harford-Foster. Both artists broadcast splendidly and have a large radio following.

Miss Dorrie Ward and Mr. W. E. Lewis are a

Before the Microphone

This picture was taken on the occasion of Armistice Day, 1924, when a special message to the people of Australia was broadcast by the Rt. Hon. W. M. Hughes. Reading from left to right the names are: Mr. J. M. Prentice, Announcer; Mr. W. J. Maclardy, Managing Director of Broadcasters (Sydney) Ltd., and Mr. Hughes, ex-Prime Minister of Australia.



a picture displayed at Hoyt's is helped by appropriate settings arranged or composed by the orchestra conductor.

Mr. Horace Keats, pianist and trio leader at 2BL, is well known in the musical world, as there is practically no branch in which he has not had experience. In pre-war days Mr. Keats was employed by a great firm of Austrian shipowners as

combination hard to excel. They are arranging special programmes of old-time songs; memories will be stirred by melodies heard thirty or forty years ago. In solos and duet numbers they are recalling those songs which, though seldom sung, are still unforgettable in the maze of new music. As much of the modern output lacks melodies, these old-timers are the more appreciated.

Perfect Reception

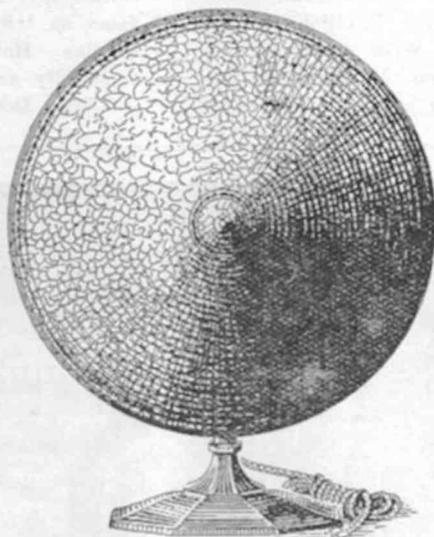
with The W.E. 540 A.W. Loud Speaker

As the result of the correct application of scientific principles and the unique method of mounting the cone, this instrument gives greater tonal purity of reproduction than any other form of Loud Speaker at present on the market.

It reproduces the lowest note of the organ as well as the highest harmonics of the piano, giving the richness and fulness of tone hitherto unknown in Loud Speaker reproduction.

Being non-directional in character, there is no necessity for listeners-in to be grouped before the instrument, and consequently the output of sound from the Speaker can be efficiently utilised.

Metal parts finished in natural bronze. Cone is constructed from specially treated brown parchment.



W.E. 540 A.W. LOUD SPEAKER.

PRICE

£14/-

A Demonstration will convince you.

MAIL ORDER DEPT., 60 Goulburn St., is under the supervision of a mail order department other than Wires, Insulators, Batteries, Loud Speakers, Cabinets, Valves, and Valves.

Open till 9.30 p.m. Friday Nights.

Wiles' Wonderful Wireless

BRANCH:
384 PITT STREET
(near Goulburn Street).

HEAD OFFICE
56-60 GOULBURN
(1 door from Pitt Street)
SYDNEY

The Traffic "Cop" of the Air

is A Wondertone Wave Trap

It will eliminate interference from other stations by a simple turn of a dial. You can build your own "Wondertone" Wave Trap. No technical knowledge is required. The directions we supply with each order are so simple, explicit and clear, that a 12-year-old boy can readily put it together in an hour of his spare time with the use of a screwdriver and pair of pliers.

Complete Set of Parts for "Wondertone" Wave Trap,
including Polished Maple Cabinet and Engraved Panel.

Unassembled	30/-
Assembled	37/6

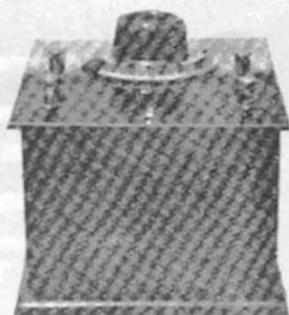


Illustration of "Wondertone" Wave Trap.

Plugs and Coil Mounts

Coil Plugs, 1/6. Fixed Panel Plugs, 1/6. Remler Movable Panel Plugs, 5/3.
2-Coil Cam Vernier Holders, 7/6. 3-Coil Cam Vernier Holders, 15/-.
2-Coil Geared Vernier Holders, 17/6. 3-Coil Geared Vernier Holders, 25/-.
3-Coil Vernier Inside Mounting Holders, 30/-. Bakelite Extension Handles, 1/6.

Expert, which ensures prompt despatch within 24 hours. We pay carriage on all goods
Value Payable Post Parcels.

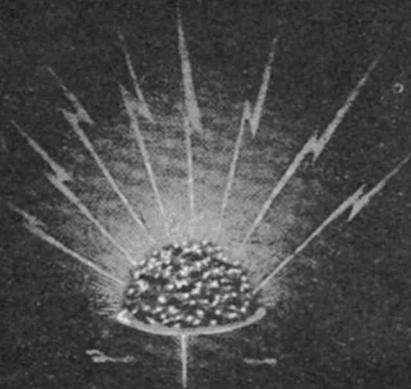
Your Own Set Rewired by Experts.

Wireless & Electrical Stores

HEADQUARTERS AND SHOP:
100 BURN STREET
(near Pitt Street),
LONDON, W.1.

BRANCH:
23 PITT STREET
(near Circular Quay).

*Ask your
Dealer for it!*



NEUTRON

TRADE MARK

The World's Greatest Radio Crystal

*Concert tested
and Guaranteed*

Paroso Ltd. 113, Gawler Place, Adelaide

*A Product of
Neutron Ltd, Sicilian House,
Southampton Row, London WC1*

Sole Agents in New South Wales—Mick Simmons Ltd., Haymarket, Sydney

AMATEUR TRANSMITTERS !

It may interest you to know that the "RADIO DEPARTMENT" of Mick Simmons Ltd., is one of the largest and most comprehensive in Sydney. Further, the fact that we buy in such large quantities enables us to sell every article at the lowest possible price. Amateur Transmitters, you will be interested in the component parts listed below.

3/16in. Sheet Bakelite	6/- lb.
Kenotron Rectifier Valves, UV 216, 5 watts	47/6 each
Phillip's Type G Transmitting Valve, 20 watts	75/- "
Faradon Condensers 1 MFD—1750 volts D.C., Model UC490	18/6 "
Magnetic Modulator, R.C.A., Model, 5-1.5, amps	£34/- "
Radio Frequency Choke Coils, UL1655	26/6 "
Oscillation Transformers, UL1008	£45/6 "
Microphone Transformers, UP414	50/6 "
Red Seal Headsets, for DX work and comfort	40/- pair

Write or Call for our Specially Illustrated Catalogue

:: Terms arranged if required on Radio Sets ::

We invite you when next passing to call in and inspect this Department and talk over your Radio troubles with our chief wireless man. He may perhaps be able to help you.

Mick Simmons Ltd.

THE WORLD'S GREATEST SPORTS STORE
Headquarters: HAYMARKET, SYDNEY

Q.S.L.

The meaning of the three letters QSL is: "Please give me a receipt" — or, in other words—"Send me an acknowledgement."

There isn't a transmitter on the air now who is not glad to get a report on his signals, whether they are phone or C.W.

You can put everything you want to say on a Publicity Press QSL card. It takes only a minute to fill in and conveys all the information the transmitter wants.

Over the last few months we have printed thousands of these cards for both transmitters and receivers, among them 2UW, 2CX, 2BF, 2LM, 2WW, 4CK, etc.

There is a QSL card for every purpose and they may be had either from stock or to suit individual tastes.

Write, phone or call.

Publicity Press Ltd.

Printers and
Publishers -

12-16 Regent Street
SYDNEY

Phones Red. 964 & 930.

What They Write

Editor's Notes

WHICH AUSTRALIAN FIRST HEARD A BRITISH AMATEUR?

To the Editor.

Dear Sir,—I note in your issue of October 16th, page 20, that Mr. Maclurean disputes the accuracy of my contribution to "Victorian Notes" in "Wireless Weekly" of October 2nd, page 40, in which, after careful consideration of all available documents, I awarded the palm to Mr. Pringle, of Brunswick, Vic., for being the first Australian amateur to hear a message from an English one in daylight on a short wavelength. Mr. Maclurean's position is such that the mere statement of a claim made by him is likely to be accepted as a dogma by most other amateurs, and it is with great diffidence that I venture to point out that he is evidently suffering from the baleful effects of an after-thought. It is only due to Mr. Pringle and also to myself that the facts should be set forth. Mr. Maclurean now claims that he heard G-2OD on April 26th before he worked U-6TS, and therefore before 4.45 p.m. Now, unfortunately for complete acquiescence in this definite but belated statement, Mr. Maclurean has done what the Psalmist once devoutly wished his enemy would do, namely, he has written a book—to wit, a log-book—and has published portions of it that are very relevant to the matter in dispute. Anyone who has Victorian "Radio Broadcast" for June need only turn up page 5, where he will find transcribed by Mr. Maclurean himself from his own log-book what purports to be a complete entry under April 25th. Let me transcribe it again here:

"Sunday, April 26th.

"3 p.m. Called G-2OD and G-2KF. Informed them that no test to-morrow, but again next Saturday, Sunday, and Monday. Tried 30, 35, and 40 metres, and asked for cabled results. Told them to reply on 20 metres.

"At 4.45 p.m. U-6TS called 2CM. Contacted with him and asked him to QRX, as I had to listen for GB. Then U-1CMX called 2CM, and I told him likewise, adding that I would call them both later.

"G-2OD was later heard faintly, but U-1CMX and U-6TS were both continuously calling 2CM and working each other, so that 2OD's signals were lost."

So that's that. But for a couple of blundering Yanks, 2CM might have heard G-2OD much earlier and more fully, but he specifically and unequivocally states that he did not hear G-2OD until later than 4.45 p.m., and even then lost him. On the other

hand, Mr. Pringle heard G-5NN's signals clearly and fully on the same day and at an earlier time than 2CM heard the other fellow, so honours are undeniably easy with Mr. Pringle. I have only to quote further from 2CM's own excellent Presidential Address as given in "Wireless Weekly" for April 24th, two days before the disputed achievement. "Above all" (says 2CM), "subdue any jealousies of another's achievements, and remember 'honour to whom honour is due.'" With these weighty and significant words I leave Mr. Maclurean to consider whether he is not guilty of suppressis veri in his statement as recorded in your issue of October 16th. It certainly appears to me that the amend honourable is distinctly due to Mr. Pringle for disputing his priority on such a slender thread of belated evidence. It will be noted, too, that not only Mr. Pringle and 2CM are involved (not to mention myself as adjudicator), but also G-2OD and G-2KF, as well as G-5NN. The dispute really threatens to assume dimensions calling for the intervention of the League of Nations!

It must be noted that G-2KF has also just dragged himself into the discussion, and attempts in August "Experimental Wireless," page 727, to discredit G-5NN's priority to Australian reception. The data he gives, however, fails dismally, as it merely refers to reception of Australian calls in England, which is a horse of another colour, with the exception of an entry under April 19th, where G-2KF claims to have been logged by 2CM through heavy static. To do 2CM justice, he states in his log (as published in Victorian "Radio Broadcast" for June) that the call sign could not be distinguished, so the logging was really a matter of conjecture. The rules of the game must be observed, and it will never do for the leaders to emulate those lesser amateurs who swing from station to station like monkeys after coconuts, not pausing to make sure whether they are ripe enough for human or even simian consumption. To log a station one really must not only hear the call sign distinctly, but also copy some at least of the message, sufficient to make sense or at least to tally with the log at the other end. On that definition the gumdrop still remains with Mr. Pringle and G-5NN, and 2CM's only recourse is to go a-gunning for U-1CMX and U-6TS with 100 kiloyank power for a pair of blundering Yanks that spoke out of their turn. If he then spends portion of his next Sunday's leisure in reading the old-fashioned story of Noboth's Vineyard, I shall forgive him for calling my accuracy and sense of fair play, and of the relative merits of record-breakers so seriously into question.—Yours sincerely,

ERNEST FYSH.

Surrey Hills, Victoria.

Philco Drynamic for less worry and better results.

To the Editor.

FREE BROADCASTING.

Dear Sir,—In the October 21st issue of the S.A. "Wireless Weekly" there appears a very good article, "Abolishing the License Fee."

I must draw this matter to your attention, inasmuch that I think it is the policy of your paper to look after the great army of listeners-in. This is a matter which interests every one of them, and which, in my mind, should be taken up very strongly, indeed, by both "Wireless Weekly" and your fortnightly paper, "Radio."

You will remember a few weeks ago my article, "Free Broadcasting," and it seems that although many readers thought well of it, none of them to date have written their expressions and feelings on the matter, and what I suggest is that you throw the columns of your paper open for immediate discussion of this matter.

What I advocate is this: that the listeners-in form an association of broadcast listeners, and that they insist that the present license fee for receiving and transmitting covering amateurs and also the broadcast listeners be abolished, and that the Federal Government pay for the whole of the broadcasting in Australia out of the duties collected on radio apparatus coming into Australia. This could easily be done, and would allow for an excellent service right throughout Australia.

I believe that since June, 1924, over £300,000 has been collected as duty on imported radio apparatus coming into Australia. This has only done one thing, and that is increased the price of radio apparatus to the listener-in.

Now, let us say that only two-thirds of this amount were spent on broadcasting in Australia per annum. This would mean that there would be £200,000 to be divided amongst the different broadcasting stations in Australia. Naturally it is only fair to expect that this money be allocated on a percentage basis of the population in each State.

The duty on radio apparatus generally has just been increased approximately 25 per cent. to 30 per cent., and on and after the 1st January the duty on receiving valves is to be increased about 25 per cent.

I feel perfectly safe in saying that within 12 months the Federal Government will easily be able to spend £300,000 per annum on broadcasting in Australia, and still have a surplus from the duties collected on imported radio apparatus.

All the broadcasting stations in Australia to-day are considering ways and means of increasing their income. The way I suggest would automatically solve this problem for them, and in addition would help that great army of listeners-in—the crystal set users.



The Brown H.I. Loud Speaker, 21ins. high, with black enamelled horn and magnets wound to 2000 ohms.
Price £9/10/-

No distorted sound waves —true to life reproduction

THE vibrations of the flat iron diaphragm in a loud speaker of ordinary type are to some extent confused. They are caused by the combined pull of the two poles of an electro-magnet, and since it is impossible to ensure that both act with absolutely equal force the resulting sound waves must frequently be distorted.

Every Brown Loud Speaker has a conical diaphragm of spun aluminium — more delicate than iron and fastened, at its centre only, to the end of a vibratory reed. There's no double acting pull to cause confused vibrations.

Ask your radio dealer to demonstrate the Brown Loud Speaker. Note its purity of tone—its full volume. Make no final choice before hearing the Brown. Prices from £4 to £26/5/-.

NOYES BROS. (SYDNEY) LTD.

'Phones: City 3870 (6 lines), MW1905

115 Clarence St., Sydney. 11 Watt St., Newcastle

Perry House, Elizabeth St., Brisbane

What is Philco going to do in Radio?

We all acknowledge in the first place that a crystal set is bought or made, and from the first crystal set comes a desire to own a good multi-valve set.

This way of paying for the broadcasting costs would automatically make the listener-in of the multi-valve set pay more towards the broadcasting than the crystal set user, as naturally the duty on parts for the multi-valve set is many times greater than the duty on the few parts which make a crystal set.

The duty on radio apparatus to-day coming into Australia is absolutely appalling. It is not helping the local manufactures a bit, because the duty has been increased not only on imported sets, but also on imported parts, and the so-called sets labelled "Made in Australia" contain anything between 60 per cent. to 100 per cent. imported parts. Really speaking, the cabinet and the assembling of the parts in the set are the only parts made in Australia. The assembling of even a good set would at the most not cost more than £3, and the cabinet of the best set offered would cost (say) £5, whereas the retail price of the best sets made in Australia amount to £70 to £140, so you can see that the actual work expended on this so-called set made in Australia is not worth considering as a local industry.

I would like to ask you if the candidates for the coming Federal election have been approached on this matter. If so, what has been their reply? I feel certain that the Labour candidates will be very interested, indeed, to hear my suggestion, as they are interested in broadcasting matters generally. As we all know, they have just put in a broadcasting station of their own in Sydney, and state that it is their intention to put in further broadcasting stations throughout New South Wales.

In Queensland, as we all know, the broadcasting is run by the State Labour Government, so I feel absolutely certain that the suggestion that the whole of the costs of the broadcasting throughout Australia be paid out of the duties collected on imported radio sets and parts would meet with all-round approval, and would solve the problem of where the broadcasting stations are to get the money from to carry on.—Yours, etc.,

INTERNATIONAL RADIO CO. LTD.

CHAS. E. FORREST,
Managing Director.

To the Editor.

Dear Sir,—I suppose you would call this a complaint, but I consider that something should be done in regard to "howlers."

My own case is typical of many others, listening in on interstate broadcasting. Last week I had the doubtful pleasure of assisting a friend attempt to

bring in 3LO and 5CL on a five-valver. It brought them in good, but the whole programmes were entirely spoilt by B.C.L.'s trying to get the last ounce out of their P.I receivers. One case of many of a good set and money being wasted. This was at Bondi. At our own station at Marrickville it is appalling. It is necessary for me in the course of my employment to carry out tests on DX broadcasting stations. With what result? Just like a piggery at feed time.

It's time something was done, and your journal, being the most widely read, would do well by publishing suggestions for eliminating this menace. My own suggestion is that a district should be allotted to honorary advisers, who will advise local B.C.L.s as to operation and possible DX working of their set. I offer my services in this regard to anyone in my own district.

I trust you will publish this, as it will do a lot of good to those who do not oscillate but are spoilt by inexperienced handlers of P.I receivers.

Wishing your journal every success.—Yours faithfully,

NEVILLE K. CHELL.

"Narooma," Mansion St., Marrickville.

To the Editor.

Dear Sir,—Mr. C. Forrest once again proves his knowledge of radio in his wideawake announcement last week.

Mr. Forrest, however, merely made a statement and did not back his utterance with figures, which, after all, is the main essential. Briefly, the whole trouble can be boiled down to the fact that men with mid-Victorian ideas are trying to run a modern business. Fees are alright in thickly populated countries where the enormous population justifies the small token forced upon them, but in a sparsely populated country like Australia it is ridiculous to ask any fee to be paid. Radio is an essential national factor in that it introduces nation-wide comradeship, and as such the parliamentary section should delve into facts and not be blinded by the smothered dictating of a firm which is past wasting the public's money.

Recently the duties on imported radio goods went up as follow:—38 per cent. on English parts, 55 per cent. on American parts, and 60 per cent. on American sets. Now, take the fact that there is in the vicinity of £1,000,000 worth of radio goods sold per year. The approximate duties, averaging, after costing, at 33-1/3 per cent., the amount that goes into the duties fund is over £300,000. What becomes of this money? Is it used for radio purposes? NO, emphatically NO!

Now, go to the other side of the story. Broadcasting licenses to the value of £100,000 were col-

lected last year, i.e., 70,000 licenses, and yet there is a conservative calculation of 4,000,000 people in Australia over the age of 13, 60 per cent. of whom probably would like to have some form of amusement. Radio being the cheapest and offering the greatest variety, consequently has the greatest pull. The 30/- licenses fee stands in their way, and until it is eradicated little or no advance will be made.

Mr. Bruce, in his policy speech, stated that import duties on motor cars would go to make better roads. Why could not import duties on radio goods be used to pay and better broadcasting, so that all and sundry may benefit by it? Now, you people, set in and give your version in the hardest punch you've got.—Yours, etc.,

"ONE PIRATE."

Victoria St., Potts Point.

(Editor's Note: The views of correspondents are not necessarily our views. We would welcome other opinions on this subject.)

Obtaining Maximum Efficiency with Crystal Set

Continued from page 18

- 1 Audio transformer.
- A and B batteries to suit valves used.
- 1 Grid condenser and leak.
- 1 Crystal detector (good type).
- 1 Pair of phones.
- 1 .001 Variable Condenser.
- 1 .0005 Variable Condenser.
- 1 Switch arm.
- 2 Switch studs.
- 2 Switch stops.
- 1 Single pole switch.
- 3 D.P. D.T. switches.

The small coils should be wound with the larger gauge wire. The larger ones will need to be bank-wound when 24 gauge should be used.

Spider-web Coil.

Table when used with the average aerial of 100 feet long and with a .001 condenser in shunt in aerial circuit and a .0005 in secondary:—

Station.	Primary.	Secondary.
2BL	25	50
3LO		
5CL		
3AR		
2FC	75 or 100	150

An Easily Controlled Receiver for Short Waves

Continued from page 21

ceiver, and is not intended for use as a broadcast receiver. If you desire to listen-in on longer waves it is best to short-circuit terminals 5 and 6, and the tuning will then be as sharp as the average circuit. Honeycomb coils or even straight wound coils can then be substituted for the basket weave coils.

In my opinion, the set is easily the best that I have tried for waves below 100 metres, and the originator of the circuit, John L. Reinartz, now with the Macmillan Expedition at the North Pole, is using a receiver of this type for his short wave receiving. Properly designed and properly operated, the set will give results which will be to some extent surprising to those who are used to critical receivers, and will, I hope, prove satisfactory to all who try it.

Sunken Phones Still on Duty

SALT WATER DID NOT IMPAIR.
HEADSETS WHICH WENT DOWN.

IF fish ever go in for radio and begin to demand headphones which are impervious to salt water, they may be interested in the testimony of W. F. Jepson, of North Philadelphia, who is using a headset which was sunk during the war and later salvaged. It gives better results than any of his other headphones.

"During the late war the U.S.S. 'Lake Erie' was sunk in the channel of Cardiff, Wales," Mr. Jepson reports. "Four days afterward a diver who had been recovering salvage material on board turned over to me in the hospital a pair of Western Electric headphones from the radio room of this ship. They had been under salt water more than three days.

"Recently I decided to play with them a bit. Much to my surprise, when they were cleaned up and fitted with new cords they worked better than any of three other headsets I had been using, and apparently will continue to give good service."

Which may prove that King Neptune need not abandon hope of having radio in his own place.

Telephone B 5925

CHARLES D. MACLURCAN
Consulting Radio Engineer

Pratten Building,
26 Jamieson Street,
SYDNEY

CALIBRATIONS

"What is a Double Seven?" "The world's best value."

PHILIPS VALVES

As the result of years of painstaking effort in the field of scientific research, backed by a factory organisation world famous for the magnificent quality and reliability of its products, PHILIPS LAMP WORKS are now placing on the market the following remarkable series of Radio Valves:

A. 110—"THE ONE-CELL VALVE." Detector and Amplifier.

Filament Consumption, 1.0/1.3 volts; 0.05 amp. Plate Voltage, 20/100

The A 110 consumes less current than any 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 Emitter, 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 199 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 199 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 199 Cap, Price 17/6.

B. 406—"THE NEW VALVE." Detector and Power Amplifier.

Filament Consumption, 3.4/4.0 volts; 0.1 amp. Plate Voltage 20/120

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

Stocks of B.406 are arriving shortly. Place your order now and make certain of securing your supplies.

Standard American or English Caps, Price 17/6.

C. 507—(IMPROVED 201.A TYPE). Detector and Power Amplifier.

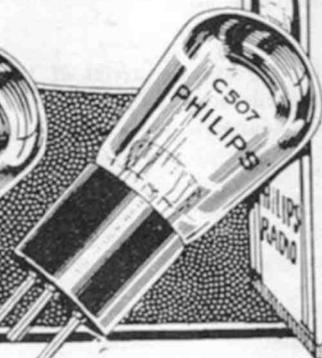
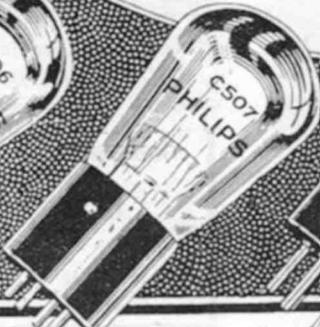
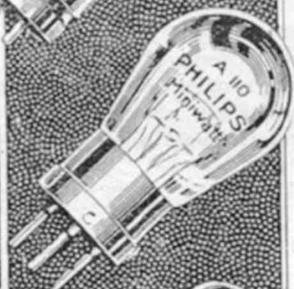
Filament Consumption, 5 volts; 0.25 amp. Plate Voltage, 20/120

Valves of the 201.A type stand high in the public's favour—their characteristics are so well known as to need no comment here. The name of Philips stands behind the C.507 valve and denotes that quality which commends them to discriminating Radio enthusiasts throughout the world.

Standard American or English Caps, Price 17/6.

Philips Valves

Obtainable from all
RADIO DEALERS.



Broadcasting



4QG

QUEENSLAND RADIO SERVICE.

Wavelength, 385 metres.

FRIDAY, NOVEMBER 6.

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: "Queensland Radio News" Night. A concert organised by the editor of the "Queensland Radio News," arranged by Mr. Erich John and held in Mr. Erich John's studio, George St., Brisbane, will be relayed and broadcast by 4QG. 7.55—Tune-in Signal. Part I.—Operatic. 8—From the studio of Mr. Erich John. Vocal quartette, "Hymn of the Fishermen's Children" (from "Zampa"—Herold), "Queensland Radio News" Vocalists; vocal, prologue from "I Pagliacci" (Leon Cavallo), Mr. Fred Homer, baritone; pianoforte solo, "Rigoletto" Fantasia (Verdi-Liszt), Mr. Rees Morgan; aria, "Flown Forever" (from "Marriage of Figaro") (Mozart), Miss Verna Moreom, soprano; instrumental quartette, Ballet Music from "Rosamunde" (Schubert), "Queensland Radio News" Instrumental Quartette; aria, "M'appri' tutti amor" (from "Martha"—Flotow), Mr. Jack Ford, tenor; cello solo, "Star of Eve" (from "Tannhauser"—Wagner), Miss May Rose; vocal duet, Miserere Scene (from "Il Trovatore"—Verdi), Miss Mildred Bell, contralto, and Mr. Fred Hooper, baritone; violin solo, "Walter's Prize Song" (from "Meistersaengers"—Wagner), Mr. Alfred Bartlett; vocal quartette, "Chorale of the Cross" (from "Faust"—Gounod), "Queensland Radio News" Vocalists; interval. Part II.—Popular—Vocal quartette, "Sweet and Low" (Barnby), "Queensland Radio News" Vocalists; instrumental quartette, "Hungarian Dance No. 5 (Brahms), "Radio News" Instrumental Quartette; contralto solo, "Seguigille" (from "Carmen"—Bizet), Miss Mildred Bell; vocal quartette, "The Owl and the Pussy Cat" (De Koven), "Radio News" Vocalists; pianoforte solo, "Valse Caprice" (Rubenstein), Mr. Erich John; vocal duet, "Barcarolle" (from "Tales of Hoffman"—Offenbach), Miss Verna Moreom and Mr. Fred Homer; flute solo, "The Nightingale" (Donjon), Mr. E. R. Brock; vocal quartette, "March Militaire" (Schu-

bert), "Queensland Radio News" Instrumental Quartette. 10—From the studio of 4QG: "The Daily Mail" news service. Close down.

SATURDAY, NOVEMBER 7.

(No Midday Session.)

The Children's Hour: A children's bedtime story session is held each 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 twice 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: Studio Concert—Lennon's Ballroom. 7.55—Tune-in Signal. 8—Instrumental number, "Chanson Russ" (Sydney Smith), the Studio Trio; soprano solo, "Over the Dreamland Sea" (Lyal Phillips), Miss Beryl Huntington; pianoforte solo, "Trinity Chimes" (Decker), Miss Naomi Archdall; elocutionary number, "The Brook Song" (Riley), Miss Jean Trundle; instrumental number, "Berceuse de Jocelyn" (Godard), the Studio Trio; aeolian vocalion selections, Hawaiian instrumental numbers, (a) "Hawaiian Love Nest," (b) "Can you bring back the heart I gave you?"; soprano solo, "Se Saran Rose" (Arditi), Miss Beryl Huntington; flute solo, selected, Mr. H. C. Marshall; pianoforte solo, "Zephyr" (Heller), Miss Naomi Archdall; elocutionary number, "The Pigtail of Li Fang Fu" (Sax Rohmer), Miss Jean Trundle; flute, selected, Mr. H. C. Marshall; instrumental number, intermezzo, "The Secret" (Gautier). 9—From Lennon's Ballroom: By courtesy of the proprietors of Lennon's Hotel, an hour and a half's jazz music, played by Miss May Dobbyn's Vice-Regal Orchestra, will be relayed from Lennon's Ballroom. 10.30—From the Studio of 4QG: "The Sunday Mail" news service. Close down.

SUNDAY, NOVEMBER 8.

The complete evening service at All Saints' Church of England, Wickham Terrace, will be relayed and broadcast by 4QG. Order of Service: 7.10 Tune-in Signal. 7.15—Organ Voluntary, "The Heavens are telling" (Hadya), "In Native Worth" (Haydn). 7.30—Entrance of Choir; Festal Evensong from Church of England Prayer Book; Psalms 148 and 149; 1st Lesson, Wisdom, Ch. 3, V. 1-9; Office Hymn 201, English Hymnal; Magnificat, Bunnett-F; 2nd Lesson, Hebrews, Chap. 11, Verse 33, to Chap. 12, Verse 3; Nunc Dimittis, Bunnett-F; Apostles' Creed; Prayers; Anthem, "What are these

Burgess Radio Batteries.

that are arrayed in white robes?" (Stainer); Intercession; Notices; Hymn 519, English Hymnal; Sermon by the Rector, the Rev. F. E. Maynard; Hymn 412, English Hymnal; Processional Hymn 641, English Hymnal; Te Deum; Blessing. Close down.

MONDAY, NOVEMBER 9.

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: Tivoli Operatic Orchestra. 7.55—Tune-in Signal. 8—From the Tivoli Theatre: By courtesy of the directors of Haymarket Theatres Ltd., the overture played by the Tivoli Operatic Orchestra of 20 performers, under the baton of Mr. C. Groves, will be relayed from the Tivoli Theatre. 8.10—From the Studio of 4QG: Duet, "The Garden of Your Heart" (Dorel), Mrs. Robert Bell, soprano, and Miss Ruth Portrate, soprano; lecturette, "Life Saving," the first of a series of four by Mr. J. C. Deeney, Hon. Lecturer to the Queensland Head Centre, Royal Life Saving Society; flute solo, selected, Mr. H. C. Marshall; contralto solo, "Down Here" (M. Brahe), Miss Andrye Iff; elocutionary number, "Pleasant Hour-Hour on the Beach," Miss Feo Todd; soprano solo, "A Heart that's Free" (Robyn), Mrs. Robert Bell; violin solo, "Liebstraum" (Liszt), Mr. H. Scott MacCallum; soprano solo, "Chanson Hindoue" (Rimsky-Korsakov), Miss Ruth Portrate; pianoforte solos, (a) "Evening," (b) "Dreaming" (Schumann), Mr. Arthur Sharman; contralto solo, "My Treasure" (Trevalsa), Miss Andrye Iff; elocutionary number, "The Obstructive Hat," Miss Feo Todd; aeolian vocalion selections, band numbers, "William Tell" Overture (Rossini), Parts I. and II. played by the band of H.M. 1st Life Guards; flute solo, selected, Mr. H. C. Marshall; tenor solos, (a) "Friend of Mine" (Sanderson), (b) "At Dawning" (Cadman), Signor Corti. 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, NOVEMBER 10.

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: To-night's programme will include special choral numbers by the Brisbane Apollo Club (formerly Liedertafel), under the leadership of Mr. Leonard Francis. 7.55—Tune-in Signal. 8—Instrumental number, "Sizilietta" (Von Blon), the 4QG Studio Trio, Mr. H. Scott MacCallum (violin), Mrs. Hilda Woolmer (piano), Miss Petropoulos (cello); lecturette, "Photography," the eighth of a series by Mr. F. L. South (manager Kodaks Ltd.); choral number, "Song of the Quarryman" (Laurent de Rille), the Brisbane Apollo Club; contralto solo, "A Rose Memory" (Decon), Miss Vera Parker; choral numbers, (a) "Sleeping" (Edward German), (b) "Old Daddy Long Legs" (Geo. Wheeler), the

Brisbane Apollo Club; tenor solo, "O Mistress Mine" (Quilter), Mr. John Steel; instrumental number, "Un pu d'Amour" (Silisu), the Studio Trio. 8.55—Announcements; instrumental number, "Salut d'Amour" (Elgar), the Studio Trio; baritone solo, "Just an Old Love Song," Mr. Maurice Goldhill; pianoforte solo, "Polish Dance" (Sharwenka), Mr. Arthur Sharman; contralto solo, "Farewell to Summer" (Johnson), Miss Vera Parker; a musical novelty by Mr. Golding; tenor solo, "The Siesta" (Squire), Mr. John Steel; aeolian vocalion selections, orchestral selections (a) "Madam Butterfly" Fantasia (Puccini), (b) "In a Monastery Garden" (by request); baritone solo, "Nita Gitana," Mr. Maurice Goldhill; Steek Duo art pianola selection, "Three O'Clock in the Morning" (Robledo); a musical novelty by Mr. Golding; bass solo, by request, "The Rolling Stone" (Hamblen), Mr. Norman Cooling; an instrumental number by the Studio Trio. 9.55—"The Daily Mail" news service. Close down.

WEDNESDAY, NOVEMBER 11.

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.

Afternoon Session: 2.55—Tune-in Signal. 3—By courtesy of the directors of Haymarket Theatres Ltd. an hour's programme of music played by the Tivoli Operatic Orchestra of 20 performers, under the baton of Mr. C. Groves, will be relayed from the Tivoli Theatre and broadcast by 4QG.

The Children's Hour: A children's bedtime story session is held each 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 twice weekly.

6.25—Tune-in Signal. 6.30—The Children's Hour. Nursery Rhymes and music. Bedtime stories by "Little Miss Brisbane." 7.15—Close down.

Night Session: 7.55—Tune-in Signal. 8—Instrumental number, "Pansy" (Erichs), the Studio Trio; baritone solo, "Macushla" (Macmurrough), Mr. Gerald Cashman; lecturette, "The Reason for Agricultural Legislation," Mr. R. Wight; contralto solo, "Garden of Happiness" (Daniell Wood), Mrs. Eric Job; violin solo, "Scene de Ballet" (De Beriot), Mr. H. Scott MacCallum; bass solo, "Invictus" (Bruno Huhn), Mr. J. P. Cornwell; instrumental number, "Kiss Me Quick" (Isenman), the Studio Trio; aeolian vocalion selections, "Poet and Peasant" Overture (Suppe), Parts I. and II. 9—Announcements; instrumental number, "Chaconne" (Durand), the Studio Trio; "A General Talk to Women" by "Veronica"; baritone solo, "When you look in the heart of a Rose" (Methden), Mr. Gerald Cashman; violin solo, "The Londonderry Air" (Kreisler), Mr. H. Scott MacCallum; contralto solo, "My Prayer" (Squire), Mrs. Eric Job; pianoforte solo, "Dancing Waves" (Spindler), Mrs. Hilda Woolmer; basso solo, "My Heart's a Swift Horseman" (Lohr), Mr. J. P. Cornwell. 9.25—Half an hour's dance music by the Studio Trio. 9.55—"The Daily Mail" news service. Close down.

Burgess—Ask Any Radio Engineer.

THURSDAY, NOVEMBER 12.

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: 7.55—Tune-in signal. 8—Instrumental number, "Norwegian Dance" (Grieg), the Studio Trio; soprano solo, "The Flower Song" from "Faust" (Gounod), Miss Verna Morcom; flute solo, selected, Mr. H. C. Marshall; bookman's radiette, a talk on books by Mr. W. A. Braiden (McLeod's Bookstore); soprano solo, "Sing, Joyous Bird" (Phillips), Miss Millicent Baker; tenor solo, "Funiculi Funicula" (Denza), Signor Corti; violin solo, "The Swan" (Saint Saens), Mr. H. Scott MacCallum; soprano solo, "Break, Break, Break" (Lewis Carey), Miss Mary McNeish; instrumental number, "Serenade" (Wedor), the Studio Trio; aeolian vocalion selections, musical novelties, (a) "Rocking-horse Parade" (Hager) (b) "The Boy and the Bird" (Hager). 8.55—Announcements. 9—Instrumental number, (a) "Winged Hours" (Bath), (b) "El Dorado" (Weidt), the Studio Trio; soprano solo, "Elizabeth's Prayer" (Wagner), Miss Verna Morcom; flute solo, selected, Mr. H. C. Marshall; tenor solo, "A Castilian Lament" (del Riego), Signor Corti; soprano solo, "Love's a Merchant" (Carew), Miss Millicent Baker; Steek Duo art pianola selection, by request, "Aloha Oe"; soprano solo, "Farewell to Summer" (Johnson), Miss Mary McNeish; cello solo, "Priere" (Squire), Miss Petropoulos; aeolian vocalion selections, bass solos, (a) "Oh, Divine Redeemer" (Gounod), (b) "Why do the Nations" (from "The Messiah"—Handel), sung by Mr. Malcolm McEachern; instrumental numbers by the Studio Trio. 9.50—"The Daily Mail" news service. Closes down.

FRIDAY, NOVEMBER 13.

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: 7.55—Tune-in Signal. 8—Instrumental number, "Sparklets" (W. E. Miles), the Studio Trio; ten minutes of humour by Mr. W. F. Kenny; soprano solo, "Love the Pedlar" (Ed. German), Miss Nance King; tenor solo, "I hear you calling me" (Marshall), Mr. G. Williamson; duet, "The Danube River" (Hamilton Aide), Misses Mae and Nance King; baritone solo, "Glorious Devon" (Ed. German), Mr. J. B. Cloirec; violin solo, "Reverie" (d'Ambrosio), Mr. H. Scott MacCallum; contralto solo, "Come, for it's June" (Dorothy Foster), Miss Mae King; duet, "The Fishermen" (Gabussi), Messrs. J. B. Cloirec and G. Williamson; instrumental number, "A Basket of Roses" (Albert), the Studio Trio. 8.45—Announcements. 8.50—Instrumental number, "Eleanor" (Deppen), the Studio Trio; tenor solo, "Mountain Lovers" (Squire), Mr. G. Williamson; duet, "Night of Stars and Night of Love" (Offenbach), Misses Mae King and Nance King; baritone solo, "The Skipper of the Mary

Jane" (Richards), Mr. J. B. Cloirec; ten minutes of humour by Mr. W. F. Kenny; instrumental number, "Carita" (Widt), the Studio Trio. 9.20—From the Tivoli Theatre: By courtesy of the directors of Haymarket Theatres Ltd., half an hour's music by the Tivoli Operatic Orchestra of 20 performers, under the baton of Mr. C. Groves, will be relayed from the Tivoli Theatre. 9.50—From the Studio: "The Daily Mail" news service. Close down.

SATURDAY, NOVEMBER 14.

(No Midday Transmission.)

The Children's Hour: A special children's bedtime story session is held each 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 twice weekly.

6.25—Tune-in Signal. 6.30—The Children's Hour. Nursery Rhymes and music. "The Sandman's" bedtime stories. 7.15—Close down.

Night Session: Studio Concert, Lennon's Ballroom. 7.55—Tune-in Signal. 8—Pianoforte solo, "Crescendo" (Lussen), Miss Naomi Archdall; soprano solo, "Sing, Joyous Bird" (Phillips), Miss Beryl Huntingdon; elocutionary number, "Earthenware" (Weston and Lee), Miss Jean Trundle; tenor solo, "Pal o' Mine," by request (Dixon), Signor Corti; flute solo, selected, Mr. H. C. Marshall; aeolian vocalion selections, orchestral numbers, (a) "Kismet" (Henlere), (b) "Loin du Cal" (Gillet); soprano solo, "The Spring is in my Garden" (Tenant), Miss Beryl Huntingdon; pianoforte solo, "Serenata" (Moszkowski), Miss Naomi Archdall; tenor solo, "Love sends a little gift of Roses," Signor Corti; elocutionary number, "When you care for a Girl" (Hazzard), Miss Jean Trundle; flute solo, selected, Mr. H. C. Marshall. 9—From Lennon's Ballroom: By courtesy of the proprietors of Lennon's Hotel, an hour and a half's programme of dance music, played by Miss May Dobbyn's Vice-Regal Orchestra, will be relayed and broadcast. 10.30—From the Studio: "The Sunday Mail" news service. Close down.

SUNDAY, NOVEMBER 15.

St. Paul's Presbyterian Church: The complete evening service from St. Paul's Presbyterian Church, Spring Hill, Brisbane, will be relayed and broadcast by 4QG. 7.10—Tune-in Signal. 7.15—St. Paul's Evening Service; preacher, the Rev. Jas. Walker.

2BL**BROADCASTERS (SYDNEY) LTD. SERVICE.**

Call Sign, 2BL. Wavelength, 353 Metres.

FRIDAY, NOVEMBER 6th.

Afternoon Session: 3—G.P.O. Clock and Chimes; Weather Report and Social Notes. 3.15—Music from the Studio. 3.30—G.P.O. Clock and Chimes; A Talk from the Studio. 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 "The Scarlet Circle." 4.45—Music from the Studio. 4.55—Late Market Reports from "The Sun." 5—G.P.O. Clock and Chimes; "The Sun" News Service. 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session: 6—G.P.O. Clock and

Programme continued on page 38

Wireless Transmitter-Receiver Sets for Cattle Stations in the Northern Territory.

Following on the installation by Amalgamated Wireless (A/sia) Ltd. of a wireless station at Wave Hill, Northern Territory—350 miles due south of Darwin—for the Commonwealth Government, the company have manufactured a specially designed 50-watt transmitter with receiver combined, for maintaining either telephonic or telegraphic communication with the Wave Hill station, or with a station similar to the Wave Hill station now in course of erection at Camooweal, near the Queensland border.

The 50-watt transmitter sets which are intended for installation by owners of cattle stations are simple to operate. The current is obtained from an oil engine and generator. Installations of a similar type are at present operating in many parts of Australia. Messages can be sent by telegraphy or telephony as desired, and under favourable circumstances transmission can be effected up to distances of 1000 miles.

The advent of wireless in the Territory is a distinct advance. By the installation of private

transmitting and receiving equipment messages can be sent by cattle station owners to either Wave Hill or Camooweal, each of which stations is in communication with the coastal radio stations of Darwin, Thursday Island, Townsville, etc., these stations in turn transmitting messages through other wireless stations and the land line system to all parts of Australia and other parts of the world.

The daily news bulletins transmitted from Perth, Melbourne, and Darwin stations to ships at sea will also be received at Wave Hill and transmitted therefrom for the benefit of settlers with wireless sets. The call letters of Wave Hill are UJD and of Camooweal UJJ.

Some idea of the importance of the advent of wireless in the Territory may be obtained from the fact that since the telegraph line connecting Darwin with Adelaide was completed 53 years ago, not one mile of telegraph line has since been built by the Government in the Territory.

Previous to the introduction of wireless the only means of sending messages to many of the cattle stations in the Territory was by team or horse, the journey sometimes taking weeks.



The beautiful location of Experimental Station 2LM, Les Wilson, Lake Cowal, N.S.W.

LONG DISTANCE WITH CRYSTAL.

Arthur D. Mew, Greenwood Street, Bankstown, claims that 5CL is being received by him on a cry-

stal receiver, also that he can tune-in 3LO any night on this set. The statement is verified by A. Davies, Weigand Avenue, Bankstown, and an invitation is extended to anyone to listen-in.

What is Philco going to do in Radio?



To summon the Genie from the world of magic, Alladin merely rubbed his lamp.

With the aid of Continental valves, the magic lamps of radio, you can be mightier than Alladin. With their aid voices and music thousands of miles away may be summoned to amuse and entertain you.

Continental Radio valves are the product of years of research and experimental work by the engineers of the Continental tube laboratories, Chicago, and they are sold under an absolute guarantee of replacement should the valve not function.

CONTINENTALS FOR SATISFACTION.

Type C 201a.
Detector and Amplifier.
Fil. Volts 5
Fil. Amps.25
Plate Voltage. 15 to 140
RETAIL PRICE, 15/-.

Type U.V.199.
Detector and Amplifier.
Fil. Volts 8
Fil. Amps.06
Plate Voltage. 15 to 80
RETAIL PRICE, 15/-.

United Distributors Limited

73 Clarence Street,
Sydney.
343 Queen Street,
Brisbane.
27 Cheeser Street,
Adelaide.

Cnr. Jervois Quay
and Harris Street,
Wellington, N.Z.
592 Bourke Street,
Melbourne.
26 Queen Street,
Perth.



Continental

Programme Continued from page 35

Chimes; Pavilion Dinner Orchestra under the direction of Mr. Cec Morrison. 6.30—The pupils of Miss Monica Scully will entertain the Kiddies. 7.45—Late Stock, Hides and Market Reports by courtesy of Pitt, Son and Badgery. 7.50—Close down.

Evening Session: 8—G.P.O. Clock and Chimes; Mr. Richard McClelland, baritone; Miss Marjorie Skill, soprano; Miss Maisie Barnett, contralto, and a Brass Quartet. At 9—Mr. H. C. Morgan will talk on Motoring.

SATURDAY, NOVEMBER 7th.

Afternoon Session: 2—G.P.O. Clock and Chimes; special Sporting Programme by courtesy of the Sun Newspapers Limited. 5.15—Close down.

Early Evening Session: 6—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison. 6.30—Uncle George and the Kiddies.

Evening Session: 8—Hoyt's Imperial Orchestra, under the direction of Mr. Lionel Hart; Mr. Arthur Mayes, basso cantante; The Ambassadors' Combined Orchestra, under the direction of Mr. Charles Aves; The following lectures will be delivered during the evening: At 8.30, Mr. W. Fitzpatrick, on "Life at Set," and at 9.30, "Talks about the Aborigines," by "Bringa." Dance music broadcast from the Dungowan, Manly, under the direction of Mr. C. J. Little.

SUNDAY, NOVEMBER 8th.

11—Service broadcast from Chalmers' Presbyterian Church. 3.30—The Seven Day Adventists. 7.15—Service broadcast from the First Church of Christ, Scientists, Sydney. 8.30—From the studio: Miss Lenore Gotsch (colorature soprano), and Broadcasters' Miniature Orchestra.

MONDAY, NOVEMBER 9th.

Afternoon Session: 3 — G.P.O. Clock and Chimes; Weather Reports and Social Notes. 3.15—David Jones' Tea Room Trio. 3.30—G.P.O. Clock and Chimes; A Talk from the Studio. 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 "The Scarlet Circle." 4.45—Music from the Studio. 4.55—Late Market Reports from "The Sun." 5—G.P.O. Clock and Chimes; "The Sun" News Service. 5.15—Close down.

Early Evening Session: 6—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison. 6.30—Uncle George and the Kiddies. 7.30—"What's On"—a guide to visitors and citizens of Sydney. 7.45—Late Stock (Hides and Market Reports, by courtesy of Pitt, Son and Badgery. 7.50—Close down.

Evening Session: 8 — G.P.O. Clock and Chimes; The Ambassador's Salon Quartette, under the direction of Mr. Claude McGlynn. Popular programme of well known vocalists. At 9.30 there will be a lecture by Mr. C. H. Bertie.

TUESDAY, NOVEMBER 10th

Afternoon Session: 3 — G.P.O. Clock and Chimes; Weather Report and Social Notes. 3.15—Music from the Studio. 3.30—G.P.O. Clock and Chimes; A Talk from the Studio. 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 "The Scarlet Circle." 4.45—Music from the Studio. 4.55—Late Market

Reports from "The Sun." 5—G.P.O. Clock and Chimes; "The Sun" News Service. 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session: 6—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison. 6.30—Uncle George and the Kiddies. 7.45—Late Stock, Hides and Market Reports, by courtesy of Pitt, Son and Badgery. 7.50—Close down.

Evening Session: 8—G.P.O. Clock and Chimes; Programme organised by Messrs. Carnegie & Sons Ltd., including Mr. Norman Janson, baritone, and Miss Pauline Harford-Foster, soprano. At 8.30, Mr. W. G. Stagg, State Secretary, R.S.S., I.L.A., will talk on "Armistice Day," and at 9.30, Mr. J. M. Prentice will talk on "Foreign Affairs."

WEDNESDAY, NOVEMBER 11th.

(Special Anzac Session at 10.50)

10.50—Memorial Service from Martin Place. 11—Chimes, followed by 2 minutes' silence. 11.2—Broadcasters' Trio. 11.10—His Excellency the Governor will speak. 11.20—Broadcasters' Trio. 11.30—Brigadier-General H. W. Lloyd will speak. 11.50—Broadcasters' Trio. 12—Unveiling of Memorial plaque to women of N.S.W. at Town Hall. 12.15—Close down.

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; A Talk from the Studio. 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; Special story entitled "The Scarlet Circle." 4.45—Music from the Studio. 4.55—Late Market Reports from "The Sun." 5—G.P.O. Clock and Chimes; "The Sun" News Service. 5.15—G.P.O. Clock and Chimes; Close down.

Early Evening Session: 6—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison. 6.30—Sporting Resume from "Sun" Newspaper; Uncle George and Uncle Jack with the Kiddies. 7.45—Late Stock, Hides and Market Reports by courtesy of Pitt, Son and Badgery. 7.50—Close down.

Evening Session: 8—G.P.O. Clock and Chimes. Duets by Valerie and Nea Bollenger; Millie Hughes and Raymond Beatty; a Sketch by Leah Freedman, and other well known vocalists. At 8.30 Miss H. G. Hirst will speak on "The Art of Batik," and at 9.30—Mr. A. T. Keeble, B.Sc., will deliver popular science talks.

THURSDAY, NOVEMBER 12th

Afternoon Session: 3 — G.P.O. Clock and Chimes; Weather Report and Social Notes from "The Sun." 3.15—David Jones' Tea Room Trio. 3.30—G.P.O. Clock and Chimes; A Talk from the Studio. 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 "The Scarlet Circle." 4.45—Music from the Studio. 4.55—Late Market Reports from "The Sun." 5—G.P.O. Clock and Chimes; "The Sun" News Service. 5.15—G.P.O. Clock and Chimes. Close down.

Early Evening Session: 6—G.P.O. Clock and Chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison. 6.30—Sporting Resume from "Sun" Newspapers; Uncle Jack and the Kiddies. 7.45—Late Stock, Hides and Market Re-

Burgess—Ask Any Radio Engineer.

ports by courtesy of Pitt Son and Badgery. 7.50—Close down.

Evening Session: 8—G.P.O. Clock and Chimes; popular programme including Dorrie Ward and Wm. Lewis in old time songs. At 8.30, Mr. F. A. Robertson will speak on "Photography."

3LO

BROADCASTING COMPANY OF AUSTRALIA.
PROPRIETARY LIMITED.

Call Sign, 3LO. Power, 5 kilowatts. Wave Length, 371 metres.

SATURDAY, NOVEMBER 7.

Morning Session (11 a.m. to 2 p.m.): 11—Time Signal. Express Train information. 11.3—Musical items by the Buckley and Nunn Studio Orchestra. 12—Time Signal. 12.2—Buckley and Nunn Studio Orchestra. 12.30—"Argus" and "Herald" news services. Reuter's and the Australian Press Association cables. 12.45—Buckley and Nunn Studio Orchestra. 1—Time Signal. 1.2—Results of the first race from the V.R.C. Meeting at Flemington. 1.5—Buckley and Nunn Studio Orchestra. 1.40—Result of the second race at Flemington. 1.45—"Herald" and "Argus" news services. Stock Exchange information. Weather forecast. River reports. 2—Close down. 2.30—Result of the third race from the V.R.C. Meeting at Flemington.

Afternoon Session (3 p.m. to 5.15 p.m.): 3—Time Signal. 3.1—Musical items from the Studio. 3.15—Result of the fourth race from Flemington. 3.20—Musical items from the Studio. 3.55—Result of the fifth race from Flemington. 4—Musical items from the Studio. 4.35—Result of the last race from Flemington. 5—All the sporting results. Progress results of all sporting events will be given throughout the afternoon as they come to hand, and the resume will be given at each hour.

Evening Session (5.45 to 7.15 p.m.): 5.45—All sporting results, local, country, and interstate. 6—Children's Hour. "Billy Bunny" stories by Miss Gum-Leaf. For the tiny ones, "The Story of the Three Little Pigs;" for the girls, "Snowdrop;" and for the boys, "The Little Lead Soldier." 6.45—Sporting results. "Herald" and "Argus" news services. Reuter's and the Australian Press Association cables. Market reports. Closing Stock Exchange information. Shipping movements. Weather synopsis. Market reports by the Victorian Producers' Co-operative Co. Ltd.: Grain, chaff, hay, jute, straw, dairy produce, potatoes and onions.

Night Session (7.15 to 11 p.m.): "A Chamber Concert." Speakers: Mr. R. Rawson, Mr. Frederick Chapman, A.L.S., Dr. J. A. Leach, D.Sc. The Musical Society of Victoria, 344th Chamber Concert. The Studio Orchestral Trio, Miss Bessie Gaunson (violin), Miss Tasma Tiernan (cello), Miss Agnes Fortune (piano). Mr. Herbert Walton, comedian. 7.15—Mr. R. Rawson in an Esperanto talk, "Esperanto, a Passport to All Lands." 7.30—Mr. Fredk. Chapman, A.L.S., "Underground Rocks of the Mallee." 7.40—Dr. J. A. Leach, D.Sc., "Birds of Australia—Mistletoe-bird and Sunbird." 8—The 344th Chamber Concert of the Musical Society of Victoria, transmitted from the Assembly Hall. Violin and Piano

Prelude, Fugue and Variation, Franck-Lemaitre (from Pieces d'Orgue): I, Prelude—Andantino—Lento. II, Fugue—Allegretto non troppo, leading to III, Variation—Andantino, Muriel Campbell and Myrtle Liddy. Songs, (a) "To Daffodils" (Walthew), (b) "Mistress Mine" (Walthew), (c) "Birds' Love and Birds' Song" (Walthew), (d) "The Letter" (Walthew), Gregor Wood. Pianoforte, (a) "Sonata in A" (Lavater): I, Allegro Moderato; II, Andante Tranquillo; III, Alla Gavotta; (b) "Shepherds Hey" (Grainger), Dorothea MacMaster. Quartette for Strings in F (Ravel): I, Allegro Moderato; II, Assez Vif; III, Tres Lent; IV, Vif et agite, the British Music Society's Quartet, Alberto Zelman, Bertha Jorgensen, Dorothy Roxburgh, Tasma Tiernan. Songs, (a) "Haymakers' Roundelay" (Dunhill), (b) "Cloths of Heaven" (Dunhill), (c) "Garden of Bamboos" (Bantock), (d) "Red Lotus" (Bantock), (e) "Feast of Lanterns" (Bantock), Edna Coon. Pianoforte, "Fantaisie—Impromptu" (Chopin), Dorothea MacMaster. Vocal Duets, (a) "Hoping in Vain" (Dvorak), (b) "Greeting from Afar" (Dvorak), (c) "Last Wish" (Dvorak), (d) "The Crown" (Dvorak), Gregor Wood and Madame Gregor Wood. Serenade for Strings, "Eine Kleine Nachtmusik" (Mozart): I, Allegretto; II, Romanze (Andante); III, Menuetto (Allegretto); IV, Rondo (Allegro), members of the Melbourne Symphony Orchestra; accompaniste, Isabel Adams. 10 (approx.)—From the Studio: "Argus" and "Herald" news services. 10.5—The Studio Orchestral Trio, "Larghetto" from "2nd Symphony" (Beethoven). 10.15—Mr. Herbert Walton, comedian (permission of J. C. Williamson Ltd.) in a few merry moments. 10.25—Miss Bessie Gaunson, Violin Solos, (a) "Liebesleid" (Kreisler), (b) "Andantino" (Martini-Kreisler), (c) "Sehon Rosmarin" (Kreisler). 10.35—Mr. Herbert Walton, comedian, in some more merry moments. 10.45—The Studio Orchestral Trio, "Trio No. 171" (Gurlitt). 11—"God Save the King."

SUNDAY, NOVEMBER 8.

Morning Session (11 a.m. to 12.15 p.m.): 11—Service relayed from the Independent Church, Collins Street, conducted by Rev. G. H. Gunson.

Afternoon Session (3 to 4.30 p.m.): 3—Service from the Wesley Church Central Mission, Pleasant Sunday Afternoon Service, conducted by Rev. J. H. Cain.

Evening Session (6 to 6.45 p.m.): 6—Children's Hour. "Billy Bunny" stories, "Pilgrim's Progress." 6.45—Close down.

Night Session (7 to 10 p.m.): 7—Service from St. Paul's Cathedral, conducted by Rev. Precentor Sherwood. 8.30—From the Studio: Brunswick Brass Quartet (leader, Mr. Hugh Niven), "Wagner" (Hume). 8.40—Herbert Browne, of "Wildflower," by permission of J. C. Williamson Ltd., "Ellegie" (Massenet), "Maire, my Girl." 8.47—Miss Rowena Ronald, of "Wildflower," by permission of J. C. Williamson Ltd., pianist, "Prelude" (Debussy). 8.57—Mr. J. Howlett Ross, "Famous Australians—C. H. Pearson." 9.17—Brunswick Brass Quartet, (leader, Mr. Hugh Niven), "Border Songs and Ballads" (Round). 9.27—Mr. Herbert Browne, by permission of J. C. Williamson Ltd., "Mother o' Mine." 9.34—Miss Rowena Ronald, permission of J. C. Williamson Ltd., "Concert Study" (Liszt). 9.40—

(Programme Continued on Page 42)

Burgess—Power, Harmony, Endurance—Burgess.



WIRELESS AT CABRAMATTA PUBLIC SCHOOL.

Mr. T. Miles, schoolmaster, opening a special Radio afternoon. The set was purchased out of funds subscribed by the children of the school and their mothers.

—Photo by courtesy "The Sun."

3LO Melbourne and Sporting Activities

NOW the outdoor season is approaching, the thoughts of the Australian public turn to sport, but circumstances do not permit of everyone participating in his (or her) particular branch. Before the introduction of wireless broadcasting inability to be present at any great sporting event occasioned many regrets amongst the unfortunate, but 3LO Melbourne—always progressive—have made special arrangements whereby all the sporting events of any prominence at all can be enjoyed at home in the armchair, as well as by those who are able to attend in person—certainly in greater comfort and in many cases with a better knowledge of the actual happenings.

During the winter season the sporting results given by 3LO Melbourne included football (League and Association), local and country; racing, all States, including the pony and trotting meetings; baseball, ice hockey, and basket ball. No doubt numbers of 3LO's listeners will remember the descriptions given by "Jumbo" Sharland from the Melbourne Cricket Ground of the final football matches. Many letters were received at the studio commenting on the fine descriptions given, and those in Geelong who found it impossible to follow the fortunes of their team at the ground heard all about the game from their own great player, "Jumbo," who, knowing all there is to know about the game, did not miss one single incident. The pony race results, too, from Richmond and Ascot every Monday afternoon are well appreciated, especially in

the country hotels, where the crowds just "drop in" to hear the results.

Another instance of great wireless interest to racing enthusiasts occurred recently when a telegram was handed into the studio from New South Wales, "Is Heroic officially scratched." Notification of the official scratching of this horse was given at the time asked for in the telegram. On other racing days the results of the races are known to all listeners as soon as the numbers appear on the board at the racecourse. The Caulfield Cup race on October 17th started at 3.54 p.m., and Whittier managed the distance in 2 mins. 34 secs.; the results and the prices were heard all over the Commonwealth by 3.57 p.m. A short treatise of the merits of the different horses participating in these events is given from the studio on the previous night by a great authority—"Musket," and these chats are eagerly looked forward to.

The Henley Regatta on the Yarra is an annual event second to none amongst the rowing fraternity of Australia. Indeed, who of the sporting public does not hold this opinion? This year it was held on Saturday, 24th October, and 3LO Melbourne made special arrangements in connection with this event which benefited its numerous listeners-in. A land line from the Lord Mayor's houseboat to the studio and thence out to the transmission station at Braybrook conveyed to those who were unable to be present on the banks of the Yarra descriptions of the events by a well-known rowing expert. The greatest excitement prevailed in many homes that day when the different crews were battling for

the honour of being first past the tape on the river. During the intervals the beautiful music being played on board the houseboat by a large orchestra helped to while away the time, whilst the results of the races at Moonee Valley were announced as soon as the numbers were hoisted at the racecourse.

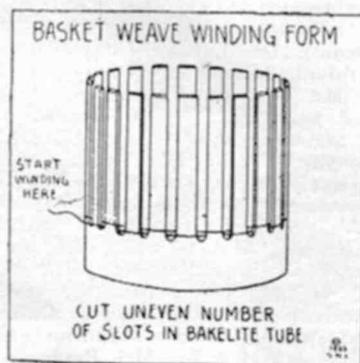
Basket Weave Winding Form

MAKES VERY NEAT, EFFICIENT LOW LOSS, COILS.

The basket weave form of winding is one of the most compact, efficient methods known. With it most any kind of coil or inductive tuner can be made. It has the following features that make it desirable for most every use, compactness, low loss, low capacity, low or no dielectric losses, and is easily mountable, being very sturdy and rigid when properly wound and sewed together.

These coils can be wound on any circular form having an uneven number of spokes. The main difficulty encountered is in removing the wire from the form after the winding has been made.

In the illustrated method this has been eliminated. The spokes in the bakelite tube are flexible, and will bend in releasing the pressure on the windings and allowing their removal without mutilating them in any way. They are made by first marking the tube and then cutting the slots with a hacksaw. A slot on each side of the tube can be cut at the same time if the blade is set properly on both of the marked lines. Before the coil is removed it should be sewed together by running a piece of thread up and down through the slots in the coil. Do this twice around the coil and then knot tightly. The coil can now be removed and is ready for use. If the builder desires he may leave the coil on the form. It will always hold the coil in shape and serves as a mounting.



A REPORT from KOSCIUSKO

To Messrs David Jones' Ltd.
George Street,
SYDNEY.

Dear Sirs,

I would like to congratulate you on the success of the "Wireless Set" supplied by you to the Hotel Kosciusko.

Kosciusko, as is well known, is a difficult location for good wireless results. From what I have seen of your set however, the reception, the entire absence of foreign noise and the volume, are far beyond any expectations I may have had. The following Stations we brought in—5CL; 2FC; 3LO and 2BL. 4QC was also brought in by Mr. Cooke, but as I was not at Kosciusko at the time I cannot give my personal opinion about the reception.

Any results other than those stated will be communicated to you if thought of sufficient interest.

P. Speet, P.M.
Manager,
Hotel Kosciusko.

DAVID JONES'

Programme continued from page 39

Brunswick Brass Quartet, "The Return" (Hartman)—Cornet Solo, Mr. H. Niven; "Two Friends"—Cornet Duet. 9.55—"Argus" news service. 10—"God Save the King."

MONDAY, NOVEMBER 9.

Morning Session (11 a.m. to 2 p.m.): 11—Time Signal. Express Train information. 11.3—Musical items by the Buckley and Nunn Studio Orchestra. 12—Time Signal. 12.2—Musical items by the Buckley and Nunn Studio Orchestra. 12.30—"Argus" and "Herald" news services. 12.45—Musical items by the Buckley and Nunn Studio Orchestra. 1—Time Signal. 1.2—Buckley and Nunn Studio Orchestra. 1.45—"Herald" and "Argus" news services. Reuter's and the Australian Press Association cables. 2—Result of first race Williamstown Racing Club Meeting. 2.5—Close down. 2.35—Result of second race Williamstown Racing Club Meeting.

Afternoon Session (3 to 5.15 p.m.): 3—Time Signal. 3.2—Musical items by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco. 3.15—Result of third race Williamstown Racing Club Meeting. 3.18—Paramount Theatre Orchestra. 3.40—Matron Moreland will speak on "Infant Welfare." 3.55—Result of fourth race Williamstown Racing Club Meeting. 3.58—Paramount Theatre Orchestra. 4.10—Result of fifth race Williamstown Racing Club Meeting. 4.13—Paramount Theatre Orchestra. 4.45—Result of last race Williamstown Racing Club Meeting. 4.48—Paramount Theatre Orchestra. 5—"Herald" and "Argus" news services. Reuter's and Australian Press Association cables. 5.15—Close down.

Evening Session (6 to 7.15 p.m.): 6—Children's Hour. "Billy Bunny" stories: "Nursery Rhymes," "The Enchanted Forest," "Houses of the Eagle." 6.45—"Herald" and "Argus" news services. Reuter's and the Australian Press Association cables. Market reports. Weather synopsis. Closing Stock Exchange information. Shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd.: Haymarket sales, poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Night Session (7.15 to 11 p.m.): "A South Melbourne Night." Speakers: Mr. G. M. Wallace, Mr. T. P. Court, Mr. Frank A. Russell. The South Melbourne City Band; bandmaster, Mr. F. R. Edward. Miss Dorothy Dane, soprano; Mr. Eric J. Wood, baritone; Mr. Herbert Walton, comedian; Mr. Darvall Thomas, tenor; Mr. T. J. Mitchell and his two sons, James and John. 7.15—Mr. G. M. Wallace, "Children's Literature." Longfellow's "Hiawatha." 7.30—Mr. T. P. Court, Technical Advisor of "Listener-In," a wireless talk. "The Valve as Detector—working explained." 7.45—8—South Melbourne City Band, March, "Contemptibles"; Waltz, "Rosen." 8.23—Miss Dorothy Dane, soprano, "Villa" from "Merry Widow," "Dreamy Melody" (Naset). 8.30—Mr. T. J. Mitchell and his two sons, James and John, in a mouth organ and auto-harp novelty. 8.40—Mr. Eric J. Wood, baritone, "Songs of Thanksgiving" (Alitسن), "Down in the Forest" (Ronald). 8.47—Mr. Frank A. Russell, "Out of the Hurly Burly." 9.2—Mr. Herbert Walton, comedian, by permission of J. C. Williamson Ltd., in ten minutes of humour. 9.12

—South Melbourne City Band, Intermezzo, "Hypatia." 9.20—Mr. Darvall Thomas, tenor, Grand Operatic Aria, "O Paradiso" from "L'Africana" (Meyerbeer), "Sally Horner" (Thomas). 9.27—South Melbourne City Band, Irish Selection, "Humours of Donnybrook"; Euphonium Solo, "Land of Hope and Glory." 9.57—Mr. Mitchell and his two sons, James and John, in mouth organ imitations. 10.6—Mr. Darvall Thomas and Miss Dorothy Dane, Duets "Sympathy" (Friml), "Rio Nights" (Thompson). 10.13—"Argus" and "Herald" news services. 10.17—Mr. Frank A. Russell, "The Play's the Thing." 10.32—Mr. Eric J. Wood, baritone, "The Luteplayer" (Alitسن), "Because" (d'Hardelot). 10.39—Mr. Herbert Walton, comedian, by permission of J. C. Williamson Ltd., in a few more merry moments. 10.47—South Melbourne City Band, Sacred Selection, "Eventide." 11—"God Save the King."

TUESDAY, NOVEMBER 10.

Morning Session (11 a.m. to 2 p.m.): 11—Time Signal. Express Train information. 11.3—Musical items by the Buckley and Nunn Studio Orchestra. 12—Time Signal. 12.2—Buckley and Nunn Studio Orchestra. 12.30—"Argus" and "Herald" news services. Reuter's and the Australian Press Association cable news. 12.45—Buckley and Nunn Studio Orchestra. 1—Time Signal. 1.2—Buckley and Nunn Studio Orchestra. 1.45—"Herald" and "Argus" news services. Stock Exchange information. Weather forecast. River reports. 2—Close down.

Afternoon Session (3 to 5.15 p.m.): 3—Time Signal. 3.1—Musical items by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco. 3.40—"Au Fait," of Buckley and Nunn Ltd., in a "Fashion Talk." 3.55—Paramount Theatre Orchestra. 4.50—Miss Flora Pell, Supervisor of Domestic Arts, Education Department, in a talk on "Domestic Economy." 5—"Herald" and "Argus" news services. Reuter's and the Australian Press Association cable news. 5.15—Close down.

Evening Session (6 to 7.15 p.m.): 6—Children's Hour. "Billy Bunny" stories by "Little Miss Kookaburra," who will tell another Uncle Remus story about "Mrs. Cow and Brother Rabbit" and fifth instalment of "The Plucky Patrol." 6.45—"Argus" and "Herald" news services. Reuter's and the Australian Press Association cable news. Market reports. Weather synopsis. Closing Stock Exchange information. Shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd.: Haymarket sheep sales, poultry, grain, chaff, hay, straw, jute, dairy produce, potatoes and onions.

Night Session (7.15 to 11 p.m.): "A Night of Variety." Speakers: Mr. W. G. Rugg, Mrs. Blainey, M.A. (Oxon.), Dr. Loftus Hills, D.Sc. Brunswick Band Carnival; Miss Wish Wynne and Mr. Bernard Kitchen; Mr. Bert Hopping, comedian; Miss Louise Moorehead and Mr. William Tainsh; Mr. Harold Rodgers, organist; Miss Gladys Moneriff in "The Street Singer." 7.15—Under the auspices of the New Settlers' League, Mr. W. G. Rugg, Health Expert, Department of Agriculture, "Poultry Keeping Outback." 7.45—University Extension Lecture, Mrs. J. Blainey, M.A. (Oxon.), Lecture in English Literature, University Extension Board, "Poetry of To-day." 8—Transmitted from the Brunswick Brass Band Carnival, contesting band in C Grade. 8.30—Miss Wish Wynne, London's famous character comedienne, accompanied by Mr. Bernard Kitchen in

Have you got your Philco yet?

numbers selected from a repertoire written and composed by herself. 8.45—Dr. Loftus Hills, D.Sc., in his popular science talks, "The Oil Age, Part 5—Prospects of Finding Oil in Australia." 9—Mr. Bert Hopping, entertainer, "Topsy-Turvy Town," "Never let her learn to dance." 9.5—Miss Gladys Moncrieff in the second act of "The Street Singer," transmitted from the Theatre Royal by permission of J. C. Williamson Ltd. Opening Chorus, "Pere Patipou," Harry Ratcliffe, Mabel Gibson, Jack Ralston, and chorus; Song, "That's the Sort of Man," Mabel Gibson and chorus; Song, "Don't Judge by Appearances," Gladys Moncrieff; Song, "Ow I 'ate Women," Arthur Stigant; Duet, "Just to Hold You in My Arms," Gladys Moncrieff and Noel Leyland; Carnival Number—(a) Carnival Chorus, (b) Banjo Number ("Dancing Around"), -chorus ladies and gentlemen, (c) Serenade, "My Lady Love," Jack Ralston and chorus; (d) Dance, Gladys Moncrieff; Duet, "Husband Number Two," Arthur Stigant and Nellie Payne; Finale, Entire Company. 10.15—"Argus" and "Herald" news services. 10.19—Two short one-act plays by Miss Louise Moorehead and Mr. William Tainsh, "The Baggage," by Bertha Moore. Characters are: Mr. Evered Montgomery, Mr. William Tainsh; Mrs. Brian Montgomery (his daughter-in-law), Miss Louise Moorehead. Mr. Montgomery is an old white-haired man of about 70, his daughter is a girl of 25. Scene: Sitting-room at Hotel Bon Din, Teritet, Switzerland. Mr. Montgomery is sitting in a chair by the fire with a newspaper, medicine, and glass on a table at his right. Second one-act play by Miss Louise Moorehead and Mr. W. Tainsh, "The Reason Why," by Mrs. Payne. Characters are: Mr. Harry Grafton, Mr. William Tainsh; Mrs. Grafton, Miss Louise Moorehead. Time: 5.30 p.m. Discovered: Mr. and Mrs. Grafton. He is in a frock-coat, and is sitting in an armchair holding a magazine and a large paper knife. She is in a smart afternoon reception gown, and is pacing the room, but pausing continually to look out of the window. 10.39—Mr. Bert Hopping, entertainer, Monologue, "The Whitest Man I Know." 10.46—Mr. Harold Rodgers, Organ Recital, Overture, "Occasional Oratorio" (Handel). "Prelude in G major" (Mendelssohn), "Adagio," Organ Sonata in A flat (Mendelssohn). 11—"God Save the King."

WEDNESDAY, 11th NOVEMBER

Morning Session (11 a.m. to 2 p.m.): 11—Time Signal. Express Train Information. 11.3—Musical Items by the Buckley and Nunn Studio Orchestra. 12 noon—Time Signal. 12.2—Buckley and Nunn Studio Orchestra. 12.30—"Argus" and "Herald" News Services. Reuter's and the Australian Press Association Cables. 12.45—Buckley and Nunn Studio Orchestra. 1—Time Signal. 1.2—Buckley and Nunn Studio Orchestra. 1.45—"Herald" and "Argus" News Services. Stock Exchange Information; Weather Forecast; River Reports. 2—Result of 1st race at the Sunbury Racing Club Meeting. 2.5—Close down. 2.25—Result of 2nd race at the Sunbury Racing Club Meeting. 2.50—Result of 3rd race at the Sunbury Racing Club Meeting.

Afternoon Session: 3—Time Signal. 3.2—Musical Programme by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco.

Programme continued on page 46

You Made this Lower Price

It is the thousands of Radio listeners, experts, and makers of good sets who have made it possible for the Wonderful True Blues to be sold at the present price.

Had there not been the tremendous increase in the demand for these Wonder Valves it would be utterly impossible to produce and sell them at today's price.

Now everybody can have the best.

Six Reasons

WHY THOUSANDS OF LISTENERS, EXPERTS, AND MAKERS OF GOOD SETS HAVE ADOPTED THE WONDERFUL

True Blue Valves

1. The only Valve free from microphonic noises, and giving a crystal clear tone.
2. Two to three times longer life.
3. Lower Battery consumption.
4. Interchangeably uniform.
5. Sterling silver contacts which cannot corrode.
6. Cheapest in the long run and better all along.



True Blues are sold in Special Safety Cases of 1, 3 & 5

QUALITY SELLS THEM.

Don't let them say your set is "like a bad gramophone." Get True Blue Valves and hear the difference (music instead of microphonic noises).

Cheap Valves are dearer in the long run.

FOR REAL RADIO ENJOYMENT,
USE TRUE BLUES.

Obtainable at Wiles', E. R. Cullen's, Hordern's, Farmer's, Murdoch's, Swain's, Colville-Moore, Miss Wallace, etc.

PARSONS & WHITTEMORE LTD.,
30 Market Street, Sydney.

(Mail orders by V.P. Post. Pay the post-man.)



❁

3LO MELBOURNE.

The first simultaneous broadcasting experiments in Australia. Mr. J. R. Collins, Secretary to the Treasury, broadcasting an appeal for funds for the Conversion Loan from a special studio at Central Telephone Exchange, Melbourne. Mr. S. H. Witt (Research Engineer) standing and Mr. L. Fanning (Supt. of Telephones) at right.

❁

The Subscription Rates to Wireless Weekly are:—

The Year—13/- post free

Half Year—6/6 post free

Wireless Weekly—12-16 Regent Street, Sydney

THREE HUNDRED POUNDS

This is the value of Wireless Goods to be offered at

O'Sullivan's Weekly Auction Sale on Saturday Morning, 7th inst

Do not fail to be there and get these goods at your own prices. All clean new Stock in original packets

Headphones, Crystal Sets, "Clix," Terminals, Spider Web Coils,
Plugs, Crystals, Catwhiskers, Electric Irons, Lamps, Etc.

— Note the Address —

296 PITT STREET (opp. W. & S. Board). Phone 8070 City

Before you
Expend
Money on
Radio
Equipment
Consult
Anthony
Horderns'
Wireless
Experts.

Your inspection of the big display of everything that is new in the world of Wireless, is invited.

(Wireless -- Second Floor)

Anthony Hordern & Sons
Limited,

Brickfield Hill, Sydney

Phone City 94

Box 2712 G.P.O.

SET THE **WE** STANDARD

150 American stations logged by Tasmanian amateur using Weco valves

EXTRACT from a letter dated April 21, 1925, sent to Western Electric Coy. Ltd., London, by Mr. W. A. Smith, 37 Cascade Road, Hobart.

"I am writing to you for the purpose of bringing before your notice some very interesting experiences I have had with a couple of your Weco valves (white spots).

I purchased these two little valves about six months ago to build a portable low loss receiver. This consisted of detector and one-step audio frequency amplification, and I received all Australian and New Zealand experimenters working below 100 metres at loud speaker strength on a small loud speaker. Also, with phones, about 150 American Amateur Stations have been logged (between 70 and 90 metres).

American Broadcasting Station K.D.K.A. 63 metres quite a fair strength on small speaker. This set has been worked under all conditions. On the top of Mt. Wellington, 1466 ft. above sea level, these valves gave us some very fine results, Australian and American stations being received again, three pairs of phones being used. While on the mountain a heavy fog or mist came over and not having any cover for ourselves or the set, we decided to continue experiments and note the effect moisture had on signal strength, the set, etc. Well, signal strength dropped considerably, but the valves oscillated freely while the induction coils were quite wet. I think, sir, this is quite a severe test and speaks highly for the Weco.

Another test is that of robustness and after trying hard I am satisfied that these little tubes are very high unbreakable. On one occasion I placed them in my coat pocket and a little later forgetting they were in my coat took the coat out and shook it well. Remembering valves were in the pocket I at once tested them and found them to be quite undamaged.

On another occasion a friend of mine was helping me test some transmitting circuits and chokes and in rushing along the test bench to reach the ammeter knocked the set containing these doomed valves on to the floor, a drop of 3 ft. 6 ins. Well a few remarks passed between us and my friend offered to stand the expense. 'Anyway,' I said 'we'll test them in case one is alright.' 'Not worth your while,' replied my friend. However, I tested them and found them both to be O.K. to my great surprise, and I think this wonderful for valves and it speaks well for the makers."



REDUCED
PRICE

WECO VALVES
are now available
from regular radio
dealers, at

17/6

Western Electric Company
(Australia) Ltd.

192-4 Castlereagh Street, SYDNEY.

Phone: City 336 and 356.

And 588 Bourke St., MELBOURNE.

Phone: Cent. 8336 and 8949.

R261

WE

Programme continued from page 43

3.15—Result of the 4th race at the Sunbury Racing Club Meeting. 3.20—Paramount Theatre Orchestra. 3.40—Result of the 5th race at the Sunbury Racing Club Meeting. 3.45—Paramount Theatre Orchestra. 4.5—Result of the 6th race at Sunbury Racing Club Meeting. 4.8—Paramount Theatre Orchestra. 4.30—Sister Peck of the Victorian Baby Health Centres' Association, will speak on "Mothercraft." 4.43—Result of the 7th race at the Sunbury Racing Club Meeting. 4.45—Choral Evensong from St. Paul's Cathedral. 5.30—Sporting Results. "Herald" and "Argus" News Services; Reuter's and Australian Press Cable News.

Evening Session (6 to 7.15): 6—Children's Hour. "Billy Bunny" stories. "Nursery Rhymes." "The Enchanted Forest." "House of the Eagle." 6.45—"Herald" and "Argus" News Services. Sporting Results. Reuter's and the Australian Press Association Cable News; Market Reports; Weather Synopsis; Closing Stock Exchange Information; Shipping Movements; Market Reports by the Victorian Producers' Co-operative Co., Ltd.; Newmarket Sales; Cattle, Pigs, Carcase Meat, Grain, Chaff, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.

Night Session (7.15 to 11): "A Shepparton Night." Speakers: Mr. H. R. Gollan, Captain C. H. Peters, The Mayor of Shepparton. "The Cingalee," by The Shepparton Choral Society; The Studio Instrumental Trio. 7.15—Mr. H. R. Gollan, Assistant Publicity Officer, Victorian Railways; "New Departures and Developments in Railway Work." 7.30 ———. 7.45—An Essay on "Service" read by Mr. Alfred Andrew. 8.—"The Cingalee," by the Shepparton Choral Society, transmitted from the Lyric Theatre, Shepparton. Cast of Characters: Hon. Harry Vereker, a tea planter, Mr. W. F. Crowe; Boobhamba, a noble of Kandy, Mr. J. P. McLennan; Sir Peter Loftus, High Commissioner and Judge, Mr. O. H. Smith; Myamgah, an Indian Servant, Mr. F. Collins; Bobby Warren, overseer on the plantation, Mr. C. M. Paul; Freddy Lowther, Dick Bosanquet, Jack Clinton, Willie Wilson, pupils of the plantation, Messrs. C. Hussey, C. Stewart, E. C. Fairbridge, R. E. Chapman; Chambuddy Ram, a "baboo" lawyer, Mr. Wm. Mitton; Captain of the Guard, Mr. F. Morrish; Navona, a Cingalese girl, Mrs. J. A. Kennedy; Peggy Sabine, a London girl engaged by Vereker governess to Nanoya, Miss Annie Guthrie; Lady Patricia Vereker, sister to Vereker, Miss Mary Guthrie; Naitooma, Sattambi, Mychellan, Soamo, tea girls, Mrs. F. Potter, Misses Myrtle Guthrie, Madge Larter, Cora Crilly; Angy Loftus, Sir Peter's daughter, Miss C. Bichons; Fraulin Weiner, M'zelle Chic, Angy's governesses, Misses Kathleen Oswald and Annie Sherry; Signorina Lasso, Miss L. Collander. Act 1—Vereker's Tea Plantation, Karagama, Ceylon. (1) Opening Chorus, "Sleepy Ceylon"; (2) Song, "Pearl of Sweet Ceylon," Vereker; (3) Chorus and Scene, Peggy; (4) Song, "My Heart's at your Feet," Lady Patricia; (5) Song, "Tea, Tea, Tea," Naihoma and tea girls; (6) March, Chorus and Song, "Hail the Noble," Boobhamba and Chorus; (7) Song, "Four little girls of Ceylon," Warren; (8) Duet, "Pretty Poll," Peggy and Chambuddy; (9) Sextet, "Island of Gay Ceylon," Lady Patricia, Peggy, Angy, Boobhamba, Sir Pet-

er, and Warren; (10) Song, "My Cinnamon Tree," Nanoya; (11) Finale. During the interval, the Mayor of Shepparton will speak on "The Possibilities of Shepparton." "The Cingalee," Act 2.—Boobhamba's Palace by the Lake of Kandy. (1) Opening Chorus, "The New Year"; (2) Song and Chorus, "The Dance I'll Lead Them," Nanoya and Chorus; (3) Song, "My Dear Little Cingalee," Vereker; (4) Song, "The Ladies," Warren; (5) Duet, "Make a Fuss of Me," Peggy and Chambuddy; (6) Song, "Sloe Eyes," Manoya; (7) Duet, "You and I, and I and You," Lady Patricia and Warren; (8) Song, "There's Nothing much more to say," Boobhamba; (9) Duet, "Gollywogs," Peggy and Chambuddy; (10) Duet, "Parahara," Lady Patricia and Warren; (11) Finale, "The Cingalee." 10.30 (approximately), from the Studio: "Argus" and "Herald" News Services. 10.32—Captain C. H. Peters, "Books, Wise and Otherwise." 10.47—The Studio Instrumental Trio: (a) "A Perfect Day" (Jacobs Bond); (b) "Told at Twilight" (Huerta). 11—God Save the King.

THURSDAY, NOVEMBER 12th.

Morning Session (11 a.m. to 2 p.m.): 11 — Time Signal. Express Train Information. 11.3 —Musical items by the Buckley and Nunn Studio Orchestra. 12 noon—Time Signal. 12.2—Buckley and Nunn Orchestra. 12.30—"Argus" and "Herald" News Services. Reuter's and the Australian Press Association Cables. 12.45 — Buckley and Nunn Studio Orchestra. 1.—Time Signal. 1.2—Buckley and Nunn Studio Orchestra. 1.45—"Herald" and "Argus" News Services. Stock Exchange Information; Weather Forecast; River Reports. 2 —Result of the 1st race from the Mornington Race Club Meeting. 2.5—Close down. 2.25—Result of the 2nd race from the Mornington Race Club Meeting. 2.50—Result of the 3rd race from the Mornington Race Club Meeting.

Afternoon Session (3 to 5.15): 3—Time Signal. 3.1—Musical programme by the Paramount Theatre Orchestra, under the baton of Signor Vincent Ricco; 3.15—Result of the 4th race from the Mornington Race Club Meeting. 3.20 — Paramount Theatre Orchestra. 3.40—Result of the 5th race from Mornington Race Club Meeting. 3.43 —Paramount Theatre Orchestra. 4.5—Result of the 6th race from the Mornington Race Club Meeting. 4.8—Paramount Theatre Orchestra. 4.30—Result of the 7th race from the Mornington Race Club Meeting. 4.35—Paramount Theatre Orchestra. 5—Result of the last race from the Mornington Race Club Meeting. 5.3 — "Herald" and "Argus" News Services, Reuter's and the Australian Press Association Cable News. 5.15—Close down.

Evening Session (6 to 7.15): 6 — Children's Hour. "Billy Bunny" stories by "Little Miss Kookaburra," who will tell the "Story of the Gum tree Brownie," and the 6th instalment of "The Plucky Patrol." 6.45 — "Herald" and "Argus" News Services. Reuter's and the Australian Press Association Cable News. Market Reports; Weather Synopsis; Closing Stock Exchange Information; Shipping Movements; Market Reports by the Victorian Producers' Co-operative Co. Ltd., Haymarket Sales: Cattle, Pigs, Carcase Meat, Grain, Chaff, Hay, Straw, Jute, Dairy Produce, Potatoes and Onions.

Night Session (7.15 to 11): "Dance Night."

Speakers: Mr. R. H. Croll, Mr. A. Wicken, Mr. J. Howlett Ross, Dr. Sinclair; Sonora Recital, Tom Swift's Embassy Band; Mr. Albert Durand, banjoist; Mr. Darvall Thomas, tenor; Miss Dorothy Dane, soprano; Mr. Herbert Walton, comedian. 7.15—Mr. R. H. Croll, "The Open Road in Victoria," "A Coastal Tramp." 7.30—Under the auspices of Federated Jewellers' Association, Mr. A. Wicken, "Optics." 7.45—Under the auspices of the Health Association of Australasia. 8—Under the auspices of the City of Prahran Health Centre, Dr. Sinclair, Health Officer, City of Melbourne, "Diphtheria," "The Shick Test." 8.15—Sonora Recital, of the latest and best gramophone records: (1) Overture, "Tannhauser," Royal Albert Hall Orchestra; (2) Song, "Listen to the Mocking Bird, Alma Gluck; (3) 'Cello Solo, "Valse Apache," W. H. Squire; (4) Vocal Duet, "Tornami a dirche m'ami," Amelita Galli-Curci, from "Don Pasquale" and Tito Schipa; (5) Fox Trot, "Moonlight and Roses," R. Miller and Orchestra; (6) Aria, "Credo," "Otello," Apollo Granforte; (7) Band Selection, "Caprice Brilliant," Vessella's Band. 8.40—Mr. J. Howlett Ross, in his talks on Australian Writers, "Essex Evans." 9—Tom Swift's Embassy Band: "Moonlight and Roses," "Oriental Love Dreams," "Mandalay," "Midnight Waltz," "Let it Rain," "China Girl," "Have a little Drink," "Yvette," "It's not the first time," "Alone at Last." During the intervals at the Embassy, the following order of programme will be given: Mr. Herbert Walton, comedian, by permission of J. C. Williamson Ltd., "In some Humorousities"; Mr. Albert Durand, banjoist, A banjo description of a Darkie's Wedding, introducing chimes, wedding march, and marriage ceremony; Miss Dorothy Dane, soprano, "Carmena," (Lane Wilson); "Garden of To-morrow" (Deppen); Mr. Darvall Thomas, tenor, "Angels Guard Thee" (Godard), "Macushla" (Macmurrrough); "Argus" and "Herald" News Services; Mr. Herbert Walton, comedian, "In some more Humor"; Mr. Albert Durand, banjoist, "Medley of Plantation Songs"; Miss Dorothy Dane and Mr. Darvall Thomas, Duets, "Hawaiian Moonlight" (Hartley), "City of Laughter" (Nichols). 11—God Save the King.

3AR

ASSOCIATED RADIO CO. LTD.

Wavelength, 484 metres. Power, 1600 watts.

OFFICIAL PROGRAMMES.

SATURDAY, NOVEMBER 7.

12—Time Signal. Market and Weather Reports. "Age" news. Musical items from the Studio. 1—Flemington Races; result of Bateman Stakes, 1 mile. 1.40—Result of Flemington Stakes, 6 furlongs. 2.40—Result of C. B. Fisher Plate, 1½ miles. 3.30—Result of V.R.C. Handicap, 1½ miles. Musical items from the Studio. 4.20—Victoria Steeple, 3 miles 1 furlong. 5—Final Handicap, 1½ miles. 5.5—Close down. 6.15—Georgian Cafe Orchestra. 7.15—The Children's Corner by "Uncle Peter." 8—Time Signal. 8.15—Dance Night: Rhythmic Dance Orchestra under the direction of Mr. George Lewis, relayed from the Maison De Luxe, Broadway, St. Kilda. 9.30—Week-end travellers' information. Railway

information, supplied by the Victorian Railways Department. Tramway information, supplied by the Tramways Board. Road information, supplied by the Royal Automobile Board. 9.50—Maison De Luxe Orchestra. 11—National Anthem and close down.

SUNDAY, NOVEMBER 8.

11—Service from the Independent Church, Collins Street. 3—The People's Sunday Hour, from St. Mark's Church, Fitzroy; service conducted by the Rev. R. G. Nicholls. 7—Service from the Independent Church, Collins Street. 8.15—The Rev. H. E. E. Hayes (Padre Toe H.) will speak on "Toe H. and the Poppy Movement." Musical items from the Studio. 9—Mr. A. N. Bishop, F.A.I.S., will speak—(a) "Democracy's Day Out" (Cup Day at Flemington), (b) "A Word for the Silent Work of the Bookmakers." 9.30—Orchestra under the direction of Mr. George Henry, relayed from the Eclipse Theatre, Port Melbourne. 10—Time Signal. "Age" news service, exclusive to 3AR. Foreign Exchanges and market reports of the world, supplied exclusively to 3AR by Messrs. Thos. Cook and Son. 10.15—National Anthem and close down.

MONDAY, NOVEMBER 9.

12—Time Signal. Market and weather reports. "Age" news. Musical items. 1—Georgian Cafe Orchestra. 2—Williamstown races; result of Hurdle Race, 2 miles. 2.35—Result of Two-Year-Old Handicap, 5½ furlongs. 3.15—Result of Williamstown Cup, 1½ miles. 3.30—Musical items from the Studio. 3.45—Social talk by "Mariette." 4—Result of Steeple, 2 miles. 4.35—Result of Altona Handicap, 1 mile. 5.10—Result of Ozone Welter, 6 furlongs. 5.15—Close down. 6.15—Georgian Cafe Orchestra. 7.15—The Children's Corner by "Uncle Peter." 7.30—The Boy Scouts' Bulletin. 8—Time Signal. Ex-Sub-Inspector D. G. O'Donnell, late C.I.D., will talk on "Crooks I Have Handled." Miss Lillian Horn, soprano, (a) "Vissi d'Arte"—"Tosca" (Puccini), (b) "A Brown Bird Singing" (Wood). Miss Marion Daniels, mezzo-contralto, (a) "Melisande in the Wood," (b) "My Ain Folk." Mr. Pip. Powell, humorous entertainer. Miss Sylvia Ash ton, soprano, (a) "Ships that Pass in the Night," (b) "Mighty Like a Rose." Miss Marie Bevan, solo pianiste, selected. Mr. W. Clarke-Wright, baritone, "In the Garden of To-morrow," (b) "Sahara." Mr. Austin D. Peters in numbers done recently by Milton Hayes at the Tivoli Theatre, including "The Meanderings of Monty" (by request). Mr. Williams, tenor, (a) "In a Monastery Garden," (b) "Vale." Mr. William Daniels, tenor, (a) "Nirvana" (Adams), (b) "The Dove" (Clarke). The Aldous Duo, Misses Irene Tishler and Edna Simmons in popular songs, "Little Town in Old County Down," "Norah McNamara, I Love You," "Sweet Hawaiian Girl of Mine." Pianiste, Mrs. Judge. 10—Time Signal. "Age" news service, exclusive to 3AR. 10.10—Mr. Claude Beales, special physical culture talks. 10.30—Georgian Cafe Orchestra. 11—National Anthem and close down.

The completion of this programme is unavoidably held over, but will be published in full in future.

Further Notes on a New Condenser Adjustment

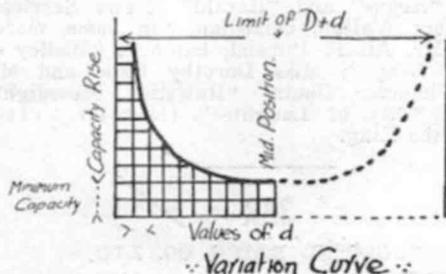
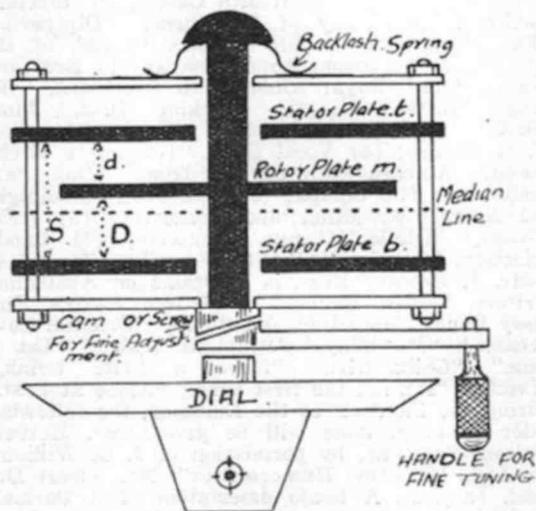
By ERNEST FYSH (Vic.).

IN the issue for October 9th (Vol. 6, No. 24) appears an article describing how a variable condenser can be provided with a rather novel fine adjustment on a new principle. Owing to an oversight the necessary diagram was omitted from that article, so it is here given, together with a suggested movement for utilising the adjustment described.

For the sake of clearness all the plates of the actual condenser are not drawn, since a condenser, no matter how many plates it actually contains, may be regarded as made up essentially of three only. Any larger number of plates is really only a subdivision into any odd number of sub-plates of the original three in order to save space.

Included in the diagram is a curve, drawn to scale, of the way the capacity varies when the new adjustment is operated. It will be noted that the increase from the minimum capacity is very gradual right up to the point where the moving plate is half-way between the median line and the fixed plate. Then it increases rather more quickly, and at last very rapidly. Within the safe bounds of adjustment this is exactly as it should be. It will be noticed that the minimum capacity is doubled at a point where d is about one-ninth S , but, of course, the rotor plates would never be approached so near to the stator plates. In making such a condenser the distance between the plates would obviously be made greater than usual. Then if the pitch of the fine adjustment screw or cam is fairly fine, a complete rotation of the fine tuning handle would move the plate a very small amount nearer, so that one degree of adjustment would be very fine, indeed. This is, of course, a precision adjustment, and calls for an engineering job. If applied to an actual 3-plate condenser it will be noticed from the curve that it rather closely fulfils the requirements for an equi-

frequency calibration, and could be made to do so exactly if a suitably shaped cam instead of the screw adjustment shown were made to operate the plates.



WIRELESS BROADCASTING TRANSMITTER ON "AUSTRALIAN MADE" PREFERENCE LEAGUE EXHIBITION TRAIN.

In connection with the "Australian Made" Preference League Exhibition train, which leaves Sydney on November 11 for a six months' tour of New South Wales towns, Amalgamated Wireless (A/sia) Ltd. have arranged to instal a $\frac{1}{2}$ k.w. broadcasting transmission set for the broadcasting of speeches made at the various functions held in each town. There will also be transmitted local news items of interest to farmers and graziers, and an entertainment programme.

The company will give demonstrations of radio

receiving sets, ranging from two valve receivers to the latest six valve Radiola Super (operating without any aerial or earth). The installation marks a distinct innovation in wireless, it being the first time that a broadcasting transmitter has been installed on the New South Wales railways.

There is little doubt that the broadcasting of a wireless programme from the train will not only be a source of entertainment and education, but will at the same time prove of extreme value in drawing attention to the wonderful exhibition of Australian made products housed in the exhibition train. The whole of the wireless apparatus has been manufactured at the radio electric works of Amalgamated Wireless (A/sia) Ltd.

Perfectly Matched!

200 Parramatta Road,
ASHFIELD, SYDNEY
10th September, 1925.

Messrs. Amalgamated Wireless (Aust.) Ltd.,
97 Clarence Street,
SYDNEY.

Gentlemen:

The other day when having valves tested in your laboratory for use in a new super-heterodyne that I am having installed, I was very much struck by the wonderful way in which your A.W.A. 99 valves plotted out. Against an imported make of world-wide favor they were easily superior, being much more uniform, and practically any valve selected at random charted out at full value.

Out of three dozen of the imported make only three matched valves could be obtained. Six A.W.A.s were selected, absolutely perfect in output, from a selection of nine valves. The remaining three were only slightly below normal.

I feel sure that if more people knew of the truly scientific construction of the A.W.A. 99, they would be used in preference, as being superior, to the very finest that the rest of the world has to offer.

Yours faithfully

George A. Hillcock

AWA 99 VALVES

17/6

The A.W.A. 99 is a low consumption dull emitter valve, operating with a filament current of 0.06 of an ampere. Dry cells may thus be used. The electrostatic capacities between the electrodes are very small, consequently the valve is an exceptionally good amplifier, and also functions well as a detector.

The A.W.A. 33 is similar to the 99 with the exception of the base—the latter has a standard 199 base, while the A.W.A. 33 fits an "R" socket.

Price: 17/6

FROM ALL RADIO DEALERS

AMALGAMATED WIRELESS (Australasia) LTD.

97 Clarence St., Sydney.

Collins House, Collins St., Melbourne

Ask your dealer for AWA 99



DE 3

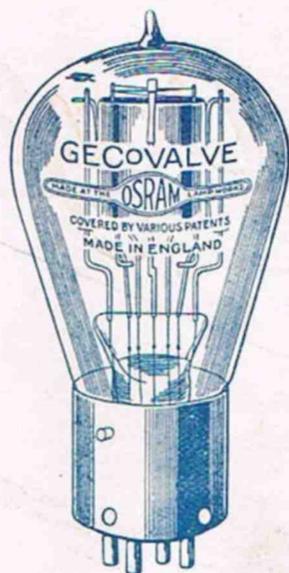
*GECovalves Always
mean utmost efficiency.*

DE 5
A dull emitter, low-frequency power amplifying valve. For distortionless loud speaker reproduction with low filament consumption. Filament volts 5 to 6; filament current .25; impedance 7000 ohms; amplification factor 7; plate voltages: detector 30-40 v.; radio amplifier 40v.; audio amplifier 90-120v.

Price - 22/6

DE 3
General purpose dull emitter valve known everywhere as the dry battery valve, with a current consumption of less than 1/16 of an ampere. Filament volts 2.4 to 3; filament current .06 amps; impedance 20,000 ohms; amplification factor 6; plate voltages: detector 20-45v.; radio amplifier 45v.; audio amplifier 80v.

Price - 17/6



DE 5

The efficiency and dependability of GECovalves are guaranteed by the reputation and experiences of the

manufacturers — the Osram Lamp Works of the General Electric Co., Ltd., England.

This unvarying quality and a specifically designed type for every purpose, justifies the faith of thousands of users all over Australia, who always insist on GECovalves.

DE3 and DE5 are dull emitter GECovalves, which combine efficiency with wonderful economy, functioning equally well with dry batteries. Your dealer stocks these types with both English and American standard bases.

Ask for the GECovalve folder, giving accurate information as to the characteristics and purposes of the different types.

At all Reliable Wireless Dealers

British General Electric Co., Ltd.

MAGNET HOUSE, 154-6 CLARENCE STREET, SYDNEY

And at Melbourne, Adelaide, Perth, Newcastle, Auckland, Dunedin, Wellington, N.Z.

GECovalve