

WIRELESS WEEKLY

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transmission by post as a newspaper.

VOL. 7. No. 13.

FRIDAY, JANUARY 22, 1926

3^D

MAGNAVOX



ANTI-NOISE TUBES



M-3 SPEAKER



JUNIOR SET

NEW
MODELS



LOWER
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"Widely Known for Quality—Tone"—Magnavox
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A Real Crystal
Receiver



The Thoroughly Dependable Carter Line

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CARTER VERNIER CONTROL RHEOSTAT.

No scraping or jerking; no friction bearing connection. Phosphor bronze contact springs. One hole mounting. Clock spring pigtail connection ensures positive and reliable operation.

With Black Knob and N.P. Pointer, Retail Prices.

25 ohm Rheo. . . 13/-
30 ohm Rheo. . . 13/-

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Self-contained. Mounts back of panel. Only one panel hole drilled. Solder terminal and con-



tact one piece; adjustable step pin. New type knob dial eliminates panel numbering. Pigtail connection eliminates sliding contacts.

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CARTER VERNIER CONTROL POTENTIOMETER.

Nickel-plated phosphor bronze contact arm always makes positive and noiseless contact. Many small turns of resistance wire permit Vernier Control using only one knob. Clock Spring pigtail connections eliminate friction contacts. One hole mounting. Binding post connections. Satin Silver finish. Complete with knob and pointer.

Retail Price.

400 ohms . . . 15/-

Ask Your Dealer to Show you this Line of Rheostats, Jaks and Switches

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De Forest Valves

17/6 each

Everywhere



Filament, 3 Volts .06 Amp.
Detector, 14 to 45 Volts.
Amplifier, 70 Volts to 150 Volts
Fits Standard American Socket.

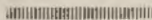


De Forest Valves were the first made.

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

DON'T BE MISLED.

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Filament, 5 Volts 1 Amp.
Detector, 12 to 22½ Volts.
Amplifier, 90 to 180 Volts.
Fits Standard American Socket.

INTERNATIONAL RADIO Co. LTD.

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ALWAYS FRESH—ALWAYS RELIABLE EVER-READY RADIO BATTERIES

These batteries are fresh daily—made in Australia by a new process which gives results well above the average. Only the finest materials are used, and used in such a way as to make the ideal battery.

ALL VOLTAGES. MANY TAPPINGS.

Note the economical pricing:

For Use with 1 and 2 Valve.		For Use with 2 to 5 Valve.	
WP 30 volt	9/6	XP 30 volt	16/-
WP 40 volt	12/6	XP 40 volt	21/-
WP 60 volt	18/-	XP 60 volt	31/6

Prices quoted apply only in N.S.W.

This is what Mr. C. MacLurcan, the radio authority, has to say of Ever-Ready radio Batteries:—

"I will be pleased if you will send me half a dozen more large size Ever-Ready 'B' Batteries. The last six which I obtained from you over seven months ago have been in continual use in my Wireless Station for various purposes, and five of them are still going strong.

"When it is realised that my wireless room is an extremely hot place, and that some of the batteries have been used in the high-power transmitter, it speaks highly of the quality of the batteries, and I am more than satisfied with the service they have given."

Obtainable from all up-to-date dealers.

If unobtainable locally, write for address of nearest source of supply.

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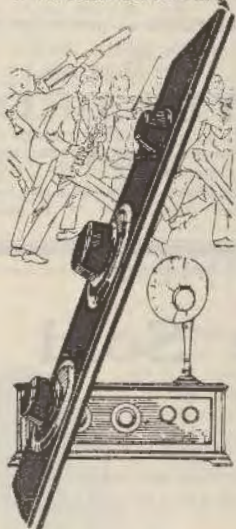
DILECTO

BAKELITE

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Cut and
Engraved
to any
Size
You
Require

LOOK — HERE
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Universal
Through-
out
the
World

Tested and proved by years of use (10 years by U.S. Navy and Signal Corps).

LOOK FOR IT — !

Easily identified by the red line on the edge.

High Dielectric Resistance, cannot warp, crack or chip, and will never deteriorate or change.

Heat - proof (to 220 deg.) and not affected by cold, water, oil, benzine fumes, ozone, or most chemicals.

OBTAINABLE FROM
ALL DEALERS.

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The UNITUNE APERIODIC FIXED COUPLER combines many of the advantages of both direct and loosely coupled methods of tuning. Ideal for eliminating interference.

In two sizes—12/- and 15/-.

Buy British guaranteed Radio Goods, and be proud of it!

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IGRANIC RADIO DEVICES are daily enjoying increased sales, and have taken their rightful place in the forefront rank of quality goods.

IGRANIC RADIO DEVICES are reaping a sustained popularity and favour from the Radio public, because they are the finest parts procurable in Australia to-day.

IGRANIC RADIO DEVICES will enable you to hear Radio at its best. They will enable you to build a set that will astonish your friends and confound your critics. They will enable you to obtain that pure and distortionless reproduction that is only secured by the use of quality goods.

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Write for Booklet No. 3.

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 SYDNEY: 115 Clarence St. MELBOURNE: 499 Bourke St
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 BRISBANE: Perry House. HOBART: 145 Macquarie St.
 And at Launceston. Also, from J. W. R. Gardam, Perth.

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These sets have all been re-wired by us and are now in good working order.

If you are interested in a set at a cheap price, these sets are well worth hearing.

If you are not satisfied with your own set we will take it in part payment for a better one.

All sets can be purchased on time payment.

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Telephone: FM 2111.

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MORE GENUINE BARGAINS FOR THE HOME CONSTRUCTOR

	s.	d.
Telephone Transformers, each	5	0
5 ohm. Filament Rheostats, each	1	0
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Honeycomb Coils, Unmounted, 120 to 600 Turns.		
1/4in. Contact Studs, Brass Washers and Nuts, Switch Parts, and numerous other items at Gift Prices.		

ON VIEW

BASEMENT

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Don't leave all those used parts lying round the place.

Thousands of wireless fans read this paper every week.

They may want just what you have to offer.

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

MAIL YOUR ADVT. NOW

Loud Speakers Repaired, Batteries Recharged. Sets Remodelled, Aerials Erected. Good parts and sound advice. E. NOBLE & CO., 256 Anzac Parade, South Kensington. Rand. 3884.

BURNDEPT

Wireless Limited

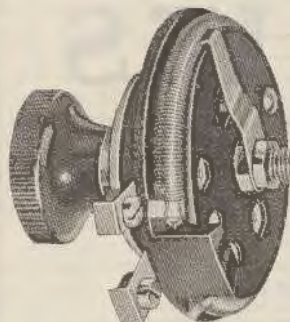
AVOID TOO MANY CONTROLS IN THE DESIGN OF YOUR SET.

Burndept RHEOSTATS and FIXED RESISTORS

are designed to efficiently and economically control the filament circuits. By their aid only one control is necessary on the face of the panel, and either Bright or Dull Emitter Valves may be used.

RHEOSTATS—14 ohms, 3 ohms, and 7 ohms	9/6
RESISTORS—3 ohms to 85 ohms, 2/9 to	3/6
RESISTOR SOCKETS	2/9

"Buy BURNDEPT by its name
Substitutes are not the same"



Burndept Rheostat



Fixed Resistor



Socket

BURNDEPT (Australasia) LIMITED

Telephone: M3732.

Broughton House, 181 Clarence Street, Sydney.

BURGESS

The unique position of esteem and confidence occupied by Burgess Radio Batteries is a natural development of the conservative policy which has characterised the manufacture, advertising and sale of Burgess products.

Of interest, perhaps, to the thinking battery buyer is the fact that no Burgess product is advertised or sold until its merit has been proved, not only by our own rigid tests, but also those of the foremost radio engineers, manufacturers and experimenters in the country.

Through friendly criticism and suggestions, together with extensive research and engineering by the C. F. Burgess Laboratories the efficiency of Burgess Batteries has increased to a degree which we believe is not equalled elsewhere.

BATTERIES

“Ask any Radio Engineer”

TRADE ENQUIRIES TO

BURGESS BATTERY COMPANY

280 Castlereagh Street, Sydney 26 Leigh Street, Adelaide 25-27 Queen's Bridge Street, Melbourne



WIRELESS WEEKLY

Phones: Redfern 964 and 955.

Official Organ of the New South Wales Division of the Wireless Institute of Australia, with which are incorporated the AMMATED 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), 18/-, 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.

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PRACTICAL WORK

The generally expressed opinion that the Club Movement is on the wane has been given a setback, and by no less an organisation than the South Randwick and District Radio Club, which, a short twelve months ago, was not even formed.

As will be seen in an announcement to be found elsewhere in this issue, the South Randwick Club has inaugurated Morse classes, and what is more to the point, facilities are to be available for the teaching of the subjects necessary to be familiar with in order to sit for the Amateur Operator's Certificate of Proficiency. The fee asked is simply the ordinary membership fee of the Club.

Last year, realising the need for some sort of specialised course for those anxious to study for the A.O.P.C. exam., Wireless Weekly published a series of sixteen articles, specially written to cover all the subjects included in the usual exam.

That these articles met a definite need was proved by the large number of students who answered the series of tests questions that were set at the end of the articles, and dozens wrote in

subsequently notifying us that they had passed the examination and that they attributed their success to the articles published in Wireless Weekly. These students were scattered all over Australia.

Following that, by special permission of the Postmaster General's Department, Morse lessons were transmitted regularly from 2WW, Wireless Weekly's experimental station, and hundreds gained their knowledge of the Morse code from those transmissions which were followed regularly even as far away as Western Victoria.

Personal contact is generally admitted to be essential in any course of tuition, and the South Randwick Club, by making these classes available to anyone willing to pay the usual membership fee, will accomplish this very thing.

The scheme is to be very highly commended. It is ambitious, but by that very fact is all the more worthy and is but a reflection of the ideals the executives have before them.

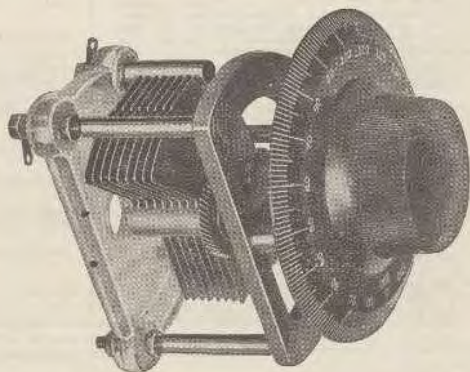
At the same time, a thing worth doing is worth doing well and it is to be hoped that the Club will make provision for the countryman who is unable to attend in person.

A. W. WATT.

QUAM CONDENSERS

with the PYREX End Plate

ARE THE ACME OF PERFECTION!



They are the sturdiest, lowest loss and most efficient Condensers built. Laboratory tests prove it.

Beautifully designed and finished. Outstanding features include Pyrex End Plate with $1\frac{1}{2}$ in. leakage paths—2 to 1 helical gears for sharpest tuning—brass frame and plates rigidly soldered in place.

The Quam Low Loss Condenser is a scientific laboratory instrument which gives the utmost satisfaction in any radio circuit.

RETAIL PRICES

Including Genuine Bakelite 4in. Knob and Dial.

25 Plate, .0005	£2 9 6
17 Plate, .00035	2 7 0
13 Plate, .00025	2 3 6

Ask your Dealer to show you this Line.

UNITED DISTRIBUTORS LTD.

(WHOLESALE ONLY)

72 Clarence Street, Sydney.
343 Queen Street, Brisbane.

Can. Jervis Quay & Harris
Street, Wellington, N.Z.
27 Gbesser Street, Adelaide.

64 Bourke Street, Melbourne
26 Queen Street, Perth.

A REAL CRYSTAL RECEIVER

By F. T. Swinburne

There are, and probably always will be, a large number of people who for one reason or another confine their radio activities to crystal receivers.

A really good crystal receiver has many features to recommend it, and is a really effective instrument. It is, however, noticeable to those of us who remember the radio of pre-valve days that very few modern enthusiasts succeed in working over any considerable distances. Furthermore, the commonest complaint of crystal users is now the difficulty which they experience in eliminating interference. From these facts, judging by performance alone, it appears that the modern crystal receiver is a decadent instrument. It was with the object of testing this assumption that the receiver described below was designed, and the results obtained with it furnish ample confirmation. Its wavelength range is such that by the use of a small loading coil 2FC may be tuned in, and its lower limit is such that stations 2KY and 2UE may just be brought in.

Tested in the city, no trouble was experienced due to interference when receiving programmes from 2BL or any of the B class stations, although they were on the air. Excellent volume was also obtained, being about twice that of the ordinary receiver of similar type. On examination it will be seen that the design embodies a simple loose coupler. This may appear reactionary and out of date to many ultra-moderns, but it should be remembered that this is the very type of receiver which gave best results throughout the years when the crystal receiver was the only type in commercial use. A careful analysis of many recent designs shows that the designers have aimed rather at obtaining a freakish appearance than at increased efficiency. The most striking feature of this design, considering its tuning range, is the small size of the coupler, yet this is not accomplished through any sacrifice of efficiency.

Special Features.

The following features are specially worthy of consideration:—(1) The elimination of all sliding contacts; (2) short connections to all switches; (3) absence of all large masses of metal from the neighbourhood of the coils; (4) ease with which coupling may be varied and its value recorded. These all aim at increased efficiency or ease of operation.

Construction.

The details of construction as shown in the ac-

companying drawings are almost self-explanatory and, as the drawings are to scale, approximate measurements may be made from them. The panel used was made of 3/16 inch bakelite about 9½ ins. square. The coil formers were tubes of the usual cardboard variety; bakelite would have been better, but was not available at the time. The primary tube was approximately 3½ ins. in diameter and the secondary tube 2½ ins. Both tubes were 3½ ins. long. The tube of the secondary coil, which it may be seen from the drawings slides on a single ¼ in. rod of bakelite, is supported at each end by a strip of bakelite 5/8ths of an inch wide, of the shape shown in the detail sketch at D. These strips are held in place by means of four small screws (No. 9 B.A. is the size actually used), which pass through the walls of the tube and are tapped into the ends of the strips as shown in detail in the partial section of the coil shown in the view from the bottom of the panel. It is impossible to give exact dimensions as to the length of these strips, because they must be made to suit the diameter of the tube used. Through the centre of each strip must be drilled a ¼ in. hole to accommodate the rod mentioned above. To one of them also is secured, by means of two more small screws, the coupling control rod F, as shown in the end view.

The coupling control rod is made from a piece of 3/16 in. brass rod. One end of it is threaded to accommodate a small bakelite knob, and a pointer the other end being drilled to suit the screws which secure it to the secondary coil support. The slot in which the rod moves may be readily cut in the panel by drilling a series of 7/32 in. holes in line, as close together as possible, and finally removing the irregular points between the holes with a file. The bakelite rod upon which the secondary coil slides is supported at each end by the bakelite strips A and C, which in turn are secured to the panel by 1/8 in. screws, which are threaded into their ends. To the piece C are also attached two small blocks, B, which support the primary tube as shown in the view from the bottom of the panel. The other end of the primary tube is supported by the block E and secured to it by means of screws.

The details of construction given above may, of course, be modified to suit the tools and materials available, but it is advisable to completely assemble all parts before winding the coils, otherwise the insulation on the winding may be injured in the process of fitting up.

DRY CELLS FOR EVERY PURPOSE

ALWAYS ASK FOR

Diamond Radio Batteries

MORE THAN A MILLION SUPPLIED ANNUALLY.

TELEPHONE CELLS.

TELEGRAPH BATTERIES.

"Cost
More
To
Build."



"Cost
Less
To
Operate."

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

"Diamond Bat-
teries make Good
Sets Better."

Wireless A B & C Batteries Produced Expressly for Radio Transmission Reception Ignition Batteries

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AMALGAMATED WIRE-
LESS (AUST.) LTD.
NOYES BROS.
P. A. SEGUR LTD.
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SON & CO.

Retailers:
ANTHONY HORDERNS'
FARMERS LTD.
GRACE BROS. LTD.

Retail Price List

BATTERY	"COIL."	
A	15/0 " Coil "	2/6
A	15/0 "Buzzer" h. amp	3/0
A	15/0 "C" wealthtype	5/6
A	15/0 "D" Diamond "	4/6
A	15/0 "Navy Special"	3/0
B	60 " Large Type	25/0
B	45 " 10M x 7	20/0
B	45 " 10M x 7	20/0
C	45 " Buzzer "	2/9
C	45 " Lge Special	15/0
C	60 " Ignite "	15/0

NOCK & KIRBY
LASSETTERS LTD.
EDWARD ARNOLD LTD.
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HAROLD HERBERT
MISS WALLACE
LEVENSON'S RADIO
STORE
SLINGSBY & COLES LTD.
MARKS' ELECTRICAL
RADIO

All Leading Radio and Electrical Stores
Every Cell is Guaranteed. Made by Australians, in Australia, for Australians.

Supplied to—

Postmaster-General's Depart-
ment
New South Wales Government
Railways and Departments



Navy Department
Public Works
Water Board
New South Wales Fire Bri-
gades,
Ordnance Stores etc.

Factory Representatives:
REG. ROSE & CO.

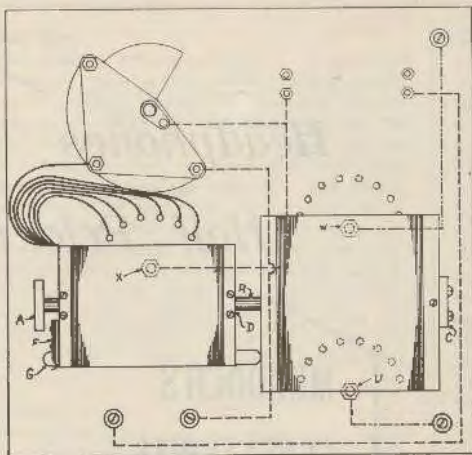
"Kembra Buildings," Margaret Street,
Sydney. Phone, B3872.



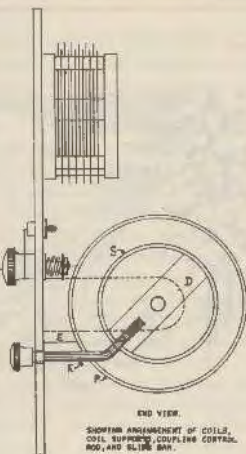
1.5 Volt Buzzer.
High Amperage
35 amps Sbt. Circuit

Manufactured by

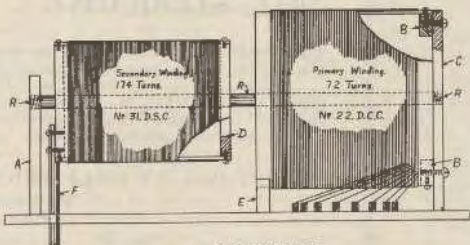
WIDDIS DIAMOND DRY CELLS
PTY. LTD.,
West Melbourne, Vict.



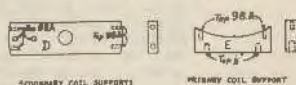
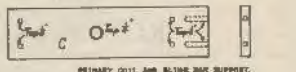
BACK OF PANEL.
SHOWING GENERAL ARRANGEMENT OF PARTS,
WIRING, AND FLEXIBLE CONNECTIONS TO
SECONDARY COIL.



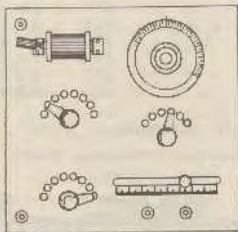
END VIEW
SHOWING ARRANGEMENT OF COILS,
COIL SUPPORTS, COUPLING CONTROL
ROD, AND SLIDE BAR.



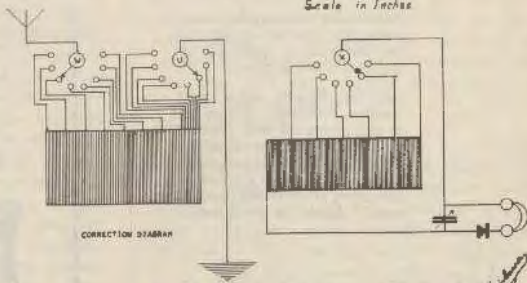
VIEW FROM BOTTOM OF PANEL,
SHOWING DETAILS OF WINDING AND
ARRANGEMENT OF CONNECTIONS TO
PRIMARY SWITCH.



Scale in Inches



FRONT OF PANEL
SHOWING APPEARANCE OF COMPLETE SET.
SCALE = 1/2.



CORRECTION DIAGRAM

A REAL CRYSTAL RECEIVER.

A—Slide bar support. B—Primary coil supports. C—Slide bar and primary coil support. D—Secondary coil support. E—Primary coil support. F—Coupling control rod. G—Slot in panel for F. P—Primary coil. R—Slide bar, 1/2 in. diameter bakelite rod. S—Secondary coil. U—Primary units switch. W—Primary section switch. X—Secondary section switch.



A FURTHER
REPORT
from
KOSCIUSKO

The Wireless Set supplied by David Jones to the Hotel Kosciusko continues to give excellent results. It has now been in operation several months. Its continued reliability is most gratifying to David Jones' Radio Department and also to Mr. Charles MacLauran who designed this instrument for the Government Tourist Bureau.

Sets similar to this, and all other radio sets and accessories can be immediately supplied by our Radio Department.

Let our Experts solve your wireless problems. If your set is not giving the best possible results phone City 6336 or B6971 and a qualified engineer will call and effect a repair or alteration at the lowest possible cost. Advice is given freely.

DAVID JONES

Headphones
at
Half Price!

MURDOCH'S
SENSATIONAL
SALE CLEARANCE

RED SPOT SALE—the great cut price event of the season—has many attractive offers for the Radio enthusiast. As an instance, the complete stock of World's Famous Makes of Headphones (all in perfect condition) are being

SWEPT OUT AT HALF PRICE

	Usually.	Red Spot Price
Murdoch's, 2,000 ohms	25/-	12/6
General Radio	30/-	15/-
Trium's Dependable	32/6	16/3
Western Electric	32/6	16/3
Prost's No. 161	32/6	16/3
Sterling	37/6	18/9
Nutmeg H. & H.	42/6	21/3
Brown's, 4,000 ohms	35/-	17/6
Siemens's	32/6	16/3
C.E.B.	25/-	12/6
Prost's No. 172	45/-	22/6

Bargain Catalogue Free!

Kindly mention "Wireless Weekly" when writing.



Specialists in all Radio Equipment.

Winding Coils.

The primary winding consists of 72 turns of No. 22 D.C.C. wire, and the whole winding should be put on without making any provision for the tappings, which are put on while connecting up. The winding should start about $5/16$ in. from one end of the tubes, and when completed will finish about the same distance from the other end. The secondary winding, which consists of 174 turns of No. 31 D.S.C. wire, may be wound on in the same way, commencing about $\frac{1}{2}$ in. from the end of the tube. Neither winding should be varnished, although varnishing the tubes before winding will improve their mechanical strength. The method of tapping the coils, which is described below, will be found extremely simple and effective, but other methods may suggest themselves.

Assembling.

In assembling the first step should be to mount on the panel, the condenser, the detector, the terminals, and the switches and their studs. Then the wires connecting these parts may be soldered in place. In addition, a 6 in. length of bare No. 22 copper wire should be secured to each stud of the two primary switches U and W. The end support C, with the primary tube supports B attached, may now be secured to the panel, as also may the primary coil centre support E. The primary tube may now be slipped into place and secured. The tappings may now be connected in the following way. Commencing with the unit switch U, the end turn of the primary winding is lifted slightly with the point of a sharp scriber, at the point where the tapping is to be connected. The insulation is then removed for a distance of about $1/8$ in. by rubbing it with a fine file. The bare wire attached to the correct switch stud is then threaded under the raised wire, pulled sufficiently tight, and twisted back over the top of the bared portion of the turn. The joint is then soldered, and the free end of the tapping may be cut off short. The joints should be staggered slightly round the circumference of the coil so as to avoid the possibility of short circuits, as shown in the drawing, also the position of the tappings should be arranged to avoid contact between the wires leading to them, and at the same time to keep these wires as short as possible. It is important that the tappings should be made to switch studs in the correct order exactly as shown, and also that all joints are properly soldered. When the connections to the primary coil have been completed, the secondary should be tapped in the following manner:—The turn to which the tapping is to be attached is lifted with the point of a scriber and the insulation removed as in the previous case, then a hole is pierced

through the tube with the point of a needle exactly under the place where the insulation has been removed. A piece of wire of the same gauge as the winding (No. 31) and about 8 in. long is cleaned of insulation for a distance of about 1 in. at one end, and the cleaned portion is bent back upon itself for a distance of about $\frac{1}{2}$ in., thus forming a deep, narrow hook. The other end of the wire is then threaded through the hole in the tube, the hook is placed round the bared turn of the winding, and its end also through the hole. By pulling gently on the free end of the tapping wire the hook will be brought into firm contact with the turn, which it will force back into its original position. A touch of solder applied where the hook and turn are in contact completes a very neat and effective joint. The correct number of turns (29) must be counted between each tapping, and the joints should be staggered (about $\frac{1}{2}$ in. between each) around the circumference of the coil, so as to avoid possible short circuits between tappings. The secondary coil supports D may now be screwed in place, and one end of the slide bar R should be screwed into the support C. The secondary coil may then be slipped in place on the slide bar, to which the support A may then be attached and also to the panel. The coupling rod F should then be secured in position and its pointer adjusted. The flexible connections to the secondary winding are made of "bell flex," and the ends connecting to the condenser and switch studs are secured by soldering in the usual way. The ends connecting to the secondary tappings, first stripped of insulation, are secured to the secondary tube by threading them through holes in the end of it and then twisting them back round the wire itself. The bared ends of the tapping wires are then bound round the joints so formed and the whole lot carefully tinned with the soldering iron. It is, of course, important that the connections should be correctly and carefully made, also the length of the flexible leads should be carefully chosen. If the leads are too short they will be unduly strained and quickly broken, but if too long they will be unsightly and seriously decrease the efficiency of the set.

Additional Notes.

The variable condenser used was of usual type, having a maximum capacity of about .0003 mfd., but of unknown brand. The detector used was a common glass enclosed type, although a less pretentious instrument would probably have been equally effective. The bakelite supports may economically be cut from disused panels. The scale for the coupling may be engraved on the panel with a sharp scriber or a neatly drawn paper scale may be used.

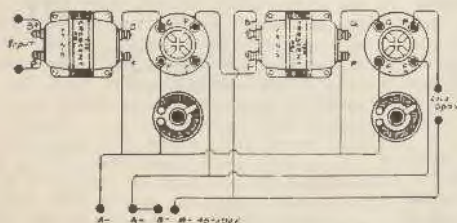
Continued on page 15, col. 1

A 2 Valve Amplifier

Will make that CRYSTAL SET effectively work a LOUD SPEAKER

START NOW AND BUILD YOURSELF ONE at a cost of **£4 7s 6d**

HERE IS THE CIRCUIT—



TWO STAGE AMPLIFIER

THIS IS WHAT YOU REQUIRE

	s.	d.
1 Baseboard	1	6
1 Bakelite Panel	1	6
2 Sockets, 199 at 2/-	4	0
2 Rheostats, Ajax, 30 ohms, at 2/3	4	6
1 Crescent Audio Transform- er, 6 to 1	13	6
1 Crescent Audio Transform- er, 3½ to 1	13	6
1 Card Engraved Terminals	2	0
6 Lengths Buswire	0	6
2 Valves, Radex 199, at 9/9	19	6
1 "A" Battery	9	0
1 "D" Battery, 60 volts	18	0

Have you tried the NEW VALVE

"RADEX"

199 Type

4 Volts .06 Amps.

201A Type

5 Volts .25 Amps.

Price **9/9**

Insofar as results and the life of the valve is concerned the "Radex" are quite up to standard—also

The "CRESCENT" AUDIO TRANSFORMER

6 to 1
for First Stages

13/6

3½ to 1
for Second Stages

Bring your Radio Troubles to "Insulator" (Mr. W. L. Hamilton) at our Sydney Store every Friday Evening.

We cater specially for country orders, and pay carriage on goods to the value of 10/- and over, except on Speakers and Batteries.

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The ECONOMIC RADIO STORES

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HILL'S REACTANODE

Patent Pending

By Garnet Hills

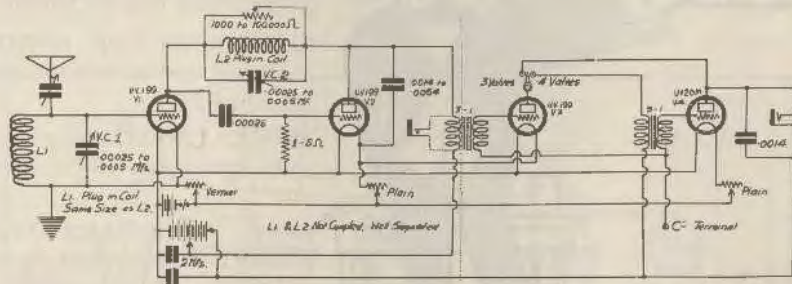
Editor's Note.—This article by Mr. Hills is full of interest and we present it in the knowledge that readers (aside from ourselves) will find pleasure in the fact that Mr. Hills has not only had the application and patience to perfect his circuit, but to give the benefit of his work to the public.

In placing before the many readers of "Wireless Weekly" this description of the "Hills Reactanode" Receiver, I would like to state that it seems to be just what is required to suit our peculiar Aus-

tralian conditions. Here we have the opportunity to listen-in to the world's leading amateurs on ultra low waves down to (perhaps) 20 metres, a variety of good broadcasting from 200 to over 1200 metres, and such long wave commercial Morse signals. All this can be accomplished with the Reactanode, be-

cause it functions steadily with high efficiency and ease of control on all waves from 25,000 metres down to 15 metres. It will have an added appeal to the reader, as it is an original Australian idea, calculated to just take its place as a good all-round Australian radio device.

First let me tell you of some of its bigger features. It is a two valve automatically regenerative radio frequency and detector combination, embodying a new idea which allows of the following advantages:—



The Reactanode Circuit

tralian conditions. Here we have the opportunity to listen-in to the world's leading amateurs on ultra low waves down to (perhaps) 20 metres, a variety of good broadcasting from 200 to over 1200 metres, and such long wave commercial Morse signals. All this can be accomplished with the Reactanode, be-

Continued from page 13

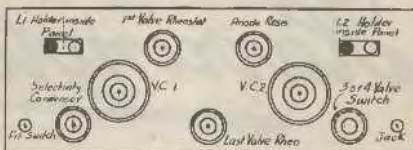
The loading coil used to receive the longer wavelengths is of similar size and winding to the primary coil, except that only one tapping in the middle of the winding is required. When in use, the loading coil should be mounted in such a position that it does not exert any magnetic effect on the secondary coil, otherwise the operation of the set may not be quite satisfactory. In operation the selectivity of this set increases as the coupling is loosened, but at the same time the signal strength decreases. The object should, therefore, be to adjust for the best signal strength obtainable without undue interference.

1. Consistent reception on all wavelengths in use to-day, with good selectivity throughout, which is under control by the operator.

2. Regeneration is automatically present while under easy control by the operator on all waves alike, from the highest down to the far limit of 15 metres.

3. Once the circuit is properly adjusted before tuning operations are begun it is quiet in operation, with no squeals or re-radiation tendencies.

4. Controls are few in number, the actual tuning



Front Panel View



Harlie

SUPER-SENSITIVE

DETECTOR

Tone &
Volume

ROTATE THE CRYSTAL by simply turning the knurled knob, whilst the catswhisker remains stationary.

ALWAYS IN CONTACT with the catswhisker automatically at the exact delicate tension.

ELIMINATES THE BOTHER of the old type of detector bracket and crystal.

SHOCK PROOF: your good point cannot be lost by vibration.

DUST PROOF AND FOOL PROOF: A removable nickel-plated cap completely covers the detector.

Double the pleasure of your Old Crystal Set
FIT ONE NOW—PRICE 7/6 each

OFFICIALLY ADOPTED AS STANDARD FOR USE ON
—LIFEBOATS AND IN THE MERCANTILE MARINE—

Obtainable from Leading Radio Dealers, or

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Sole Agents for Australia and New Zealand.

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Sydney 856 George Street
Katoomba Katoomba Street
Melbourne 206 Collins Street
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Adelaide 19 Rundle Street
Wellington, N.Z. 42 Willis St.
Auckland, N.Z. 140 Queen St.

being all done by adjusting two dials, which read practically the same, and one vernier filament rheostat.

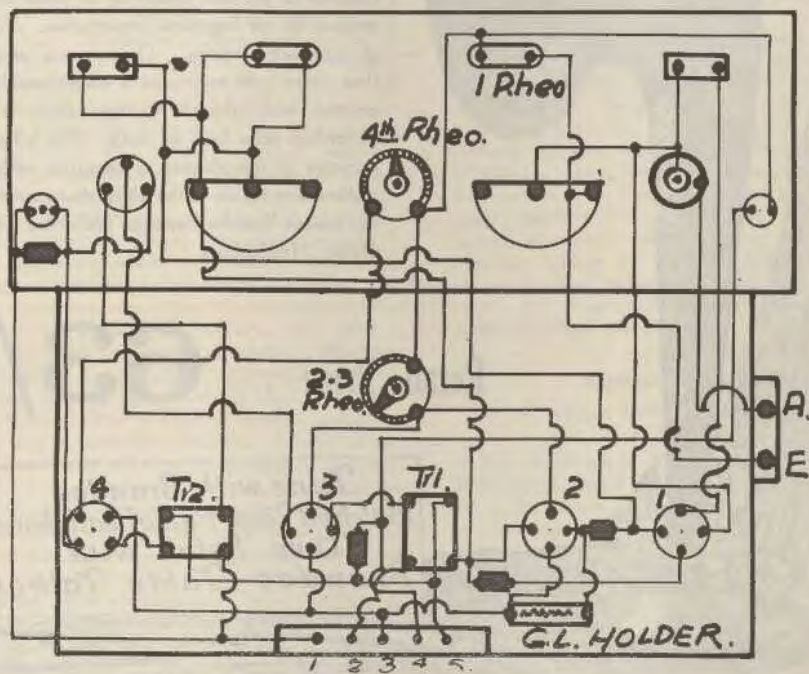
5. Extra controls and component parts are done away with, and the highest efficiency is maintained on 20 metre reception, just as on the higher waves, owing to the inclusion of facilities for using plug in coils for tuned circuits, only two (in a pair) of which are in the set on any wavelength, thus eliminating dead-end turns and idle apparatus losses. These coils are of the plug-in variety, and the appearance of the panel is enhanced by the fact of the coils being inside the cabinet. There are no movable coils used at any time.

6. The potentiometer is not used, yet the circuit is quite stable. Owing to the low loss characteristics of the circuit, and to overcome the trouble of having both dials tune too finely, the reader will notice there is a slight damping adjustment which takes the form of a variable resistance across L2 in the figure. In use this is set so that with the first valve's vernier rheostat set, so that the first valve is burning rather dull, the circuit will just slide

gently into oscillation when the said rheostat is advanced slightly.

Now, perhaps the best way to continue is to begin at the aerial and describe the parts and other details till we come to the loud speaker or phones. Any ordinary aerial is O.K. with this receiver up to 150 feet long, but the ground connection must be of low resistance, therefore go over the ground connections and fix it up. Look up buck numbers or "Wireless Weekly" for hints on how to fix up a good low resistance earth.

The variable condenser in the aerial lead is very small, and of low loss construction. I use a five-plate midget on my set, but a standard three-plate size is quite alright. This controls selectivity, and adapts the circuit to use on various aerials on various wavelengths. When receiving on waves over 200 metres, set it near maximum. When on waves from 200 down to 15 metres, set it at nearly zero. Only set it once for the waveband in use, and do not touch again till going to another waveband. The two tuning coils are mounted in fixed panel mounting plugs, and are used in pairs for the various



1 = AF. + B.

2 = RF, DET. + B.

3 = +A and -B.

4 = -A and +C.

5 = -C.

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
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Wholesale
Only

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wavebands. For waves above 200 metres I use ordinary honeycomb coils in standard plugs, while all waves under 200 metres are received well with either coils wound low loss fashion on Grodin spider formers, or by means of low loss type coils wound with 18 D.C.U. wire around a 4in. form and mounted on ordinary honeycomb coil plugs.

For the number of turns required a table may be looked up, but I myself use the following:—

Low wave coils as described, 2—5 turns, 2—10 turns, 2—15 turns, 2—25 turns, 2—40 turns. Higher waves, 2—50 honeycombs, 2—75's, 2—100's. 2—200's, 2—750's, all honeycombs. All coils used must be in exact pairs. Here let me refer you to an excellent article that appeared on low loss low wave coil construction in a back number of "Wireless Weekly." These coils were fitted to ordinary honeycomb coil plugs. The two tuning variable condensers are both the same size and make, and the size I am using is .00035. They must be low loss, and both have fitted one of those vernier dials with long, extended scale. They are turned slowly one against the other in tuning at about the same settings. The stabilising resistance across L2 must be a fine adjusting one. I use and must recommend a Filko resistance here. Readers who have been looking in the figure for the reaction coil or reaction condenser will not find them. Less controls, less coils, less variable condensers, no moving coils, automatic regeneration under fine control, on all wavelengths. That explains it. The correct degree of regeneration is always present, and is under control by one knob on the panel. This is the knob of the filament rheostat in the first valve filament circuit. All regeneration control is effected with this rheostat. It must be the finest vernier obtainable. I use and recommend a Filkostat. The detector filament rheostat is a simple, plain one, and is not adjusted after once being set, so that detector or second valve is burning as brightly as safety will allow. Therefore it is mounted under the cabinet. If audio valves are added this rheostat also controls the first audio valve's filament. The B battery voltage applied to the first and second valve is rather critical. I use 35 volts. If this is too high the set will be unstable. Once set, it is not altered. When using audio frequency valves, place about 60 to 100 volts on their plates. I use 80 volts with about 4 volts C battery here, and find same good. The remainder of the parts do not need mention, except, perhaps, the grid leak and the other matter I have been speaking or writing on, the audio amplifier part of the set. Well, as to the grid leak, do not go to the expense of a variable one, as it is not critical. Try a few from 1 to 5 megohm sizes, also try using no leak. I use a 5 megohm.

Now, in conclusion, a few details regarding audio amplification and the Reactanode. I began by saying it was a two valve circuit, but in the figure the reader will see four valves shown. Well, for loud speaker work the ordinary two audio valves are added as shown to the right of the dotted line in the figure.

There are one or two material and labour-saving features about this part of my set, also. I use the switch marked 3-4 to receive on three or four valves, according to whether using phones or speaker. Only one jack is required instead of the customary two.

The reader will notice that two valves are not used alone. The reason is, whenever listening on two valves, and a third or audio valve is switched on, the difference in constants of the phones as compared to the audio frequency transformer has a detuning effect, therefore it is better to use one audio valve at all times.

The first three valves must all be alike and of the same make. I use and recommend the .06 type. The last valve is a UV 201A or any 5 to 6 volt audio valve. For perfect reproduction I have also found that two .06 valves used in parallel are very good here.

When building the Reactanode, the figure must be followed in all details, as one wrong connection will put everything out. The other figures will give a good idea as to placement of parts. The writer has received all the main Australian broadcasting stations, and also high wave commercial signals, not to mention strong amateur signals down to 20 metres, on his set, from which the description and figures herewith are taken. The writer will be pleased to answer individually or collectively any questions readers of "Wireless Weekly" may find necessary when building or using the Hills Reactanode. But I am confident that in all cases it will work right from the go.

WIRELESS OFFICERS.

List of Marine Staff changes for week ending
January 7, 1926:—

- G. Donaldson signed off "Mareeba" in Sydney.
- E. F. Hayes signed on "Mareeba" in Sydney.
- H. A. De Dassel (2nd) signed off "Hobson's Bay" in Sydney.
- F. Exon (3rd) signed off "Hobson's Bay" in Sydney.
- F. T. Neal (2nd) signed on "Hobson's Bay" in Sydney.
- G. Donaldson (3rd) signed on "Hobson's Bay" in Sydney.
- P. Whelan signed on "Kanna" in Sydney.
- L. N. Callaghan signed off "Dimboola" in Sydney.
- S. G. Jones signed on "Dimboola" in Sydney.



WUNCCELL DULL
EMITTER.

TYPES W.1. & W.2.

Type W.1. is for use as a Detector or Low Frequency Amplifier. Type W.2. (identified by its red top) has been specially developed for use as a High Frequency Amplifier. Owing to their construction, and also to the fact that the filament glows only at a very dull red heat—almost invisible in day light—Wuncell valves possess an exceptionally long life.

Technical Data.

Filament voltage, 1.8 volts.
Filament consumption, 3 amps.
Plate voltage, 20-80 volts.

WUNCCELL DULL
EMITTERS. TYPE

W.E.1. & W.E.2.

In characteristics these Valves are identical with W.1. and W.2. but are fitted with an additional resistance to enable them being used with either a 2, 4- or 6-volt accumulator without alteration to Set. Specially suitable for use with bright emitter valves working from a 6-volt accumulator. When required for use with a 2-volt accumulator the internal resistance can be thrown out of action by means of a short-circuiting screw. Technical Data as above.



COSSOR LOUD
SPEAKER VALVE.

TYPE W.3.

When used with a good Low Frequency Transformer this new W.3. Valve gives an immense volume of pure and undistorted sound. Its use renders a second stage of I.P. amplification practically superfluous. The design embodies all the well-known Cossor principles, and the Valve is, therefore, quite free from microphonic noises. Filament voltage 1.8 volts; filament consumption .5 amps; plate voltage 80-120 volts.



PERFORMANCE

—the acid test for a Valve

THE first Dull Emitter placed on the market was not a Cossor—but Cossors had been experimenting with Dull Emitters long before. Obviously Cossor's reputation for Bright Valves is such that they cannot afford to trifle with any Valve which will not at least equal in efficiency the wonderfully popular P.1 and P.2 Cossor Valves.

Previous to the introduction of the Wuncell Valve there was not a Dull Emitter that could be said to compare with the high average standard of a British Bright Emitter. If it had volume it lacked sensitiveness. If it possessed tonal purity it suffered from microphonic noises. And so on. There was always some defect that wireless enthusiasts were glad to put up with to overcome the continual heavy upkeep costs of 4-volt Valves consuming nearly $\frac{1}{2}$ of an ampere.

But the Wuncell is quickly changing everyone's ideas as to what a Dull Emitter can and should do. Users are finding that they sacrifice nothing when they change over to Wuncells. Rather, indeed, do they gain heavily.

In volume, sensitiveness, freedom from microphonic noises, exceptionally long life, low operating cost, purity of tone and stability the Wuncell is indeed without equal. And whether their Set is a reflex or a plain Circuit—a single valve or a multi-valve—they are finding that Wuncells give it added sensitiveness.

Remember that the Wuncell requires less than 2 volts and it consumes only .3 ampere—its low current consumption is obtained by means of a special filament (exclusive to the Wuncell) and not by means of a filament whittled down to the point of fragility.

After all, there is not much economy in obtaining low current consumption if the filament is made excessively delicate and the life of the Valve endangered. If you want long service for your Dull Emitter, use the Wuncell—the only Dull Emitter with a filament as stout and as robust as that used in an ordinary bright valve.

A Complete Stock of all Cossor Valves is held by—

Cossor Valves are stocked by all the principal Wireless Dealers. In case of special difficulty, apply to
JOHN ARNOLD, Factory Representative,
Box 802, DE GRAVES BUILDINGS, DE GRAVES STREET,
MELBOURNE.

Cossor Wuncell Valves

THE BRITISH DULL-EMITTER WITH THE LONGEST LIFE



The Inimitable Dan.

Dan Thomas, the famous pantomime dame and humorous entertainer, is featured by 2BL on January 21. His radio audiences threaten to esteem him as highly as the many thousands who have heard and seen him on the stage. There is a quaintness about his work that is characteristic and which transmits splendidly. The day of the red-nosed comedian who relied upon make-up for effect is gone; now it is character and true humour that is demanded, and both these Mr. Thomas has in plenty. On the same programme there will be Miss Margaret Mackenzie, mezzo-soprano, in favourite numbers, and Broadcasters' Brass Quartette. This latter combination play excellently, and the ensemble of instruments is perfect, while their pianissimo effects are really beautiful.

Jazz Everywhere.

Saturdays are given over to dancing everywhere, and the radio programmes reflect the popular taste. The Dugowan Band are featured on Saturday, January 23, by 2BL, playing until midnight. Hoyt's Imperial Orchestra, so widely known for their splendid incidental music at Hoyt's Theatre, are also on the programme. Many people claim that they are able to visualise the pictures presented by following the changes of the music from grave to gay and back again. Mr. Norman Wright will be heard also in tenor solos.

Churches Want Broadcasting.

Many visitors to the studio of 2BL have wondered if they had not made some mistake and wandered into a church conference or something of the sort by finding gentlemen in clerical dress demanding various members of the staff. Actually these are ministers of various denominations seeking to have their services placed "on the air." With a fine spirit of catholicity 2BL encourages all of them and gives them turn and turn about, recognising the complete lack of sectarianism on the part of listeners. The only difficulty experienced so far is the fitting in of all of them. If Sunday came twice a week the work of the programme compiler would

be eased greatly. On Sunday, 24th, the morning service is Presbyterian (Chalmers Street Church) and the evening service Anglican (St. Thomas', North Sydney). The studio concert following the service in the evening will be presented by Broadcasters' Instrumental Trio and Mr. Alfred Cunningham, a new baritone with a voice of luscious quality. On his first broadcasting Mr. Cunningham made many admirers, and threatens to become one of the favourite artists at 2BL.

Ambassadors' Again.

Monday is another dance night. On this week-day the Ambassadors' Combined Orchestra furnish the strains whereto tripping feet move in the mysteries of jazz. One wonders what the originators of old Greek dancing would think (and say!) if they were permitted to re-visit these glimpses of the moon. Maybe they would be carried away by the present fashion of dancing and want to refuse their return to the regions of oblivion. There are many admirers for the Ambassadors' Orchestra, and it is becoming more and more the fashion to run weekly radio dancing parties to take advantage of the broadcasting of their programmes of dance numbers. And where could better music be obtained? Fashionable hostesses looking for novelties could do nothing better than to instal a good set and a loud speaker for the entertainment of their guests. Watch, then, for January 25. Earlier in the evening, at 8 o'clock, 2BL will broadcast the Ambassadors' Salon Quartette, directed by Mr. Claude McGlynn. There is provided a special programme of classical and operatic music, beautifully played—as incidental music to a dinner party there can be nothing better. What is there so iniquitous as radio?

A Baritone.

Mr. Les Herford, popular baritone, will be on the air from 2BL's studio on January 25. He is another of 2BL's exclusive artists whose work is always welcomed by a vast army of admirers. This studio seems to have a special facility for obtaining baritones of quality, and the items thus broadcast transmit splendidly.



BANISH ISOLATION!

Have you yet realised what a tremendous difference RADIO can make to your social life?

How it can bring the music of the theatre and the concert hall right into your home!

Have you realised the difference between reception from an ordinary valve and one which is made by

PHILLIPS?

We specially recommend the following two Valves:—

A110. The One Cell Valve. Filament, 1.0 to 1.3; volts, .06 amp. The most remarkable valve yet produced, as it enables you to run each valve for weeks on one Dry Cell, while the volume and tone are exceedingly good.

Price, 17/6 each.

B406. The New Wonder Valve. The B406 is in a class by itself, as it is the first Low Frequency Amplifier which attains a saturation current of 20 milliamps with a filament consumption of only 0.1 amp. at 3½ to 4 volts. Only a Two Cell Accumulator or Three Dry Cells should be used, thus showing a further remarkable saving.

Price, 17/6 each.

Obtainable from all Radio Dealers.

Ask your Dealer for illustrated folder describing these wonderful Valves.

PHILIPS

SEASONINGS—Continued**Duet Numbers.**

On January 26th, 2BL transmits a somewhat unusual combination of voices in the form of tenor and contralto duet numbers. Miss Myra Gillon is joining forces with Mr. Norman Wright, and both these fine artists will be heard in solo numbers also. They are presenting a song cycle of special merit, and further announcements will be awaited with interest. That excellent combination, Broadcasters' Instrumental Trio, will also be heard. Mr. Horace Kents, the energetic pianist and leader, is always seeking fresh musical works to conquer, and has recently been bombarding European publishing houses with requests for all the latest and best in trio publications. Miss Blair, the violiniste of the combination, has resumed duty after a well-earned rest, and Mr. Bryce Carter, whose 'cello tone adds so much to the beauty of trio work, is there to add breadth and balance.

Guitar and Uke.

Elliott and Edwards, in harmony numbers, form part of the entertainment promised by 2BL on January 27. Also, there will be dance music from the Embassy Palais. Under Professor Bolot the Embassy is coming to the front as a popular place of dancing entertainment. The Honolulu Duo will also bring their guitars and mandolins and saxophones to the studio and make music for the lovers of these instruments. The very soul of Waikiki Beach, of the Hawaiian Islands, and of the old Waikiki moon, are in these players. The cult of the steel guitar is still developing, and constant requests are received for more and yet more of the ukelele type of performance. Tuneful and filled with haunting melodies, the Hawaiian music makes a very wide appeal.

Two Favourites.

Miss Millie Hughes and Mr. Raymond Beatty—soprano and baritone they are, respectively—will be heard in duets and also in solo numbers on January 28. Both are well known, and both favourite artists with the listeners-in to 2BL, who will be transmitting their items.

Annual Concert.

Another feature on January 28's programme will be the transmission of the first annual concert of the Steadman Welfare Society from the Australia Hall. Contributing artists will be Miss Heather Kinnaird, contralto, Miss Dorrie Ward and Mr. W. E. Lewis in solos and duets, Miss Edith Dickerson in songs at the piano, and Mr. Fred Gooch, a humourist.

Distinguished Lecturers.

Lecturers at 2BL who are doing series of talks are Mr. Leo Buring, managing director of Messrs.

Lindemann's Ltd., a great authority on wines and wine-growing; Mr. G. C. Barnes, president of the Independent Theosophical Society, whose fascinating theme is "The Romance of Buried Treasure"; and Mr. Fraser Anderson, president of the Astrological Society, on "Astrological Aids to Character." Each of these are being featured on programmes during the coming month, and each will interest a widely diversified audience. All of these lectures will be entertaining as well as very instructive.

Band Contest.

On Friday, 22nd, from the studio, 2FC will broadcast a film talk. From the Sydney Sports Ground, continuation of the Championship Band Contest, B Grade. Entries: Abermain, Armidale, Ashfield, Botany, Canterbury, Glebe, Hurstville, Kurri Kurri, N.S.W. Tramway, Paddington, Parramatta, Westmead Boys.

Race Results.

From Randwick will be transmitted, from 2FC, on Saturday, 23rd, direct race results of the A.J.C. Anniversary Meeting. Full resume of sporting information will be given from the studio. In the evening, from the Sydney Sports Ground, continuation of the Championship Band Contest, B Grade. Entries: Abermain, Armidale, Ashfield, Botany, Canterbury, Glebe, Hurstville, Kurri Kurri, N.S.W. Tramway, Paddington, Parramatta, Westmead Boys. An hour's dance music will be broadcast from the Wentworth Hotel until 11 o'clock.

Church Services.

On Sunday, 24th, in the morning the service from St. Mary's Cathedral. In the afternoon, organ recital from Petersham Congregational Church. In the evening, for the first time will be broadcast from St. Matthew's, Manly, special commemoration service of the foundation of Australia. At 8.45, from the studio: 2FC Instrumental Trio; Mr. Lionel Lawson, violinist; Mr. Gladstone Bell, cellist; and Mr. Lindley Evans, pianist. Songs by Miss Phyllis Gibbs, soprano, and Mr. Harold Tollemache, baritone.

FOR SALE.—"Stirling Primax" Loud Speaker, 25; cost £13. Guaranteed. H. SILVESTER, 71 Regent Street, Redfern.

FOR SALE.—Selective 3-Valve Set, 3-coil circuit, in maple cabinet; 3 A and 2 B dry batteries; coils. On inspection this set will prove a bargain at £13. FRED FIELD, Cameron Road, Pymble.

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

BURGESS—"THEY'RE USED ON THE UNITED STATES AIRCRAFT"—BATTERIES

The Crystal that Startled the Radio World

Another shipment is head per R.R. "Diamond" of the famous

"LION" MICRO PERMANENT DETECTOR.

The "Lion Micro" Permanent Mineral contains the Lion King Combination, employing the great South American Semi-Transparent Rare Permanent Mineral Crystal (Gilsenham) and the other Silver Crystal (Tellurium) discovered in 1925.

Complete enclosed in Dust and Moisture Proof Container Price \$/8 each
No Catawbalet. No Adjustment.

OTHER FIRST QUALITY CRYSTALS.

Tungstate Gold Label	2/	each
Tungstate Blue Label	1/8	"
Argonite Mounted, 2-1/2 Unmounted	1/8	"
Russell's "Genoise" Quartz	1/8	"
Aerovox Mounted Radioite	1/-	"
Aerovox Mounted Galena	1/-	"
Sacrystal Australia, W.K.E. Galena	1/-	"

OUR MAIL ORDER DEPARTMENT, 60 Goulburn Street, is under the supervision of a Mail Order Expert, which ensures prompt despatch, careful attention to packing, and all details necessary for an efficient Mail Order Service. We despatch our 24 hours. May we have your order?
Open Friday Nights until 9 p.m. Complete parts for all circuits. Advice and Your own set revised by experts. Satisfaction guaranteed. Established over 30 years.

WILES' WONDERFUL WIRELESS and ELECTRICAL STORES

Branch:
242 Pitt Street,
(near King's Cross Street.)

Head Office and Shop,
54-60 Goulburn Street,
(1 door to Pitt Street),
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Branch,
23 Pitt Street,
(near Circular Quay).

Selectivity & Efficiency with a MENOMINEE

Low Loss Variable Condenser

In the manufacture of these Condensers every safeguard is provided to prevent current losses or leakage. A MENOMINEE Low Loss Condenser will increase the range of practically any Set by many miles, and as there is no body capacity the Station will not detune after a setting is made.

Perfect Electrical Connections—Silent Workmans.

SPECIAL FEATURES.

Soldered Rotor Assembly.
Double Shielded Stator Assembly.
Clock Spring Fingert Gun coating.



SPECIAL FEATURES.

Adjustable Cup Bearing
Adjustable Stator Assembly.
Efficiency Guaranteed.

Diagram of Menominee Low Loss Condenser

.001 mfd. 45 PLATE WITH DIAL	27/6
.005 mfd. 30 PLATE WITH DIAL	25/-
.000 mfd. 17 PLATE WITH DIAL	22/6

LOW MOTION MICROMETER DIALE FOR FINE TUNING.

Replace your existing Dial with a Slow Motion Type and add to the selectivity of your Set.

ED. ACCURATELY 100 to 1 Ratio	35/- each
ED. DIALOG, 7 1/2 to 1 Ratio	10/6 each

RADIO PANELS

To those who are about to build their own Radio Set, we submit the following. These prices of Bakelite we would mention are the lowest prevailing in Australia.

BAKELITE

Cut to any desired size

1/8in. $\frac{1}{2}$ d. per square inch

3/16in. $\frac{3}{4}$ d. per square inch

Diaphragms for Manhattan Junior Speakers, each 2/0

Filko-Stats. Your set deserves one, each 12/6

Vernier Attachments. 100 to 1 ratio, each 3/0

Accuratune Ultra-Vernier Dials each 25/0

Bakelite Valve Sockets (special line) American, each 3/0

Argus Lightning Arrestors, porcelain covers (approved by Fire Underwriters), each 7/6

Mick Simmons Ltd

THE WORLD'S GREATEST SPORTS STORE

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

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

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Anthony Hordern & Sons
Limited,

Brickfield Hill, Sydney

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Box 2712 G.P.O.

TO THE KIDDIES

One Guinea Prize

FOR SUCCESSFUL COMPETITOR.
Limited to Children.

Everybody knows Uncle George and his G-O-O-D-N-I-G-H-T is familiar to every little one who listens in to 2BL.

Now this little competition is to enable every little listener to put down on paper his or her impressions of him.

It can be done in a short verse of six or seven lines and so that you may get the idea, we are showing you a sample of what we mean.

Here it is:

"Uncle George is short and thin,
But he has a voice of gold,—
Every kiddy's love he wins,
And he's not so very old—
All the Kiddies wait to hear
The way he calls out—loud and clear
G—o—o—d N—i—g—h—t!"

Now it doesn't matter if you have never seen Uncle George. You have HEARD him hundreds of times—you know the funny things he says, the quaint songs he sings and the jokes he tells. It is very easy to write a little verse describing your impressions of him.

Is he tall? Is he thin? Is he short? Is he fat? Do you love him? Do you like his voice? Does he make you laugh? Do you look forward to his stories?

Tell it in a little verse—and try to win the guinea prize which "Wireless Weekly" is awarding for the best verse sent in.

Here are the conditions. Read them carefully.

The competition is only open to girls and boys under 12 years of age.

Verse must not exceed seven lines or have less than five.

Entries must reach us not later than Friday, February 5th.

Enclose your verse in an envelope, mark the envelope in the left hand corner "Uncle George," and mail it to "Wireless Weekly," 12/16 Regent Street, Sydney.

No more than two attempts are allowed to each competitor.

THE JUDGES FOR THIS COMPETITION ARE MR. C. C. FAULKNER, (DIRECTOR RADIO BROADCAST BUREAU), UNCLE JACK (2BL), AND THE EDITOR OF "WIRELESS WEEKLY."

A cheque for one guinea will be forwarded to the winner whose name will be announced in due course in "Wireless Weekly."

Uncle George's Letter to the Kiddies

Hello, children!

Another week and the most unfriendly of editors shouting for copy. He says my letters always hold up the paper going to press, and this, from an editor's point of view, is a dreadful thing. Of course, if it didn't happen that Uncle George had lots of time and nothing much to do, he could always be writing, but it so happens that there is always something waiting to be done.

But not another word, for Uncle Jack will be saying that I'm always making apologies. I am glad that so many of you have accepted our invitation to come in to the studio on Saturday mornings, when both Uncle Jack and myself are always waiting to see you. Don't forget that we are here between 10 and 11 o'clock. Sometimes there are little ones who take a risk and come later—to get disappointed. We just love to see you, and will always find time for a word or two for each one—between 10 and 11. After that nothing is promised!

I am glad to learn by so many letters that our little Sunday service is so successful, and that so many of the little ones love it. You must never forget that the Bible is the most wonderful Book in the world, even from the point of view of literature, and no one can claim to be educated who doesn't know something about it. It is filled with the most fascinating stories that never seem to grow old at all, and there is romance in it, the very soul of adventure, and some really splendid poetry. Every great writer since 1600 has been assisted in developing his style by reading it. If you want to have the foundation of a fine education you must know something of its contents, so we are telling the best and finest tales every Sunday.

The wireless family continues to spread; every night seems to see extra members. We are filled with pleasure when we get a chance to welcome in new nephews and nieces, and I have been specially pleased to note that a number of new arrivals from England want to join up as soon as they get here. This is as it should be, as we must be always ready to welcome the newcomers, who come to help make Australia a great nation, and see that they are made to feel at home. When they know that they have radio cousins all round them, they can't feel anything like so lonely. And then most of them have listened-in in England and so are familiar with the benefits of radio.

NEW 12-Volt Car Battery, also 6-Volt Wireless Battery, also De-Luxe Crystal Set. Sell cheap or exchange for wireless parts. OALTON, 288 Oxford Street, Paddington.

Australian Broadcasting Stations—Schedule of Transmission

Located at	Operated by	Call.	Wavelength.
Sydney, New South Wales	Farmer & Co. Ltd.	2FC	1100 metres
Sydney, New South Wales	Broadcasters (Sydney) Ltd.	2BL	353 metres
Melbourne, Victoria	Aust. Broadcasting Co. Ltd.	3LO	371 metres
Melbourne, Victoria	Associated Radio Co.	3AR	484 metres
Porth, West Australia	West Australia Farmers Ltd.	6WF	1250 metres
Hobart, Tasmania	Associated Radio Co.	7ZL	410 metres
Brisbane, Queensland	Queensland Radio Service	4QG	385 metres
Adelaide, South Australia	Central Broadcasters Ltd.	5CL	395 metres

RADIO SET ON TIME PAYMENT

Simple, Selective & Efficient. **12 Months**

	£	s.	d.
2 Valve Sets	15	12	6
3 Valve Sets	21	10	0
4 Valve Sets	27	10	0
5 Valve Sets	32	10	0
"Udisco" Super			
Six	110	0	0
De Forest D17	75	0	0

Guarantee

TERMS:

10 p.c. Deposit;
balance in twelve
months.

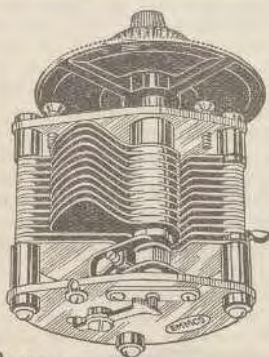
COMPLETE READY FOR USE

at Prices and Terms to suit every
pocket

KEOGH RADIO SUPPLIES

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RADIO PRODUCTS

Emmco Radio Products

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

All Capacities with Direct Vernier.

Built like a Watch.

Most Minute Adjustment.

Absolute Insulation.

Grounded Rotor Metal End Plates.

Straight Line Wave Length. Square Law.

Most up-to-date Low Loss Condenser Made.

Emmco Jacks, Single at 2/6

Emmco Jacks, Double at 3/-

Emmco Jacks, Switch at 4/6

SEE THEM AT YOUR DEALERS

Hector and Hectoreen are back on the job, and the amount of information that is now pouring in upon us is terrific. Hectoreen has proved herself a most efficient aid to Hector, and we expect to surprise you all by the amount of information we possess about you, especially the little ones. I have told Hector and Hectoreen that we are very much more interested in the doings of our little nieces and nephews than in the bigger ones, as the bigger ones are better able to take care of themselves. There is some feeling that Hector should have married an Australian birdling, but Hector is a great Imperialist, so he got a bride from South Africa to do his bit in linking up the Empire and holding it together. Hector is a very wise bird.

I shall be very glad if any of you have suggestions to make in regard to special activities and "stunts" for the bedtime story hour, and will write to me about them. Many of you must have thought of something you would like to do or have done. Let me know, and if it is possible and suitable I shall be glad to act upon it.

There are now quite a lot of institutions in which we are interested. Furlough House and the hospitals, and I am certain you all like to hear us talking to those kiddies. There is a great amount of love and friendship in the world, and a very wise writer once said that "true happiness is found in great love and much service." So never miss an opportunity of loving and helping where you can—the kiddies who are ill always welcome a thought. Of course, they are not usually ill at Furlough House, but they are there for a change and a holiday, and they welcome the fact that we keep them in mind and never forget them.

This is all for this week, except that I must finish off by sending all my love.

With every good wish,

UNCLE GEORGE.

GEORGE FIELD

297 Hunter Street, Newcastle (Phone 1185)

and at Hamilton.

Your mail orders despatched same day at lowest ruling prices. Write for lists.

THE LARGEST AND OLDEST RADIO SUPPLY HOUSE OF THE NORTH.

STANDARDISATION.

A move has been started in America for standardisation of wireless parts. Let's hope British and Australian manufacturers come in on this. For some reason or other the two largest Australian manufacturers of transformers have elected to use different markings for the terminals. Numbers of queries have reached us regarding the correct way to link up American and British made transformers. The average make of American transformer is marked as follows:—

Primary, +B, P. Secondary, —F, G. +B is joined to the positive plate battery, and P goes to the plate of the valve. —F goes to the negative filament lead and G to the grid of the valve.

With English transformers, the markings are:— Primary, IP, OP. Secondary, IS, OS. These correspond with American markings in this way:

IP = P
OP = +B
IS = —F
OS = G

LONG VALVE LIFE.

Sydney P. Stevens, Tahapau, Hawkes Bay, in a letter to International Radio Co. Ltd., says: "That DV-3 valve I bought from you about two years ago is still going strong and been working a loud speaker the last six months. I have tried several valves, but have none better."

J.O.A.K. AGAIN.

Mr. P. Boulton, of Albury, tuned J.O.A.K. (Japan) in with such strength on Sunday night that, using only one stage of audio, his announcement could be read 30 feet from the speaker. A 3 ft. loop aerial was used. He is getting a station about 6.30 in the morning on about 450 metres, but so far cannot read his call sign. Anyone else hear this station?

A TALL ONE.

A gentleman who resided in a Jersey community recently was afforded a business opportunity which would require locating in Brazil, and before making a decision in this connection wrote to WEA F making inquiry whether it would be possible to pick up the programmes of that station at such a distance from New York.

POSITION WANTED. An amateur wireless operator (in possession of Amateur Operators Certificate of Proficiency) requires a position. Prepared to go anywhere. Has good all round knowledge of wireless and is handy with tools. Apply, A.B.C., C/o Wireless Weekly, 12/16 Regent Street, 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	£39 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.

HOWELL'S SALE & EXCHANGE

THE HOWELL REINARTZ

HAS EARNED ITS REPUTATION BY ITS WONDERFUL
PERFORMANCES.

A FEW FACTS.

Mr. Wireless Enthusiast,—

Is it not a fact that Clarity, Volume, Selectivity, Low Wave DX Reception, and Excellent Local and Interstate Reception is the aim of every owner of a Radio Receiver?

Wouldn't you delight in being the owner of a Receiver that would give you these results?

Wouldn't you be proud of a Set that would operate on all wavelengths from 15 to 1250 metres or more, one that would receive the low wave stations as easily as the most expensive Low Loss Receivers? Yes, certainly you would. Well, you can easily do this by installing the "HOWELL REINARTZ." It will do it.

Let us rebuild your Receiver to the most "POPULAR HOWELL REINARTZ" circuit.

Call in and have a chat. It commits you to nothing.
Our advice is always given freely.

19 BARLOW STREET, SYDNEY

Open till 9.30 Friday Night

Phone MA 1133

MODEL STEAM ENGINES & PARTS

FOR LAUNCHES, LOCOMOTIVES, VERTICAL AND
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	£	s.	d.
Reliable Headphones, 4000 ohms, 12/6 to	15	0	
Dulcivox Loud Speakers	2	15	0
1 Valve sets, complete with Headphones, Batteries and Valve	6	0	0
2 Valve Sets	11	0	0
3 Valve Sets, complete from £17 to	21	0	0

SLINGSBY & COLES Ltd.

482 Pitt Street

Under the Railway, opp. Marcus Clarke

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.

FROM HERE AND THERE

RADIO FABLES.

Wireless is essentially a technical subject, and there are many cases on record where the public's lack of knowledge of the intricacies of the science has been used for the dissemination of false ideas. The latest example comes from Dunedin, where the broadcasts from the exhibition have been most unfavourably compared with the Australian broadcasts as received in New Zealand. A statement was made that the poor reception of the Dunedin broadcasts was due to a proximity effect which always obtains, and it was further said that the Sydney broadcasts were impossible to listen to in Sydney, but that they lost their undesirable characteristics by the time they reached New Zealand. The writer hardly thinks that listeners would be prepared to accept this nonsensical, if ingenious, attempt to explain the poor modulation of the Dunedin broadcasts.

Another fable, of a different nature, has been originated by a Christchurch writer in an endeavour to explain what was, until recently, a reduction of the strength of the Australian broadcasts as received in New Zealand. This writer states in all seriousness that the power of the Australian stations was deliberately reduced so that New Zealand listeners could not hear them, this being done as a retaliation for the refusal of permission to Amalgamated Wireless to broadcast the Dunedin Exhibition entertainments. Comments on these statements are needless.

—'New Zealand Herald.'

COW EXERCISE.

At last something has been found which radio cannot do. Health training exercises broadcast from KGO are good enough, as thousands of letters testify. But pushing a cow uphill every morning before breakfast, causing joy in the entire neighbourhood, is held to be more efficient than radio physical drills.

Here is a letter sent to the studio manager of KGO:—

"I have tried all your exercises, but I like my own little workout better. Every morning, before breakfast, I wrestle with a strong-willed, determined-eyed cow, pushing her uphill against her wishes. I must say it puts your radio exercises completely in the shade for efficiency.

"My cow exercises bring all the muscles of the body into play, and at the same time gives plenty of chance for muscles of the jaws. And the whole neighbourhood gets the benefit of the 'laughing exercise' which you recommend so highly."

WIRELESS IN CEYLON.

Though the wheels of progress have passed, leaving in their wake the smell of oil and the deeply imprinted track of the balloon tyre in the tea-dusty tracks of the island, radio is yet a bud.

Atmospheric conditions are entirely unsuitable for the listener-in, as static, mild thunderstorms, and cyclonic disturbances are exceedingly prevalent.

The islanders are, to say the least, excessively slow to grasp and accept any innovation, and as, unlike the situation in Australia, no appointing fruit in the shape of a good programme is held out to them to entice, they being perfectly human are not at all content to invest in a profitless venture.

This statement, of course, is general. There are the customary enthusiasts, the pioneers who sit up in the early hours in the sometimes deluded pastime of dodging Nature and picking up some European or Indian amateur.

The programme supplied by the one station in Colombo and the island is probably the principal reason of the opposition radio has met.

It consists of about two hours of gramophone and pinola selections, preceded by half an hour of Merse and Stock Exchange quotations.

This last is probably the only redeeming feature of the programme, but even this is only of interest to the up-country planters.

It may easily be seen, however, that the unattractiveness of the musical programme is the sole preventive which deters those who would buy sets from so doing.

It is my opinion, however, that a little enterprise, some capital, a good programme, and a loud speaker or two in the main streets would do a lot.

(W. de V.)

Continued on page 33, col. 2

For Sale

Three Valve Radio Set, complete with Accessories, only £11/10/-. This Set is a real bargain, and has just been fitted with new batteries. Call and hear it this week-end.

G. Holland

9 Pile Street, Dulwich Hill

M. H.**Mica Fixed Condensers**

AND

1. Of the permanent capacity engraved thereon.
2. Instantly interchangeable.
3. Of everlasting and unflinching service.

Unmounted.		Mounted Type.	
Two Clips are supplied with each Condenser.			
	each		each
0.0001 to 0.001 μ F,	3/-	0.0001 to 0.001 μ F,	4/6
0.0015 to 0.01 μ F,	3/8	0.0015 to 0.01 μ F,	5/6
0.015 to 0.04 μ F,	4/3	0.015 to 0.04 μ F,	5/8

Built by

L. McMichael Ltd., Wireless Engineers, London.

OSBOLDSTONE & CO. PTY. LTD.,

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MONTROSE LOW LOSS CONDENSERS

- .0005 Low Loss STRAIGHT LINE FREQUENCY Con- ^{each} 27/6
densers are unsurpassed for quality and price
- .0005 Montrose Low Loss Straight Line Condensers - 22/6

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Obtainable from your Dealers
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340 KENT STREET, SYDNEY.

Manufacturers of "Burginphone" Wireless Receivers

Box 734 G.P.O.

Phones: City 141, City 9886, M 3069.

WHAT THEY WRITE

CHEW THIS OVER.

To the Editor.

Dear Sir,—Be letter in this week's "Wireless Weekly" from Mr. McClelland. His idea of DX is a long way short of what we old experimenters demand. The picking up of 6WF and 5CL is no record at all, and would not be considered DX.

The power they use is sufficient for anyone to get them within 1000 or 2000 miles who can handle three valves. I have pages of log of stations as far as 2000 miles away using up to only 15 watts, using the old three-valve P.I.; also landed four Californian stations, two on speaker, still on the old three-valve. These stations were on 300 to 400 metres, and are considerably harder to pick up than the short wave ones. I was also the first to pick up KGO on one valve in March, 1924, when this station was on low power. This will stand comparison.

Hoping this will give Mr. McClelland an idea of DX.—Yours, etc.,

HERBERT GOTTING.

Braemar, N.S.W., 12/1/26.

A KNOCKER.

To the Editor.

Dear Sir,—Arthur McClelland, whose letter appeared on page 15 of your magazine of January 8, just about hits the nail on the head. In my opinion mere hot air is pumped by these experimenters than by the rest of the civilised world.

With monotonous regularity the daily press reports that Mr. So-and-so of Um-hum heard G.O.A.T., B.U.L.L., or some other station umpteen thousand miles away last night on his two-valve low loss receiver. What confirmation is there of these statements, and how do we know that these birds don't simply hear a noise and put it down to an American station?

What I want to see is one of these ginks come forward and show us a set that will drag in 3LO any time he's wanted, and without interference from 2BL or flopping valves. Any of us can do it with a neutrodyne or a super het, but let one of these experts show us B.C.L. mugs how it can be done on a simple receiver and still get 2FC.

Trot 'em out.—Yours, etc.,

"NO CONFIDENCE."

Bondi, 10/1/26.

PRACTICAL APPRECIATION.

To the Editor.

Dear Sir,—May I thank you for the excellence of your paper and the articles in it.

I have just constructed a single valve set, using the circuit given by "Grid Leak" in his article in your issue of 1/1/26. Operating the set here in Toowoomba, I got 3LO so loudly on the 'phones that I put a loud speaker on. The music and announcements could be heard clearly and distinctly at a distance of 6 feet. As 3LO must be at least 1000 miles in a direct line from here. It speaks highly for the effectiveness of the circuit.—Yours, etc.,

E. A. F. McDONALD.

Willowburn, Toowoomba, Qld.

FROM HERE AND THERE

Continued from page 31

ONE WAY OF PUTTING IT.

A great deal of discussion has been aroused in Chicago through the attempts of amateurs to get a "silent broadcasting night" once a week.

Summing up the situation, "Popular Radio," New York, says:—

"From all indications a noisy group of long distance cranks, who yap over their records like silly school kids, want all of the broadcasting stations in Chicago to close shop one night in each week while they paw over the ethereal wares of the country.

"Things are coming to a pretty pass when a bunch of idiots set out to prevent the sensible people in Chicago from listening to their local stations. Yet, aided by the newspapers, they seem to be making out quite a case for themselves, and we should not be a bit surprised to find them in the end victorious. After all, it is the squawker who wins his point in the long run."

ON THE AIR AGAIN.

The Wellington station, 2YK, has recommenced broadcasting. The regular transmissions will be on Monday, Wednesday, Friday and Sunday nights, from 8 till 10. The power input is 120 watts and the wavelength is about 300 metres. Selected gramophone and piano-player records will be given at present. When the testing has been completed, concert items will be broadcast. The studio is located in a building about half a mile away from the transmitting station. Mr. C. A. Drummond is the announcer, and Mr. Huggins, late of Auckland, is the operator.

A Simple Sum



If you add 14/- to the price of a

True Blue Valve

to allow partly for its 2 to 3 times longer life, you will not then arrive at its full value.

Then consider this:—

Micaphonic noises make a Set sound "like a bad gramophone." True Blues are the only non-micaphonic Valves in the world. Frying noises are caused by corroded contacts. TRUE BLUES have sterling silver contact points (a patented process) which cannot corrode.

TRUE BLUES consume $\frac{1}{2}$ the B Battery current of ordinary Valves.

SO TRUE BLUES MUST BE

"Cheapest in the long run, and better all along.

Don't let them say your Set is "Like a bad gramophone."

Insist on TRUE BLUES.

Made for both standard and small sockets. Obtainable at Wiles', Cullen's, Colville-Moore, Mick Simmons', Farmer's, Hordern's, Miss Wallace, Radio House, Murdoch's.

You should see it

A wonderful job

The general opinions expressed by experts, Radio Dealers, and builders of Sets after examining and testing

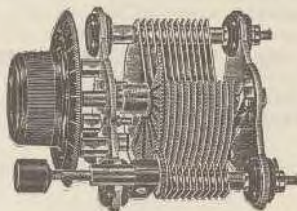
Heath Condensers

are

"A Wonderful Job,"

"Beautiful Work,"

"Built and Fitted Like a Watch."



The Strictly Low Loss Distance-Getter.

Laboratory tests prove it.

Come and examine the plates that cannot warp.

Prices, with Micrometer Geared Vernier, .00025, 27/-; .0005, 30/-; .001, 35/6. Plain, 7/- less (.00035 Plain, 25/6). Dials, 4/- extra.

Obtainable at Wiles', Colville-Moore., Mick Simmons', Farmer's, David Jones', Miss Wallace, Radio House.

HEATH'S RESISTANCE COUPLED AMPLIFIERS FOR PURITY.

Three Stages with Sockets wired and assembled. Can be added to your Detector in a few minutes. Saves the cost of transformers. Complete, 79/-. Obtainable David Jones', Mick Simmons', Farmer's, Wiles'.

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SYDNEY, N.S.W.



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

At the last meeting of the Delegates' Council, held at Institute Headquarters on Friday, January 8, 1926, a great deal of interest was manifested in the work of the Traffic Bureau. The organisation is being pushed rapidly ahead, and the work of the sub-committee entrusted with the drawing up of the details of the scheme is nearing completion. What now remains is for traffic to be originated, and this is a continuous progress, in which every member of the Institute should take part. It is essential for the success of the scheme that every member should feel their responsibility in this matter and should make a special effort to help in this way.

International Broadcasting.

Many efforts have been made during the past few months at international broadcasting, and it would seem that the time is not far distant when the international broadcasting of concerts and other items of interest will take place. One of the inherent difficulties in such a scheme is that of time, as when the programme is broadcast throughout the length and breadth of the world some people must perforce receive it in the early hours of the morning, while with others it will be received during the busiest hours of the business day. These are the difficulties which are very hard to overcome, as it is likely to upset a good deal of the business organisation.

The question of language is not anything like so hard a problem, as there is no doubt that one of the universal

languages will be adopted in this connection. Nevertheless, the technical problems involved have not yet been fully overcome, and the tests which are being carried out now at regular intervals only serve to indicate the problems which have to be dealt with, and the work of all experimenters can be carefully employed in overcoming these difficulties.

Agreement Form.

The following additional agreement form has come to hand:—J. E. Stewart, Newcastle, 2MR.

Institute's Transmitter.

Reports on the reception of any transmissions from A-2WI, particularly with regard to the standard frequency transmission signals at 10 p.m. on Tuesday nights, will be of great assistance in the adjustments of this transmitter. To the many who have already forwarded reports the Institute would express its thanks. Reports are still required, and the more that are sent in the greater facilities will be given for the obtaining of the maximum output by this Institute.

Members of the New South Wales Division are particularly requested to listen-in for these transmissions and forward to headquarters as complete a report as possible. This is especially desired in view of the proposed transmissions of news items and brief technical lectures from 2WI for the benefit of members. Until full adjustments have been made these transmissions cannot be made.

Round the Clubs

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

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THE LEICHHARDT AND DISTRICT RADIO SOCIETY.*

The 159th general meeting of the above society was held on the 12th inst. at the club rooms, 176 Johnston Street, Annandale.

There was a large attendance of members, as well as representatives of Croydon, Concord, and Merryville clubs. The subject of the evening, entitled "Magnets and Magnetism," was ably handled by Mr. J. C. Pinnell. Always looked upon as a dry subject, the lecturer proved the fallacy of such an opinion, for he treated us all to a most illuminating insight into the fundamental principles underlying magnetism. He brought out in a most interesting manner points not found in the general run of literature on the subject, showing what a wide field has been explored in the preparation of the lecture. A vote of thanks was carried by acclamation. The meeting then resolved itself into a small social evening to bid farewell to the late Secretary, Mr. W. J. Zech, who is leaving for Melbourne to enter into business there. During the repast, after eulogising speeches had been made by the chairman and members of the Leichhardt Club, Mr. Concord, and Mr. Concord, Mr. Zech on behalf of Croydon, and Mr. McQuoid, Merryville, wishing him the best of luck in his new sphere of activities, and deploring the loss to the Leichhardt Club in particular and the radio community in general, Mr. Zech was presented with a far-simile of the club's badge done in gold, suitably inscribed, as a reminder that he has been elected a life member of the society. The humorous touch was supplied by the presentation also of a pair of pistols and sword by the wags. In reply, Mr. Zech was visibly

overcome, and said he felt very keenly the severance of old ties, but promised to keep in touch with us by radio and letter, etc. After singing with feeling "For he's a jolly good fellow," the meeting closed.

Inquiries re the activities of the above society are cordially invited, and all communications addressed to the Hon. Sec., Mr. J. G. Arkell, 148 Ilford Street, Forest Lodge, will be duly acknowledged.

PRACTICAL WORK.

Morse Classes and A.O.C.P. Class.

The committee of the South Randwick and District Radio Club wishes to notify readers that the aforementioned club is now conducting classes for those persons desirous of learning to read Morse signals. A class is also being formed for those who wish to fit themselves to sit at examination for an amateur operator's certificate of proficiency, or who seek to extend their knowledge of radio in both theory and practice.

Instruction will be given in Morse signalling, procedure and conventions, Government regulations, and in the theory and practice of transmission and reception of wireless signals. Anyone interested may arrange to attend the Morse classes, or to receive the entire course of tuition, which will fully cover the range of subjects demanded by the present system of examination. Further particulars may be obtained in writing from the Hon. Secretary, Mr. W. R. Hardy, "Daisyville," 24 South Street, South Kensington, or information may be had by ringing Randwick 299. Enquiries will also be welcomed at the club meetings, which are held at "Rosie," See Street, South Kensington, each Monday, at 8 p.m. Fees: Club membership fees only.

CONCORD AMATEUR RADIO CLUB, 2GD.*

The members of the above club met at the club rooms, "Euripidea," Wallace Street, Concord, on Thursday, Jan.

What I See and Hear

THE ADVENTURES OF BURGESS

When one reflects upon the short time that radio has been developed, it is hard to realise how vital a part it plays in the maintenance of civilisation.

No ship of any size to-day puts to sea without a radio equipment and a full complement of operators, and it is practically impossible for a vessel to be at any time out of touch with those people whose interest follows it. Naturally, modern expeditions of exploration and survey such as those penetrating the heart of Africa or crossing the deserts of Australia, go out, just as a ship, fully equipped with wireless apparatus. And many are the strange adventures that those wireless outfits experience. The material and component parts are subjected to considerable stress and strain, and must be of sterling quality to win through.

Pregnant with interest are a series of articles describing the adventures of Burgess Batteries which I have just received from America by the last mail.

What happened to these cells during their journey to the North Pole with MacMillan; Round the World Flight of the American Army Airman; the Thrills of a Balloon Race across Europe; the Rough Times in the Speeacks; across America in the Shenandoah and Los Angeles; in the Arctic Outposts; in the Submarines and other ships of the United States Navy; in the Leviathan, etc., are dealt with in detail and make fascinating reading, in fact the heart of a small boy—in fact grown ups, too—would rejoice over these stories, just as over Jules Verne works.

AUSTRALIAN MADE PARTS PROVE SUCCESSFUL.

Telephony Tests With England.

Mr. H. W. Maddiek, prominent Victorian experimenter, using "Advance" radio products, has just completed a receiving set for special telephony tests by arrangement with English and American experimental stations.

On the first test of this set Mr. Maddiek has broken another wireless record by listening to the conversation between an experimenter in London and a New Zealand station in Wellington.

The talk took place between 6.10 and 7.45 p.m. on Sunday, January 10. The conversation concerned technicalities of the apparatus used. After 7.45 the New Zealand station informed the English experimenter that his signals and telephony had become weakened and were unintelligible, though Mr. Mad-

dick with his Australian apparatus could still plainly hear the conversation from England. After this the Morse code was used.

This is the first time that telephony has been carried out over such a long period on low power without losing any words.

The strength of the stations was excellent. Taking 10 as a maximum strength, the Englishman was received at strength 3 and the New Zealand station strength 8.

This speaks very highly for the efficiency of "Advance" radio products. Mr. Maddiek will almost immediately commence the official tests, and he is confident that in these tests the apparatus will prove far superior to the imported lines which he has been using. Australian-made goods are now becoming far superior to many of the imported lines.

"Advance" radio products are manufactured by Messrs. Clarke and Hagblom, of Carlton, Victoria. During the years of their manufacture of radio products their component parts have improved wonderfully, and many up-to-date lines have been recently introduced on the market.

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14, for the purpose of holding their usual weekly meeting. Attendance was up to the usual standard.

After the minutes and correspondence had been dealt with, it was left to the members to compile a roster for the ensuing quarter.

It was unanimously decided that a copy of "Jama" be purchased, and that it should form the basis of the club's lectures for the next three months. Each individual member to take a chapter or two and thoroughly explain it. It was also decided that Mr. W. Barker and Mr. C. E. Morton be the two chief lecturers, each to be prepared to deliver a short lecture when called upon.

The Morse Class was also a feature of the club some time ago has been revived, it being definitely decided to devote half an hour each club night, immediately after the correspondence, to code practice.

News has reached the club that one of our members is an inmate of Sydney Hospital, having met with a serious accident, which is likely to keep him there for some time. The members decided to lighten his troubles as much as possible by visitations, etc., and expressed the hope that he will be restored to health and that no after-effects will mar his progress.

The club's transmitter, 2GD, is still "perkling" satisfactorily, and reports have been received from various States. More reports are needed, and will be acknowledged by card.

Any inquiries as to membership, etc., will receive prompt attention if addressed to the Hon. Sec., Mr. W. Barker, at the club rooms.

Meeting closed at 10.15 p.m.

THE SOUTH RANDWICK AND DISTRICT RADIO CLUB.*

The first half-yearly meeting of the above club was held at "Roobie," See Street, South Kensington. Six new members were enrolled and officers elected for the ensuing period.

It was decided to construct a workshop and equip it with the necessary tools for the construction of experimental and club apparatus, etc.

A very interesting and progressive policy has been outlined, part of which is the acquisition of the most modern wireless gear. Another very important feature is the instructional classes for those desirous of learning the Morse code or of obtaining the amateur operator's proficiency certificate.

At the next meeting Mr. W. A. Stewart will deliver a lecture on "Wavemeters—their construction and use."

Anyone new is interested in radio is invited to communicate with the Hon. Secretary, Mr. W. R. Hardy, "Dudville," Beulah Street, South Kensington.

CROYDON RADIO CLUB.*

The usual weekly meeting of the Croydon Radio Club was held in the club rooms, "Rockleigh," Lang Street, Croydon, on January 16, at 7.30 p.m. After the correspondence had been dealt with, Mr. Ledger brought forward some interesting information explaining the action of tantulum rectifiers. This subject evoked a great deal of interest among all the members, as the great efficiency of this type of rectifier and the smallness of the electrodes used made the majority of the owners of the old aluminium type present solemnly swear to decorate the shack with a set of these new rectifiers when available for amateur use and consign the old ones to the junk heap.

Mr. C. W. Shide then delivered a lecture on the difficulties surrounding short wave transmission and reception. The lecturer quoted the instance of our Victorian friend, 3BD, who found that most of the interference experienced by him was due to the effect of uninsulated guy-wires and clothes-lines in the vicinity of his antenna; in fact, the effect of tapping either of the above was like the local fire engine rattling down the main street. Therefore, in view of these circumstances, the local residents should be prepared for the ludicrous sight of the week's washing of some of the club members supported by a clothes-line, broken at intervals by hefty insulators tested to the strain of two props (cycles unknown).

At the conclusion of his lecture Mr. Shide was so besieged with questions that the meeting did not close till 10.15, when members dispersed with the full intention of ridding Sydney's stock of insulators to enhance the efficiency of their short wave reception. All inquiries regarding the club's activities addressed to the club rooms will be promptly attended to.

WIRELESS SOCIETY OF NEWCASTLE.*

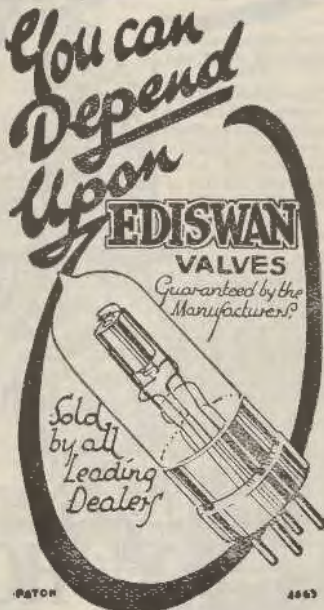
A meeting of the Newcastle Wireless Society was held at the club rooms, 49 Everton Street, Hamilton, on Tuesday night, January 12, 1926. The proceedings were opened by welcoming into the society a new member, Mr. O'Mara.

The usual good attendance was noticed. The lecture of the night was delivered by the President, Mr. L. Swain, A 2CS, on "Tuned Anode Radio Frequency," which was highly appreciated by members. Mr. Swain very clearly dealt with this subject, and pointed out to members that a lot of experimentation and research could be exploited in this field. The transmitter has been on the air frequently lately, and members have reason to believe that the tone on 210 metres is all that could be desired. The society would be very pleased to have reports on transmissions. All reports will be promptly acknowledged by the society.

The next meeting of this society will be held on Tuesday, January 19, and persons interested in its activities are requested to come along or get into touch with the Hon. Sec., Mr. L. Wilson, c/o Messrs. W. G. Watson and Co., 29 Hunter Street, Newcastle, who will be pleased to give any information.

BROADCAST PLANS IN PERSIA.

An ambitious scheme in regard to broadcasting is being pursued in Persia, following upon the raising of the ban which hitherto vetoed all suggestions for establishing a broadcasting service. A 1½ kilowatt station has already been constructed at Teheran, and plans are proceeding for the installation of six relay stations in different provinces.



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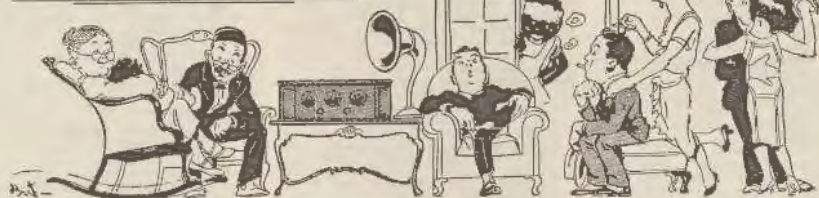
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FRIDAY, JANUARY 22.

Middie 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. G. Groves, will be relayed from the Tivoli Theatre and broadcast by 4QG.

4—Close down.

Night Session.

8—Tune-in to the Tivoli Theatres.

8.5—From the Studio: Soprano solo, "Ave Maria," (Rosenwicz); with violin obligato, Mrs. Herbert Bell; cornet solo, "The Rosary" (Nevin), Mr. J. W. Burgemeister; tenor solo, "Blue Aleatian Mountains" (Adams), Mr. W. Stebbins; Mr. N. Gould and his banjo; baritone solo, selected, Mr. H. Moffat; instrumental number, "Look for the Silver Lining" (Kern), the Studio Quartette; soprano solo, "Love Pipes of June" (Day), Mrs. Robert Bell; cornet solo, "Romance Wendouree" (Coley), Mr. J. W. Burgemeister; tenor solo, "To the End of the World with You" (Ball), Mr. W. Stebbins; Mr. N. Gould and his banjo; baritone solo, selected, Mr. H. Moffat.

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

9.10—Announcements.

9.15—Three-quarters of an hour's Irish entertainment by Mr. Charles O'Mara and Miss Anna Burke. The programme will include the following:—Songs by Miss Anna Burke, (a) "Little Town in the Anld County Down" (Senders), (b) "Barney Malone" (M. Nomo), (c) "Shanaghagh Vale" (Stroud), (d) "Mulligan" (Manning); songs by Mr. Charles O'Mara, (a) "The Donovan's" (Needham), (b) "Mulligan's Picture Show" (Waston & Lee), (c) "Off to Philadelphia" (Haynes), (d) "Gilligan's Morning Day" (Stanford).

9.55—The "Daily Mail" news service. 10—Close down.

SATURDAY, JANUARY 23.

No midday transmission.

The Children's Hour.

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

6.25—Tune-in signal.

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

7.15—Close down.

Night Session.

8—Tune-in to the Tivoli Theatres.

8.5—From the Studio: Soprano solo, "After Long Absence" (Sanderson), Miss Lottie Richter; scolian selection, band number, "Voice of the Goss" (contralto solo, "Bon Bolt" (Dr. English), Miss Vera Parker; baritone solo, "Mifanwy" (Foster), Mr. Fred Homer; violin solo, "Uno Pensoso Davina" (K. Holbrooke), Mr. H. Scott MacCallum; soprano solo, "Weep Not for the Roses" (D. E. Slater), Miss Lottie Richter; duo art selection, "Waltz Song"—"Nymphs and Fauns" (Bumberg); contralto solo, "When my Ships come Sailing Home" (Dorel), Miss Vera Parker; baritone solo, "Beansie" (D'Hardeol), Mr. Fred Homer.

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

8.55—Announcements.

9—From Lennon's Hotel: By courtesy of the proprietors of Lennon's Hotel, an hour and a half of dance music played by Miss May Dobbyn's Vice-Royal Orchestra will be relayed from Lennon's Ballroom.

10.30—From the Studio: The "Sunday Mail" news service. Close down.

SUNDAY, JANUARY 24.

Morning Session.

The complete morning service at St. Andrew's Presbyterian Church will be broadcast. Order of service:

10.45—Tune-in signal.

10.50—Organ prelude, "Andante" (Sonata 6), (Mendelssohn); Doxology; prayer of invocation; hymn 873, "We love the place, O God"; reading, Psalm 37, verses 23-40; prayer; Psalm 23, "The Lord is my Shepherd"; chant 209; reading, Hebrews 12, verses 1-14; children's address; children's hymn 525; prayer and Lord's Prayer; announcements and of-

feratory; anthem, "Lift up your heads" (Hopkins); sermon, "The Chastening of the Lord," Hebrews 12, verses 6; "When the Lord loveth He chastiseth"; brief prayer; hymn 207; Benediction; organ postlude, "Moreau Symphonique" (Guilmant). Close down.

Afternoon Session.

The afternoon transmission will take the form of a "Pleasant Sunday Afternoon" held in the studio of 4QG and arranged by the Young People's Department of the Newmarket Baptist Church.

2.55—Tune-in signal.

3—Hymn, "What a Friend" (Scriven); brief prayer; tenor solo, "The Lord is my Light" (Allison), Mr. J. Lord; Bible reading, Psalm 23, John 10, 1-18; instrumental number, "How Lovely is Zion" (Wreckuhl), Miss L. Davidson, Messrs. Auld, Pike, and Durrant; recitation, "Papa's Letter," Miss A. Clew; solo, "The Burged Cross" (Remond), Mr. A. E. Durrant; brief address, "The Lord our Shepherd," Mr. R. Y. Pike, leader Bible Class; set, "Gleamed Lights of Home" (Fanny Crosby), Miss J. Paine and Mr. E. R. Beasley; instrumental number, "Refuge at the Cross" (Gabriel); recitation, selected, Miss G. Chudwick; tenor solo, "King Ever Glorious," from the "Crucifixion" (Stainer), Mr. J. Lord; quartette, "Give me Jesus"; descriptive item, "The Sinner and the Song" (Thompson), by the Bible Class; hymn, "Shepherd of Israel" (Stebbins); Benediction. Close down.

Evening Session.

The complete evening service in St. Andrew's Presbyterian Church will be broadcast.

7.5—Tune-in signal.

7.10—Organ prelude, "Caprice" (Mozowski), "Nocturne G Minor" (Chopin, chorale, "O Sacred Heart" (Kisling).

7.30—Anthem, "Sun of my Soul" (Turner); prayer of invocation; hymn 429; reading, Mark, chap. 3, verses 1-21; solo, "Blessed are the Holy" (Frost), Mr. James Hunter; prayer and Lord's Prayer; hymn 302; instructions and offertory; anthem, "Sing Praises to God" (Wareing); sermon, "The Sanity of the Christian Life," Mark 3, verses 21, "They said His is beside Himself"; brief prayer; hymn 341; Benediction; organ postlude, "Toccata" (Dobois). Band Concert: At the conclusion of the church service, the concert provided in the Wickham Park by the Greater Brisbane Municipal Concert Band, under

the leadership of Mr. E. Jackson, will be broadcast.
8.30—Band concert.
9.30—Close down.

MONDAY, JANUARY 25.

Midday Session.

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

The Children's Hour.

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

6.35—Tune-in signal.
6.35—The Children's Hour. Nursery rhymes and music; bedtime stories by "The Sandman."
7.15—Close down.

Night Session.

8.5—Tune-in to the Tivoli Theatre.
8.5—From the Studio: Contralto solo, "Angels Guard This" (Goddard). Mrs. Charles Willey; motorists' corner, a talk on "The Gear Box and Differential," Mr. W. J. Donohoe; soprano solo, "La Kaday" (Crompton); Miss Millicent Baker; vocalization number, "Playmate," Miss Foe Todd; tenor solo, "The Drum Major" (Newton), Signor Corti; Hawaiian instrumentalists "Rio Nights," the Kalua Trio; baritone solo, "Lighterman Tom" (Squire), Mr. D. Brindfield; Mr. N. Gould and his band; eleventh number, "Peter," Miss Foe Todd; radio novelty, English concertina, "The Dream of Home" (Arditi), Mr. E. Powney.
8.55—Weather information officially supplied by the Commonwealth Weather Bureau.

9—Announcements.
9.5—Hawaiian instrumentalists, "On the Beach at Waikiki," the Kalua Trio; contralto solo, "My Ships" (Burns). Mrs. Charles Willey; Mr. N. Gould and his band; tenor solo, "Love, could I only tell the Signor Corti"; Hawaiian instrumentalists, "Hilo March," the Kalua Trio; soprano solo, "Boat Song" (Ware), Miss Millicent Baker; vocal selection, "Sea Songs" (Jessel), (b) "Parade of the Tin Soldiers" (O'Hagan); English concertina, "Under Freedom's Flag," Mr. E. Powney; baritone solo, "Lady Mine" (Lahr), Mr. D. Brindfield; duo art selection, fox trot, "Sheba" (O'Hagan).
9.55—The "Daily Mail" news service.
10—Close down.

TUESDAY, JANUARY 26.

No midday session.
Night Session.
8.5—Tune-in to the Tivoli Theatre.
8.5—From the Studio: Contralto solo, "Salsam" (Lane), Miss Vera Parker; mouth organ selections by Mr. W. R. Lamb; tenor solo, "Bamboula" (Ellis), Mr. W. Stebbins; cornet solo, "Comin' thro' the Rye" (Himmel), Mr. J. W. Burgemeister; soprano solo, "Haven of Tenderness" (Gordon), Mrs. Robert Bell; instrumental number, "Moon Glow" (J. F. Barth), the Studio Quartette; musical monologue,

"Three Ages of Man" (Hastings), Miss Vera Cross; baritone solo, "Beneath Thy Window" (Toschmacher), Mr. L. R. Little; auto solo, "In the Forest" (Forsvall), Mr. B. Kelly; vocal selection, vocal, "In a Monastery Garden" (Ketsberg).
8.55—Weather information officially supplied by the Commonwealth Weather Bureau.

9—Announcements.
9.5—Instrumental number, fox trot, "I'm Sitting Pretty in a Pretty City," the Studio Quartette; contralto solo, "I Did Not Know" (Trotter), Mrs. Vera Parker; mouth organ selection by Mr. W. R. Lamb; tenor solo, "The Heart of a Rose" (Methran), Mr. W. Stebbins; cornet solo, "Inspiration" (Ond Hume), Mr. J. W. Burgemeister; soprano solo, "Sky Biscuonette" (May Brahn), Mrs. R. Bell; instrumental number, "Falling" fox trot (Collings), the Studio Quartette; musical monologue, "Just Her Way" (Sylvester), Miss Nora Goss; violin solo, "Bouquet Valente" (Goldin-Kreider), Mr. H. Scott MacCallum; baritone solo, "Beloved, it is Morn'" (Aylward), Mr. L. R. Little; duo art selection, "Blue Danube Waltz" (Strauss).
9.55—The "Daily Mail" news service.
10—Close down.

WEDNESDAY, JANUARY 27.

12.55—Tune-in signal.
1—Market reports supplied by the Council of Agriculture; Stock Exchange information supplied by the Committee of the Brisbane Stock Exchange; weather information supplied by the Commonwealth Weather Bureau; "Daily Standard" news service. Close down.
The Children's Hour.
A children's bedtime story session is held each Monday, Wednesday, and Saturday evening. At a later date this session will be made a nightly feature, but in the immediate present, while transmission is being effected under temporary conditions, it is held three times weekly.
6.25—Tune-in signal.
6.30—The Children's Hour. Nursery rhymes and music; bedtime stories by "Little Miss Brisbane."
Night Session.
8.5—Tune-in to the Tivoli Theatre.
8.5—From the Studio: Bass solo, "King of the Air" (Stonham), Mr. J. P. Cornwell; lecture to farmers by Mr. R. Wight; instrumental number, "Remembrance" (Deppen), the Studio Quartette; soprano solo, "A May Morning" (Denza), Miss Victoria Down; collo solo, selected, Miss Petropoulos; baritone solo, "The Drama of Life" (Lahr), Mr. Fred Homer; flute solo, "Faust Fantasia" (Gounod), Mr. B. Kelly; soprano solo, "Ave Maria" (Luizi), Miss Victoria Down; vocal selection, "Foe Gyn Suite," No. 1, "Morning" (Greig); bass solo, "Where the Great Ships Ride" (Sanderson), Mr. J. P. Cornwell.

8.55—Weather information officially supplied by the Commonwealth Weather Bureau.
9—Announcements.
9.5—Soprano solo, "Amarella" (Winn), Miss Ellen McLennan; instrumental number, vocal, "The Drama of Adam's Song," the Studio Quartette; baritone solo, "A Song of May" (Rovers), Mr. Fred Homer; musical monologue, "The Cowards" (Hamel), Miss Ellen McLennan; vocal selection, contralto solo, "Christina's

Lament" (Dvorak), sung by Miss Belog Hank; baritone solo, "Till the Sands of the Desert Grow Cold" (R. E. Ball), Mr. D. K. Symes; instrumental number, "Scented Violets" (Gerswold), the Studio Quartette; baritone solo, "My Beloved Queen" (Fabian Rose), Mr. D. K. Symes; violin solo, "Romance" (Licourane), Mr. H. Scott MacCallum; bass solo, by request, "Come to the Fair" (Morton), Mr. N. A. Cooling.
9.55—The "Daily Mail" news service. Close down.

THURSDAY, JANUARY 28.

Midday Session.
12.55—Tune-in signal.
1—Market reports supplied by the Council of Agriculture; Stock Exchange information supplied by the Committee of the Brisbane Stock Exchange; weather information supplied by the Commonwealth Weather Bureau; "Daily Standard" news service. Close down.
Night Session.
8—Tune-in to the Tivoli Theatre.
8.5—From the Studio: Tenor solo, "Everywhere" (Warwick Evans), Mr. J. Trezise; cornet solo, selected, Mr. Frank Pörr; soprano solo, "One Fine Day," from "Madame Butterfly" (Puccini), Mrs. A. Jordan; English concertina, "The Polish March" (Payne), Mr. E. Powney; baritone solo, "Mother Maere" (Olcott and Ball), Mr. N. Brown; cornet solo, selected, Mr. Frank Pörr; vocal duet, "Absent" (Metcalfe), Messrs. J. Trezise and N. Brown; soprano solo, "At My Window" (Park), Mrs. A. Jordan; vocal selection, "Ballet Egyptian" (Lauriat), baritone solo, "Red Devon by the Sea" (Clayton), Mr. Norman Brown; English concertina, "Trauere" (Schumann), Mr. E. Powney; tenor solo, "The Link Divine" (Lauriat), Mr. J. Trezise.
8.55—Weather information supplied by the Commonwealth Weather Bureau.
9.55—Announcements.
9.55—From the Centennial Hall: By courtesy of the lessee, an hour's dance music by the Centennial Hall Orchestra will be relayed.
9.55—From the Studio: The "Daily Mail" news service. Close down.

2KY

WEEKLY BROADCASTING PROGRAMME.
TRADES HALL.

Call Sign. 2KY. Wavelength, 280 metres.

FRIDAY, JANUARY 22.

Afternoon Session.
2.30—A varied vocal and musical programme will be transmitted, closing down at 4.45 p.m.
Children's Hour.
6.30—"The Man in the Moon."
Evening Session.
7.45—Latest news items; Ryan's Viola Dance Orchestra; Miss Esme Diell, L.L.C.M.; Miss Music Carroll, soprano; Mr. Alf James, baritone; and others to be announced.
SATURDAY, JANUARY 23.
Evening Session.
7.15—Latest news items and sporting results; Mr. Alf James, tenor; Miss O'Neill, contralto; Herbert Beaver,

humorous odds and ends; and others to be announced.

MONDAY, JANUARY 25.

Afternoon Session.

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

Children's Hour.

6.30—"The Man in the Moon."

Evening Session.

7.45—Latest news; items; Miss A. Ruwald, entertainer; Miss D. Johnstone, soprano; Miss Wood, soprano; Mr. J. Gray, baritone; Mr. W. Strain, tenor; Mr. Walter Faulkner, musical burlesque; lecturette, "My Visit to Russia," Mr. J. S. Garden; Freedland's Dance Orchestra; and others to be announced.

TUESDAY, JANUARY 26.

2KY will be closed on Anniversary Day.

WEDNESDAY, JANUARY 27.

Afternoon Session.

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

Children's Hour.

6.30—"The Man in the Moon."

Evening Session.

7.45—Latest news; Cecil Morris and his Bluebirds' Jazz Band; radio lecturette, Mr. B. Whitaker; Mr. David Bond, baritone; Mr. McKillop, tramway comedian; Miss Dorrington, soprano; Miss Dean, pianist; Mr. Don Ellis, harmonica; and others to be announced.

THURSDAY, JANUARY 28.

Afternoon Session.

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

Children's Hour.

6.30—"The Man in the Moon."

Evening Session.

7.45—Latest news items; Messrs. Haydon and Price, cornet duet; Miss Tibbie Smith, monologues; Miss Beckie Jones, contralto; special announcement regarding 2KY's big serial story competition.

2BL

BROADCASTER (SYDNEY) LTD.

Call Sign, 2BL. Wavelength, 363 metres.

FRIDAY, JANUARY 22.

Afternoon Session.

3—G.P.O. clock and chimes; weather report and social notes from "The Sun."

4.15—Music from the Studio.

4.45—G.P.O. clock and chimes; a talk on "Modern Psychology" by Mr. J. M. Prentice.

5—G.P.O. clock and chimes; music from the Studio.

5.30—G.P.O. clock and chimes; serial story entitled "The Treasure of Ho."

5.45—Music from the Studio.

5—G.P.O. clock and chimes; "Sun" news service.

5.15—G.P.O. clock and chimes. Close down.

Early Evening Session.

6—G.P.O. clock and chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison.

6.30—Sporting resume from "Sun"

Newspapers; 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.

Dance music broadcast from the Embassy Dancing Palais. Concert from the Studio, including Miss Margaret McKenzie, soprano; Broadcasters' Dinner Quartet; Dan Thomas, world-famous pantomime dame. At 9 p.m. Mr. H. C. Morgan will talk on "Moring," and at 10 p.m. there will be a "Round the World Travelogue" by Mr. J. M. Prentice.

SATURDAY, JANUARY 23.

Afternoon Session.

2—G.P.O. clock and chimes; special sporting information broadcast direct from "Sun" office; music from the Studio.

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 George and the kiddies.

7—A talk to the kiddies by Brings.

7.45—A talk on "Roads."

Evening Session.

Dance music broadcast from the Dun-gowan Modern Dance Band, Manly. From the Studio: Mr. Norman Wright, tenor and Mr. Sid Owen, in musical novelties. At 9.30 Brings will chat about the "Aborigines."

SUNDAY, JANUARY 24.

11—Service broadcast from Chalmers Street Presbyterian Church; minister, Rev. D. P. Brandt.

9.30—Classical concert from the Sadio.

7.15—Service broadcast from St. Thomas' Church of England, North Sydney; minister, Rev. H. A. Baker.

8.30—From the Studio: Alfred Cunningham, baritone.

MONDAY, JANUARY 25.

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 on "A Course in English Literature" by Mr. J. M. Prentice.

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 Treasure of Ho."

4.45—Music from the Studio.

4.55—Late market reports from "The Sun."

5—G.P.O. clock and chimes; "Sun" news service.

5.15—G.P.O. clock and chimes. Close down.

Early Evening Session.

6—G.P.O. clock and chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison.

6.30—Sporting resume from "Sun" Newspapers; Uncle Jack and the kiddies.

7.30—"What's On"—a guide to the visitors and citizens of Sydney.

7.45—Late stock, hides and market reports by courtesy of Pitt, Son and Badgery.

7.50—Close down.

Evening Session.

Ambassadors' Salon Quartet, under the direction of Mr. Claude McGlynn. From the Studio: Popular concert, featuring Les Herford, baritone. Dance music until midnight supplied by Ambassadors' Jazz Orchestra, under the direction of Mr. Hammett. Interesting talks will also be given by Mr. Maurice Breton, on "Memory Culture," and Mr. Fraser Anderson.

TUESDAY, JANUARY 26.

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; special musical session.

4.30—G.P.O. clock and chimes; serial story entitled "The Treasure of Ho."

4.45—Music from the Studio.

4.56—Late market reports from "The Sun."

5—G.P.O. clock and chimes; "Sun" news service.

5.15—G.P.O. clock and chimes. Close down.

Early Evening Session.

6—G.P.O. clock and chimes; Pavilion Dinner Orchestra, under the direction of Mr. Cec Morrison.

6.30—Sporting resume from "Sun" Newspapers; 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.

Popular concert from the Studio, featuring Broadcasters' Instrumental Trio; Myra Gillon, contralto; Norman Wright, tenor. A talk on the "Wine Industry" by Mr. Leo Daring and Mr. J. M. Prentice will speak on "Foreign Affairs" and reply to any telephone question on the subject.

WEDNESDAY, JANUARY 27.

Afternoon Session.

3—G.P.O. clock and chimes; weather report and social notes from "The Sun."

3.15—Broadcasters' Trio.

3.30—G.P.O. clock and chimes; a talk on "The Musical Outlook" by Mr. J. M. Prentice.

3.45—Broadcasters' Trio.

4—G.P.O. clock and chimes; Broadcasters' Trio.

4.30—G.P.O. clock and chimes; serial story entitled "The Treasure of Ho."

4.45—Broadcasters' Trio.

4.55—Late market reports from "The Sun."

5—G.P.O. clock and chimes; "Sun" news service.

5.15—G.P.O. clock and chimes. Close down.

Early Evening Session.

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 George and Uncle Jack with the kiddies.

7.30—"The Advancement of an Australian Firm"—Geo. A. Bond and Co., Ltd.

7.45—Late stock, hides and market reports by courtesy of Pitt, Son and Badgery.

7.50—Close down.

Evening Session.

Hoyt's Imperial Orchestra, under the direction of Mr. Lionel Hart, broadcast from Hoyt's Theatre. From the Studio: Broadcasters' Minstrel Show; Honolulu Duo in steel guitar selection.

Burgess—"They're used throughout the United States Navy"—Batteries

tion; Elliot and Edwards in harmony numbers; Millie Hughes, soprano, and Ray Healy, basso cantante, in solos and duets; Dance music supplied by Professor Bolot's Embassy Jazz Orchestra broadcast from Embassy Palais.

THURSDAY, JANUARY 28.

- Afternoon Session.
3.—G.P.O. clock and chimes; weather report and social notes from "The Sun."
8.15—David Jones' Tea Room Trio.
9.30—G.P.O. clock and chimes; a talk on "Studies in English Poetry" by Mr. J. M. Prentice.
9.45—Music from the Studio.
10.—G.P.O. clock and chimes; David Jones' Tea Room Trio.
10.15—Music from the Studio.
10.30—G.P.O. clock and chimes; serial story entitled "The Treasure of Rio."
10.45—Music from the Studio.
10.55—Late market reports from "The Sun."
5.—G.P.O. clock and chimes; "Sun" news service.
6.15—G.P.O. clock and chimes. Close down.
Evening Session.
6.—G.P.O. clock and chimes; Pavilion Dinner Orchestra, under the direction of Mr. Oec Morrison.
6.30—Sporting resumes from "Sun" newspapers; Uncle Jack and the kids.
7.45—Late stock, hides and market reports by courtesy of Pitt, Non and Badgery.
7.50—Close down.
Evening Session.
Concert broadcast from Australian Hall, Elizabeth Street, assisting artists—Misses Dorrie Ward, soprano; Hea-

ther Kilmaird, contralto; Dulcin Blain, violiniste; and Edith Dickerson, songs at the piano; Meares, W. R. Lewis, baritone; Bryon Carter, cellist; Horace Keats, accompanist.

3AR

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FRIDAY, JANUARY 22.

- Morning Session.
12 noon—Time Signal.
12.15—First Weather Forecast.
12.3—Events of the Day.
12.5—The Age News Bulletin.
12.15—Musical Selections.
12.30—Stock Exchange News.
12.35—Market Reports.
12.40—Musical Selections.
12.50—Mail Reports. Shipping Movements. Musical Selections.
1.—The Georgian Cafe Orchestra.
2—Close Down.
Afternoon Session.
3.30—Musical Selections.
3.45—Graphic News.
4.—Time Signal.
4.1—2nd Weather Forecast. The Georgian Cafe Orchestra.
4.30—Mr. K. Stanley Haines (of Brunnings Pty. Ltd.) Talk to the Children on "Interesting Botany."
4.45—Musical Selections.
5—Close down.
Evening Session.
6.15—The Georgian Cafe Orchestra.
7.15—The Children's Corner by Uncle Ned.
8—Time Signal.
8.1—Mr. Fred Mitty. Special Racing Commissioner in 3AR will give his weekly Racing Talk "Racing Anticipations."
8.10—Mr. R. Stanley Haines (Gardening talk) "Artificial Manures and their uses." (3rd series).
8.25—Mr. Fred Smyrk (bass-baritone).
8.35—Miss Marion Daniels (meso-contralto).
8.40—Miss Pauline West (solo violiniste).
8.40—Miss Edna Johnson (clouctoniste).
8.55—Miss Maxwell Cowderoy (solo pianiste).
9.—Miss Cecily Walkerdine (contralto).
9.10—Miss Freda Stevens (soprano).
9.17—Mr. Fred Smyrk (bass-baritone).
9.25—Miss Pauline West (solo pianiste).
9.32—Miss Marion Daniels (meso-contralto).
9.39—Miss Maxwell Cowderoy (solo pianiste).
9.46—Miss Edna Johnson (clouctoniste).
9.53—Miss Freda Stevens (soprano).
10—Time Signal.
10.1—The Age News Bulletin. Exclusive to 3AR.
10.15—The Georgian Cafe Orchestra.
11—National Anthem and Close Down.

SATURDAY, JANUARY 23.

- Morning Session.
12 Noon—Time Signal.
12.1—First Weather Forecast.
12.3—Events of the Day.
12.5—The Age News Bulletin.
12.15—Musical Selections.
12.30—Stock Exchange News.
12.35—Market Reports. Foreign Exchanges of the world, supplied exclusively to 3AR by Messrs. The Cook & Sons.
12.40—Musical Selections.
12.50—Mail Report. Shipping Movements. Musical Selections.
1.—Close Down.
Afternoon Session.
Mounee Valley Races.
2.—Description while racing of Hurdle Race, 2 miles.
2.30—Result of Sydney Handicap, 1 1/2 lengths.
3.—Description while racing of War. Field Stakes, 6 furlongs.
3.30—Musical Selections from the Studio.
3.40—Result of Warrack Nightweight Handicap, 5/4 furlongs.
4—Time Signal.
4.20—Result of Caldermeads Handicap, 1 1/4 miles.
4.45—Musical Selections.
4.50—Result of Cranallan Maiden, 1 mile.
4.55—The Evening's Amusement Guide.
5.—Close down.
Evening Session.
6.15 The Georgian Cafe Orchestra.
7.15—The Children's Corner, by Uncle Peter. Announcement of Children's Jig Saw Painting Competition.
8.—Time Signal.
8.15—Musical Selections from the Studio.
8.45—Dance Night. The Rybhuik Dance Orchestra, relayed from the Mason De Luxe, Broadway, St. Kilda, under the direction of Mr. George Lewis.
9.30—Week-end Travellers' Information. Railway information, supplied by the Victorian Railways Department. Timetable information, supplied by the Lanesway's Board. Road information, supplied by the Royal Automobile Club.
9.50—The Mason De Luxe Rybhuik Orchestra.
11.—National Anthem and Close Down.
MORNING, JANUARY 23
Morning Session.
10.30—Bells from St. James' Old Cathedral.
11.—Service from the Church of Christ, Newson St. Preacher, Mr. Guss. Scholz. Hymn, Prayer and Lord's Prayer. Old Testament Lesson. Psalm 34. New Testament Lesson. St. Matthew, chapter 5; 1:26. Evensong Address. Communion Hymn. Communion. Hymn. Prayer. Invitations. Sermon. Hymn. Benediction.
Afternoon Session.
2.—Time Signal. Miss Clure Daily (soprano). Miss Nell Lyster (soprano). Mr. Roy Lewis (baritone). Mr. Sydney Heron (bass). Mr. Hector Perkins (tenor).
6.30—The bells from St. James' Old Cathedral.
7.—Service from the Church of Christ, Swanson St. Preacher, Mr. J. L. Shipway. Hymn. Prayer and Lord's Prayer. Address. Scripture Reading: Ephesians chapter 2:11-22. Hymn. Prayer. Invitations. Hymn. Sermon: Subject: "The Practiceness of the Cross." Hymn. Benediction. Verse. Histring Hymn.
8.30—Mr. D. K. Cameron: Talk—"A Radio Tribute to Robert Burns" (with vocal illustrations).
8.35—The Lillipee Grand Orchestra: relayed from the Felipae Theatre, Pigeon Melbourne, under the direction of Mr. George Henry.
9.50—The Age News Bulletin, exclusive to 3AR.
10—National Anthem and Close Down.
MORNING, JANUARY 23
Morning Session:
12 Noon—Time Signal.
12.1—First Weather Forecast.
12.3—Events of the Day.
12.5—The Age News Bulletin.
12.15—Musical Selections.
12.30—Stock Exchange News.
12.35—Market Reports.
12.40—Musical Selections.
12.50—Mail Report. Shipping Movements. Musical Selections.
1.—The Georgian Cafe Orchestra.
2—Close Down.
Afternoon Session.
Richmond Pony Races: Results immediately after each Race.
3.30—Musical Selections.
3.45—Graphic News.
4—Time Signal.
4.15—Second Weather Forecast. The Georgian Cafe Orchestra.
4.45—Musical Selections.
4.55—The Evening Amusement Guide.
5—Close Down.
Evening Session.
6.15—The Georgian Cafe Orchestra.

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SYDNEY.

- 7.—The Children's Corner, by Uncle Rad: 1. Bedtime Story, 2. Talk on Hobbies, 3. Commencement of Children's Jig Saw Painting Competition.
8.—Time Signal.
9.1—Mr. A. L. Brown, Talk: "The Silk Industry" (4th Series).
9.20—Miss Kit. Mills (contralto).
9.27—Mr. Reg. Hayward (baritone).
9.34—Miss Thelma Crowe (solo violinist).
9.41—Miss Myrtle Whitt (soprano).
9.48—Miss Marie Bevan (solo pianist).
9.55—Miss Hilda Bartrop (contralto).
9.2—Miss Constance Evans (mezzo-soprano).
9.9—Miss Thelma Crowe (solo pianist).
9.16—Miss Kit. Mills (contralto).
9.23—Mr. Reg. Hayward (baritone).
9.30—Mr. Stephen McDonald, Talk: "Voice Production" (4th Series).
9.42—Miss Constance Evans (mezzo-soprano).
9.49—Miss Hilda Bartrop (contralto).
9.55—Miss Marie Bevan (solo pianist).
10.—Time Signal.
10.1—The Age News Bulletin, exclusive to JAR.
11.—The Georgian Cafe Orchestra.
11.—National Anthem and Close down.

TUESDAY, JANUARY 26.

Morning Session.

- 12 Noon—Time Signal.
12.1—1st Weather Forecast.
12.2—Events of the Day.
12.5—The Age News Bulletin.
12.15—Musical Selections.
12.30—Stock Exchange News.
12.35—Market Reports.
12.40—Musical Selections.
12.50—Mail Notices, Shipping News, Musical Selections.
1.—The Georgian Cafe Orchestra.
2.—Close down.

Afternoon Session.

- 3.30—Musical Selections.
3.35—Graphic News.
4.—Time Signal.
4.1—2nd Weather Forecast, The Georgian Cafe Orchestra.
4.45—Musical Selections.
4.55—Evening Amusement Guide.
5.—Close down.

Evening Session.

- 6.15—The Georgian Cafe Orchestra.
7.—The Children's Corner by Uncle Peter: 1. Bedtime Story, 2. Talk on Hobbies, 3. Children's Jig Saw Painting Competition.
8.—Time Signal.
8.1—Miss Dorothy Mattingley (solo pianist).
8.8—Miss Margaret Groom (contralto).
8.15—Mr. David Shaw (cello solo).
8.22—Mr. Maurice Latimer (elocutionist).
8.28—The Brighton Glee Party (part songs).
8.36—Mr. Wilfred Kane (tenor).
8.43—Miss Margaret Stewardson, (violinist).
8.50—The Brighton Glee Party (part songs).
8.57—Miss Dorothy Mattingley (solo pianist).
9.4—Miss Esie Mitchell (lyric soprano).
9.11—Mr. Wilfred Kane (tenor).
9.18—Mr. David Shaw (cello solo).
9.25—The Brighton Glee Party (soloed).
9.32—Mr. Maurice Latimer (elocutionist).
9.39—Miss Margaret Stewardson (violinist).
9.46—Miss Margaret Groom (contralto).
9.53—The Brighton Glee Party.
10.—Time Signal.
10.1—The Age News Bulletin.
10.15—The Georgian Cafe Orchestra.
11.—National Anthem and Close down.

WEDNESDAY, JANUARY 27.

Morning Session.

- 12 Noon—Time Signal.
12.1—1st Weather Forecast.
12.2—Events of the Day.
12.5—The Age News Bulletin.
12.15—Musical Selections.
12.30—Stock Exchange News.
12.35—Market Reports.
12.40—Musical Selections.
12.50—Mail Notices, Shipping Movements, Musical Selections.
1.—The Georgian Cafe Orchestra.
2.—Close down.

Afternoon Session.

- Appendix Races.
2.30—Result of Hurdle, 2 miles.
3.—Result of Maiden Plate, 5 furlongs.
3.30—Result of Appendix Plate, 6 furlongs.
4.—Result of Appendix Park Handicap, 1 mile.
4.30—Result of Appendix Race, 6 furlongs.
4.45—Musical Selections.
4.55—The Evening's Amusement Guide.
3.—Result of Welter Handicap, 1 1/2 Miles.
5.—Close down.

Evening Session.

- 6.15—The Georgian Cafe Orchestra.
7.—The Children's Corner by Uncle Rad: 1. Bedtime Story, 2. Talk on Hobbies, 3. Children's Jig Saw Painting Competition.
8.—Time Signal.
8.1—Miss Doris Hawker (solo pianist).
8.8—Mr. A. Hershell (baritone).
8.15—Miss Muriel Hoales (contralto).
8.22—The Rev. N. Gos (lauteist).
8.28—Mr. Harry Webster (tenor).
8.30—Miss Mily Satch (elocutionist).
8.43—Mr. Les James (baritone).
8.50—Mr. E. Fogarty (violinist).
8.57—Miss Bevil Hawker (soprano).
9.4—Miss W. E. Jones (baritone).
9.11—Miss Muriel Hoales (contralto).
9.15—Miss Mily Satch (elocutionist).
9.25—The Rev. N. Gos (lauteist).
9.32—Mr. A. Hershell (baritone).
9.39—Miss B. Hawker (soprano).
9.46—Mr. E. Fogarty (violinist).
9.53—Mr. Les James (baritone).
10.—Time Signal.
10.1—The Age News Bulletin.
10.15—Mr. G. W. Steane Talk: "With a Wireless Operator at Sea."
11.—National Anthem and Close Down.

THURSDAY, JANUARY 28

Morning Session.

- 12 Noon—Time Signal.
12.1—First Weather Forecast.
12.2—Events of the Day.
12.5—The Age News Bulletin.
12.15—Musical Selections.
12.30—Stock Exchange News.
12.35—Market Reports.
12.40—Musical Selections.
12.50—Mail Notices, Shipping Movements, Musical Selections.
1.—The Georgian Cafe Orchestra.
2.—Close Down.

Afternoon Session.

- 3.30—Musical Selections.
3.45—The Graphic News.
4.—Time Signal.
4.1—Second Weather Forecast.
4.30—Fashion Talk by Mons. Rouhandi, of Paris.
4.40—Special Pig and Calf Report, supplied by Messrs. McPhar, Anderson & Co.
4.45—Musical Selections.
4.55—The Evening Amusement Guide.
5.—Close Down.

Evening Session.

- 6.15—The Georgian Cafe Orchestra.
7.—The Children's Corner by Uncle Peter: 1. Bedtime Story, 2. Talk on Hobbies, 3. Children's Jig Saw Painting Competition.
8.—Time Signal.
8.1—Lecturer: "The Care and Feeding of Infants."
8.20—Miss Edith Onions will speak on "The Melbourne Newsboys."
9.—Dance Night: The Rhythmic Dance Orchestra, relayed from the Maison De Luxe, Broadway, St. Kilda, under the direction of Mr. George Lewis.
9.30—Musical Selections from the Studio.
9.50—The Maison De Luxe Rhythmic Dance Orchestra.
10.—Dance Signal.
10.1—The Age News Bulletin, exclusive to JAR.
10.15—The Maison De Luxe Rhythmic Orchestra.
11.—National Anthem and Close down.

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FRIDAY, JANUARY 22.

- Morning Session, 11 a.m. to 3 p.m.
11.—Time signal; express train information.
11.3—Musical items by the Studio Orchestra.
12.—Time signal.
12.—The Studio Orchestra.
12.30—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cables.
12.45—The Studio Orchestra.
1.—Time signal.
1.2—The Studio Orchestra.
1.45—"Herald" and "Argus" news services; weather forecasts; river reports; Stock Exchange information.
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 Kleea.
4.45—"An Eye" of Buckley & Nunn Ltd., in a fashion talk.
5—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cables.
5.15—Close down.
Evening Session, 6 to 7.15 p.m.
6—Children's Hour. "Billy Bunny" stories: "The Magical Trip," "Sleepy Fancies," "House of the Eagle."
6.45—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cables; market reports; closing Stock Exchange information; weather synopses; shipping movements. Market reports by the Victorian Producers' Co-operative Co. Ltd.: Dairy cattle, sheep, carcasses meat, grain, chaff, hay, straw, jute, dairy produce, potatoes, and onions.
Night Session, 7.15 to 11 p.m.
Minstrel bands, ballads, Speakers: Mr. R. H. Wilmot, Mr. N. E. McKenna, B.A., LL.B., Mr. Geo. A. Highland, Mr. R. A. Broinowski, Will Quintrell and the Tivoli Theatre Orchestra; the Nigger Minstrels; the Collingwood Citizens' Band; Mr. Frank R. Thomas, baritone; Miss Alys Watson, soprano; Miss Agnes Fortune, accompanist.
7.15—Mr. R. H. Wilmot, "Everyday Chemistry."
7.40—Mr. N. E. McKenna, B.A., LL.B., under the auspices of the Develop Australia League "Arguments for Australians and Australia."
7.45—Mr. Geo. A. Highland, producer of "Libra Time" at the Theatre Royal will tell of some of the joys of a producer, by permission of J. C. Williamson Ltd.
8.—Will Quintrell and the Tivoli Theatre Orchestra by permission of Murgrove Theatre Ltd.
9.20—Mr. R. A. Broinowski, "Famous Men of the Ages."
9.35—The Collingwood Citizens' Band, overture, "Turpedi."
9.45—Mr. Frank R. Thomas, baritone, "Invictus" (Hahn), "To You" (Sparks).
9.52—The Collingwood Citizens' Band, cornet solo, "Titanic," played by Mr. J. Amour.
10—"Argus" and "Herald" news services.
10.5—Miss Alys Watson, soprano,

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

- "When You Were Mine" (Sama Soule), "A June Morning" (G. D. Roberts).
- 10.12—The Collingwood Citizens' Band, waltz, "Forest Flowers."
- 10.13—Mr. Frank B. Thomas, baritone, "Drake Gave West" (Sanderson).
- 10.14—The Romanian Mountains (Lohr).
- 10.15—The Collingwood Citizens' Band, march, "V.C.," march, "Collingwood."
- 10.16—Miss Alys Watson, soprano, "Where my Caravan has Rested" (Lohr), "Curfew" (Gould).
- 10.16—The Collingwood Citizens' Band, fox trot, "San Francisco"; one step, "Miss My Swiss"; "Japanese Dance."
- 11—"God Save the King."

SATURDAY, JANUARY 23.

- Morning Session, 11 a.m. to 2 p.m.
- 1—Time signal; express train information.
- 11.7—Musical items by the Studio Orchestra.
- 12—Time signal.
- 12.2—The Studio Orchestra.
- 12.3—"Argus" and "Herald" news services; Reuter's and the Australian Press Association cables.
- 12.45—The Studio Orchestra.
- 1—Time signal.
- 1.2—The Studio Orchestra.
- 1.45—"Herald" and "Argus" news services; Stock Exchange information; weather forecast; river reports.
- 2—Result of the Hurdle Race from the Moonee Valley Race Club Meeting.
- 2.5—Close down.
- 2.30—Result of the Niddrie Handicap from the Moonee Valley Race Club Meeting.
- Afternoon Session, 3 to 6.15 p.m.
- 3—Time signal.
- 3.1—Result of the William Reid Stakes from the Moonee Valley Race Club Meeting.
- 3.5—Musical items from the Studio.
- 3.40—Result of the Warwick High-wind Handicap from the Moonee Valley Race Club Meeting.
- 3.45—Musical items from the Studio.
- 4.20—Result of the Caldermeade Handicap from the Moonee Valley Race Club Meeting.
- 4.30—Musical items from the Studio.
- 4.50—Result of the Cranmullan Maiden from the Moonee Valley Race Club Meeting.
- 5—All the sporting results; Reuter's and the Australian Press Association cables.
- 6.15—Close down.
- Evening Session, 8 to 11 p.m.
- 5.45—All sporting results, local, country and interstate.
- 6—Children's Hour. Stories by Mary Gumleaf. For little ones, "To my Son," "Play Up and Play the Game," "Daddy Begins"; or girls, "Mourning Children" for boys, "A Boy and his Dreams."
- 6.46—Sporting results; "Herald" and "Argus" news services; Reuter's and the Australian Press Association cables; closing Stock Exchange information; shipping messages; weather synopsis. Market reports by the Victorian Producers' Co-operative Co. Ltd.; Grain, chaff, hay, straw, lute, dairy produce, potatoes, and onions.
- Night Session, 7.40 to 11 p.m.
- "A varied programme." Speaker: Dr. J. A. Leach, D.Sc., The Studio Orchestra, musical director—Miss B.

- Garrison; Mr. Norman Lee in Shakespearean recitals; Mr. Allan Mitchell, tenor; Miss Edie Armstrong, contralto; Miss Frances Lea, soprano; Miss Tasma Thierman, collette; Miss Agnes Fortune, accompanist.
- 7.40—Dr. J. A. Leach, D.Sc., "Birds of Australia—Crows and Ravens," Storm and Calm as Expressed in Music.
- 8—"From back to back leaps the live thunder,"
- 8—The Studio Orchestra, "The Flying Dutchman" (Wagner).
- 8.20—Mr. Allan Mitchell, tenor, "Blow, Blow, Thou Winter Wind" (Gulliver).
- 8.31—The Studio Orchestra, overture, "William Tell" (Rossini).
- Colm—"All things have rest; There is no joy but calm."
- 8.58—Miss Edie Armstrong, contralto, "In Heaven" (Elgar), "Where Gerals Lie" (Elgar).
- 8.46—The Studio Orchestra, "Nocturnal Piece" (Schumann), "Spring Zephyrus" (Vossella).
- 9—Miss Frances Lea, soprano, "O Lovely Night" (Ronald), "Still as the Night" (Brahm).
- 9.7—The Studio Orchestra, "Midsummer Night's Dream" (Mendelssohn).
- 9.17—Mr. Norman Lee, Shakespearean recital, Court Scene from "Twelfth Night," A Sonora recital, famous Australian artists abroad. A "dumb wait" sketch of the life of these Australian artists will be given before each record is played. Song, "Walata Moori," Rosina Buckman; violin solo, "Grieg Sonata," "Allegro Molto Vivace," Daisy Kennedy; song, "Love's a Sweet Song," Evelyn Scoulton; flute solo, "Wind in the Trees," John Amadio.
- 9.37—The Studio Orchestra, "In a Monastery Garden" (Ketty).
- 9.47—Mr. Allan Mitchell, tenor, "A Farewell" (Liddle), "Regina" (Massenet).
- 9.54—Miss Agnes Fortune, piano solo, "The Dying Puer" (Gutschalk).
- 10—Miss Edie Armstrong, contralto, "None but a Lonely Heart" (Tchaikowsky), "Lithuanian Song" (Chopin).
- An Interlude.
- 10.7—Mr. Norman Lee, Shakespearean recital, Richard III's Oration to his Army.
- 10.17—"Argus" and "Herald" news.
- The Lighter Side.
- 10.21—The Studio Orchestra, selection, "Cabaret Girl" (Kern).
- 10.31—Miss —Frances Lea, soprano, "Pipes of Pan" (Mouckton), "Lappy Song" (del Riego).
- 10.32—Miss Tasma Thierman, collette, "Melody in E" (Rubenstein).
- 10.45—Mr. Allan Mitchell, tenor, "Ma Little Banno" (Dichmont).
- 10.48—The Studio Orchestra, selection, "Mr. Miss Gosh" (Mouckton).
- 11—"God Save the King."

SUNDAY, JANUARY 24.

- Morning Session, 10.45 a.m. to 12.15 p.m.
- Morning service from St. Paul's Cathedral.
- 10.45—Matins (choral) and Intercessions; opening sentence; exhortation; general confession; absolution; the Lord's Prayer; versicles and responses; Venite; Psalms 42 and 43; Ist lesson, Hosae, 13, 1, 2, 6; Te Deum & Benedicite; Selby in A; 2nd lesson, St. John 2; the Apostles' Creed, etc.; collect; anthem, "Tell it out among
- the brethren" (Travers); intercessions; hymn 7, "Gloria, Who glory fills the skies," A. & M.; sermon, Rev. Robert Hamilton; hymn 538, "There is a land of pure delight"; the Blessing.
- Afternoon Session, 3 to 4.30 p.m.
- Prayers: Sunday afternoon service from the Wesley Church Central Mission; chairman, Rev. S. J. Hoban.
- 3—Orchestral selection, conductor—Mr. G. M. Williams; hymn, "All the power of Jesus Name"; prayer, Rev. J. H. Cain; hymn, "Jesus shall reign where'er the sun"; solo, Miss Grace Jackson, "My Dear Soul" (Sanderson); orchestral selection; solo, Miss Grace Jackson, "Thank God for a Garden" (del Riego); notices and offering; orchestral selection; address, Rev. A. Wesley Amos, "Our Mandate in the Pacific"; National Anthem; Benediction.
- Evening Session, 8 to 8.45 p.m.
- 6—Children's Hour, "Billy Bunny" stories; "Bible Battles" and other stories.
- 8.45—Close down.
- Night Session, 7 to 10 p.m.
- Evening service from the Australian Church, conducted by Dr. Charles Strong.
- 7—Opening voluntary; service in supplement, page 110; hymn (supplement), "Brightly gleams our Banner"; 1st lesson; chant 34, "Songs of Hope in the Future"; 2nd lesson; anthem 29 (supplement, page 83); collect; prayer which Hirstet's (Martin); 1st verse; response; hymn 144, last verses; C.W.; hymn (supplement) 52, "Light in a World of Lights"; address, "The Church of the Future" (supplement), hymn (C.W.) 371, "The Church of God"; announcements; offertory, "Interlude" (Dubois); tenor solo and chorus, "Lobsegang" (Mendelssohn); Benediction; concluding voluntary, Scherzo, Op. 11, by Chopin; music from the Studio; The British Musical Society's Quartet, Alberto Zelman, Dorothy Roxburgh, Tasma Thierman, Bertha Jorgensen, Mr. Harold Rodgers, pianist and accompanist, Miss Jessie Benson, of "Aladdin"; Mr. Herbert Browne, of "Lilac Time."
- 8.30—Mr. Harold Rodgers, pianoforte solo, "Consoluntino" (Liszt).
- 8.40—Miss Annie Beaton, a recitation of J. G. Williamson Ltd., "Laxy," "So long as he loves me."
- 8.47—The British Musical Society's Quartette, "Quartette No. XIII, in B Flat Major" (Haydn), Allegro Con Spirito; "Tenderly of Me" (Sharp); —Finale Allegro Ma Non Troppo.
- 9.7—Mr. Herbert Browne, by permission of J. G. Williamson Ltd., "The Breeze and the Saw" (del Riego), "Tenderly of Me" (Sharp).
- 9.14—The British Musical Society's Quartette, "Quartette No. 5, in A Major" (Beethoven, Allegro—Meno mosso); Trio, Andante Cantabile with Variations; Finale Allegro (Sharp).
- 9.34—"Argus" and "Herald" news services.
- 9.58—Mr. Herbert Browne, "To Mary" (White), "My Dream" (Tosti).
- 9.46—Mr. Harold Rodgers, pianoforte solo, "Three Waltzes" (Schubert), "Barcarolle in A" (Mendelssohn).
- 10—"God Save the King."

MONDAY, JANUARY 25.

- Midday Session, 12 noon to 2 p.m.
- 12—Time signal; "Ford" and "Argus" news services; Reuter's and the Australian Press Association cables; weather forecast; river reports; ship-

phing intelligence; Stock Exchange information; market reports.

- 1.—Time signal.
- 1.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Overture, "Larline" (Wallace).
- 1.15—Fox trot, "The Co-Ed" (Lange).
- 1.29—Selection, "Oh, Oh, Delphine" (Haryl).
- 1.35—Mr. Walter Smith, cornet solo, "Thoughts of Yesterday" (Smith).
- 1.40—"Cachus" (Hadley).
- 1.45—Suite, "Ballet Egyptian" (Lulinski).

2.—Time signal. Close down. Afternoon Session, 3 to 5 p.m.

- 5.—Time signal.
- 5.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Selection, "The Messenger Boy" (Godfrey).
- 5.15—Miss Bessie Gausson, violin solo, "Bullito Romantico" (Simonetti).
- 5.25—Orchestra, Oriental Fantasy, "In a Chinese Temple Garden" (Kretzler).
- 5.31—Mr. Bobby Pearce, baritone, "The Floral Dance" (Moss). "Marie, Marie" (D) Chava.
- 5.38—Miss Flora Pell, Supervisor of Domestic Arts, Education Department, in a talk on "Domestic Economy."
- 5.53—Mr. Bobby Pearce, baritone, "Just a Little Love" (Silesu). "Ora Pro Nobis" (Piccolomini).

- 4.—Orchestra, fox trot, "After the Rain" (Griffin).
- 5.—Miss Agnes Fortune, piano, "Tarantella" (Hellen).
- 4.10—Orchestra, suite, "Indian Summer" (Lake).
- 4.20—Fox trot, "Sunset Land" (Kawelo).
- 4.25—Miss Bessie Gausson, violin, "La Precieuse" (Couperin-Kreisler).
- 4.30—Orchestra, selection, "Moszkowiana" (Langey).
- 4.45—"Herald" news service; Reuter's and the Australian Press Association cables.

5.—Time signal. Close down. The results of Richmond ponies will be given at the conclusion of each race. Evening Session, 6 to 7 p.m.

- 6.—Children's Hour. Stories by "Billy Bunny": "Tom and her Friends," "The Magical Trip," "Houses of the Eagle."

6.45—"Argus" and "Herald" 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, hay, grain, chaff, straw, jute, dairy produce, potatoes and onions.

Night Session, 7.20 to 11 p.m.

- "A Niche w' Rabble Burns." Speakers: Mr. G. M. Wallace, M.A., Mr. J. Howlett Ross, Melbourne Highland Pipe Band; musical director, Miss Bessie Gausson.
- 7.25—Mr. G. M. Wallace, M.A., "Shakespearean Plays" "Hamlet."
- 7.40—Mr. J. Howlett Ross, "Robert Burns."
- 8.—Melbourne Highland Pipe Band, "There was a lad was born in Kyle."
- 8.10—Miss Ella Riddell, contralto, "The Lyre of Robbie Burns" (Thomson). "My Heart is Sair" (Burns).
- 8.17—Mr. Brunswick Brass Quartette, "Auld Reekie."

- 8.25—Mr. Arthur Douglas in a spasm of Scottish humour.
- 8.34—Miss Violet McGregor, violiniste, "The Coronach" (Murdach). "Melodius of Scotland" (arr. by V. McGregor).
- 8.44—Messrs. G. Mulgrew, D. Greenhorn, cornet duets, "Ye Banks and Braes," "O wart thou in the cauld blast."
- 8.52—Miss Leonora Scott, soprano, "John Anderson, my Jo," "Ye Banks and Braes."
- 8.59—Melbourne Highland Pipe Band, "Highland Mary."
- 9.—Mr. J. Howlett Ross, recital, "Tom o' Shanter" (Burns).
- 9.24—Mr. Allan Mitchell, tenor, "March of the Cameron Men," "Scots, Wha Hae."
- 9.31—Brunswick Brass Quartette, "Scottish and Burns Gems."
- 9.38—Miss Ella Riddell, contralto, "There was a lad was born in Kyle" (Burns). "Comin' thro' the Rye" (Burns).
- 9.45—Miss Violet McGregor, violiniste, "Requiem," "Danza and Bagpipe imitation" (arr. by V. McGregor).
- 9.55—Mr. Arthur Douglas in a few moments of pawky fun.
- 10.—"Argus" and "Herald" news.
- 10.7—Melbourne Highland Pipe Band, "Portree Bay."
- 10.17—Miss Leonora Scott, soprano, "Robin Adair," "Whistle an' I'll come to ye, ye my lad."
- 10.24—Brunswick Brass Quartette, cornet solos, "To Mary in Heaven," "My Heart is Sair," soloist—Mr. D. Greenhorn.
- 10.31—Mr. Allan Mitchell, tenor, "I'm wearin' awa'." (Foote). "Draw the Sword, ye Sand."
- 10.38—Melbourne Highland Pipe Band, "Coro Riggs," "Dovecot Park," "A man's a man for a' that."
- 11—"God Save the King."

TUESDAY, JANUARY 26.

- Midny Session, 12 to 2 p.m.
- 12.—Time signal; "Herald" and "Argus" news; Reuter's and the Australian Press Association cables; weather forecast; river reports; shipping intelligence; Stock Exchange information; market reports.
- 1.—Time signal.
- 1.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Overture, "Fingal's Cave" (Mendelssohn).
- 1.15—"Cello solo, "Serenade Espagnole" (Ilsouzouov), Miss T. Tiernan.
- 1.20—Selection, "The Street Singer," (Frasar Simpson).
- 1.30—Mus. trot, "I Cried for You" (Lyman), "Other Lips" (Wallace & Harris).
- 1.37—March, "Lail, America" (G. Drum).
- 1.42—Violin "Liespend" (Kreisler), Miss B. Gausson.
- 1.49—Selection, "The Kiss Call" (Orzell).
- 2.—Time signal. Close down.
- 2.—Afternoon Session, 3 to 5 p.m.
- 3.—Time signal.
- 3.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Selection, "Lilac Pine" (Clatsm).
- 3.16—Piano solo, "Pavane, G. Sharp Minor" (Chopin), Miss A. Fortune.
- 3.23—Waltz, "Little Town in Old County Down."
- 3.28—Miss Billie Jones, soprano, "Say it with Music," "In an Oriental Garden."
- 3.35—Matron Macleand will speak on "Infant Welfare."
- 3.50—Miss Billie Jones, soprano, "I'm

- Nobody's Sweetheart Now," "Oh, Katherine."
- 3.57—The Studio Orchestra, "Symphony No. 1" (Bachovov).
- 4.22—Viola, "Adagio" (Mozart), Miss D. Bushbirt.
- 4.29—Suite, "In Sunny Spain" (Elfort).
- 4.45—"Herald" news service; Reuter's and the Australian Press Association cables.
- 5.—Time signal. Close down.
- Evening Session, 6 to 7.15 p.m.
- 6.—Children's Hour. Stories by Mary Gurnett: Poems, "The Window Man," "The Boy and his Dog," "The Rainy Day," "Dorothy's Bravery," "How Tom Sayer got his fence whitewashed."
- 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; poultry, grain, chaff, straw, jute, dairy produce, potatoes and onions.
- Night Session, 7.15 to 11 p.m.
- Pentomime and Australian Songs. Speakers: Mr. J. H. Lester, Mr. J. M. Ward, Mr. J. McRae, M.A., Dr. Loftus Hills, The Studio Orchestra; musical director, Miss B. Gausson. Miss Billie Jones, soprano, Mr. Walter Smith, cornetist; Mr. Bob Molyneux, baritone.
- 7.15—Under the auspices of the New Settlers' League, Mr. J. H. Lester, Shire Secretary, "The Shire of Birch." Mr. J. M. Ward, Superintendent of Horticulture, Dept. of Agriculture, "Control of Fungus Diseases."
- 7.45—University Extension Lecture, Mr. J. McRae, M.A., "Genius and the Unconscious."
- 8.—First act of "Aladdin," by permission of J. C. Williamson Ltd. Opening chorus, "Come and Buy," chorus song, "Kinky Kids' Parade," Jennie Benson, duet, "True Till Death," Jennie Benson and June Elvidge; finale, "Aladdin is Gone," ensemble; opening chorus, "Come out, Mrs. Twanky," chorons; duet, "Yearning," Jennie Benson and June Elvidge; song, "Our Arcadia," Bruce Green; finale, "Rachmannoff's Prelude," Jennie Benson and chorus; selection, "Madley," the orchestra.
- 8.10—Dr. Loftus Hills, D.Sc., "Wines."
- 8.25—The Studio Orchestra, selection, "Miss Hank of Holland" (Rubens).
- 9.40—Miss Billie Jones, soprano, "A.C. Double S.I.E.," "Gundagai."
- 9.47—Mr. Walter Smith, cornet solo, "Al Dawn" (Code).
- 9.54—Mr. Bob Molyneux, baritone, "Old Bush Shanty," "Aussie Tern and Thrush."
- 10.1—"Argus" and "Herald" news services.
- 10.5—The Studio Orchestra, "Barcarolle" (Tschaikowsky), "Spanish Dance" (Rehner).
- 10.15—Miss Billie Jones, soprano, "Wondonga," "Aussie Rose."
- 10.22—"The Studio Orchestra, "Screen Song" (Foskell).
- 10.32—Mr. Bob Molyneux, baritone, "Yandandandah," "Sweet Australian Watloo Girl."
- 10.40—The Studio Orchestra, "The Ciu galeo."
- 11—"God Save the King."

BURGESS—"ASK ANY RADIO ENGINEER"—BATTERIES

WEDNESDAY, JANUARY 27.

- 12—Midday Session, 12 noon to 2 p.m.
 12—Time signal, "Herald" and "Argus" news services; Reuter's and the Australian Press Association cables; weather forecast; river reports; shipping intelligence; Stock Exchange information; market reports.
 1—Time signal, Close down.
 1.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Overture, "Turandot" (Lachner).
 1.16—Fox trot, "Don't Wake Me Up" (Lange).
 1.22—Miss Dorothy Roxburgh, viola, "Ave Maria" (Schubert).
 1.28—Orchestra, suite, "A Night in Japan" (Brubank).
 1.38—Selection, "The Kiss of Kosis O'Reilly" (Colman).
 1.50—Miss Agnes Fortuna, piano, "Waltz in E flat Major" (Chopin).
 2—Time signal, Close down.
 2.15—Result of Hurdle Race from Ascendale R.C. Meeting.
 2.45—Result of Maiden Plate from Ascendale R.C. Meeting.
 Afternoon Session, 3 to 5 p.m.
 3—Time signal.
 3.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Selection, "The Pearl Fishers" (Bizet).
 3.15—Result of Ascendale Plate from Ascendale R.C. Meeting.
 3.17—Orchestra, "Barcarolle" (Teubal-hovak).
 3.23—Fox trot, "Don't Bring Lulu" (Brown).
 3.30—Mr. Bobby Pearce, baritone, "Funiculi Funicula" (Denza), "Up from Somersea" (Sanderson).
 3.37—Sister Purcell, of Victorian Baby Health Centres Association, on "Motherhood".
 3.47—Result of Ascendale Park Handicap from Ascendale R.C. Meeting.
 3.10—Mr. Bobby Pearce, baritone, "Be cause" (d'Hardelot), "To-morrow" (Kee).
 3.54—Trio instrumental, "Andante" (Beethoven), "Valse Song—Faust" (Gounod).
 4.6—Orchestra, fox trot "Who wouldn't love you" (Davis).
 4.15—Result of Ascendale Purse from Ascendale R.C. Meeting.
 4.17—Miss Tasma Tiernan, 'cello, "Dreaming" (Squire).
 4.23—Orchestra, selection, "La Boheme" (Puccini).
 4.45—Result of Ascendale Welter from Ascendale R.C. Meeting, "Herald" and "Argus" news services; Reuter's and the Australian Press Association cables.
 5—Time signal, Close down.
 Evening session, 7 to 7.15 p.m.
 6—Children's Hour, Stories by Wallaby Bill: "The Further Adventures of the Fairy Pines."
 6.45—"Herald" and "Argus" news services; sporting results; Reuter's and 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, carcass meat, hay, grain, chaff, straw, jute, dairy produce, potatoes and onions.
 Night Session, 7.30 to 11 p.m.
 Speakers: Mr. A. E. Hyland, Mr. J. W. Pearce, Capt. C. H. Peters. The Studio Orchestra; musical director, Miss Bessie Gausson. Mr. Harold Webb, baritone; Miss Violet Jackson, soprano; Mr. Max Ashton, humorist; Mr. A. Borthwick, xylophonist; Miss Louise Moorehead and Mr. Wm. Tainish in a one-act play.

- 7.20—Mr. A. E. Hyland, Chairman of Railway Betterment Board, "The Railway Gaugers" (Chairman).
 7.47—Mr. P. W. Pearce, "Physical Culture—a talk to business men." A Bunch of Flowers.
 8—The Studio Orchestra, "Canterbury Bell" (Debussy).
 8.10—Mr. Harold Webb, baritone, "O Flower Thyine" (Haydn Wood), "Rose in the Bud" (Foster).
 8.17—The Studio Orchestra, "Tulips & Pansies" (Reynold).
 8.27—A one-act comedietta, "The Dream House," or "The Kipper," by Bertha Moore. Scene: A sitting-out room at a hall; card table open, with cards upon it. Characters: Emma Vernon, Louise Moorehead; Bruce Ireland, William Tainish.
 8.40—Miss Bessie Gausson, viola, "To a Wild Rose" (MacDowell).
 8.48—Miss Violet Jackson, soprano, "The First Violet" (Mendelssohn), "The Lotus Flowers" (Schumann).
 8.53—The Studio Orchestra, "A Country Garden" (Rust).
 9.8—Captain Peters, "Books, Wise and Otherwise."
 9.23—Mr. A. Borthwick, xylophone selections.
 9.28—Mr. Max Ashton, humorist, "Auto Suggestion," "Ena Doesn't Huddle Day."
 9.37—Orchestra.
 9.46—The Studio Orchestra, "Tot Poturi from Gluck to Wagner."
 9.56—Mr. Harold Webb, baritone, "Ma Little Banjo" (Dieckmeyer), "Wimmin, Oh, Wimmin" (Phillips).
 10.3—"Argus" and "Herald" news service.
 10.7—Mr. A. Borthwick, xylophone selections.
 Two Songs by an Australian Composer.
 10.23—Miss Violet Jackson, soprano, "I passed by your window" (Brabe), "To a Minstrel" (Brabe).
 10.29—Miss Tasma Tiernan, 'cello solo, "Serenade Espagnole" (Giazoum).
 10.36—Mr. Max Ashton, humorist, "The Whist Drive," "Deaf Me."
 10.43—The Studio Orchestra, "Martha" (Flotow).
 11—"God Save the King."

THURSDAY, JANUARY 28.

- Midday Session, 12 noon to 2 p.m.
 12—Time signal, "Herald" and "Argus" news services; Reuter's and the Australian Press Association cables; weather forecast; river reports; shipping intelligence; Stock Exchange information; market reports.
 1—Time signal.
 1.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Overture, "Die Matrosen" (Flotow).
 1.11—Miss D. Roxburgh, viola solo, "Spring Song" (Mendelssohn).
 1.17—Orchestra, one step, "I Miss My Socks" (Gilbert and Sauer).
 1.23—"On the Mountains" (Grieg).
 1.29—Selection, "Oldie" (Vardi).
 1.34—Miss T. Tiernan, 'cello solo, "Serenade" (Gounod).
 1.42—Orchestra, fox trot, "Because of You" (Flotow).
 1.55—March, "The O.C." (Reeves).
 2—Time signal, Close down.
 Afternoon Session, 2 to 5 p.m.
 3—Time signal.

- 3.1—The Studio Orchestra; musical director, Miss Bessie Gausson. Overture, "Morning, Noon, and Night" (Sauer).
 3.16—"I Look into Your Garden" (Haydn Wood).
 3.26—"One step," "Savoy American Madley" (Somers).
 3.40—Miss Billie Jones, soprano, "If You Knew Susie," "Swanee River Moon."
 3.47—Mr. Walter Smith, cornet solo, "The Harp that Once" (Harcman).
 3.49—Miss Billie Jones, soprano, "Mello Cello," "Honolulu Blues."
 3.56—Orchestra, selection, "Veronique" (Audrey).
 4.16—Fox trot, "Sweet Little You" (Sauer).
 4.22—Miss Bessie Gausson, viola solo, "Two Russian Folk Songs" (Kreutzer).
 4.28—Orchestra, "Serenade" (Toselli).
 4.36—Selection, "Mosaic" (Ponani).
 4.45—"Herald" and "Argus" news services; Reuter's and the Australian Press Association cables.
 5—Time signal, Close down.
 Evening Session, 6 to 7.15 p.m.
 6—Children's Hour, Stories by Mary Gamble; Poems, "The Little Shadow," "Dream Travel," "Little Red Riding Hood," "Florence Nightingale," "Jake's Adventures."
 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.; Newmarket sales, cattle, pigs, carcass meat, grain, chaff, hay, jute, straw, dairy produce, potatoes and onions.
 Night Session, 7.30 to 11 p.m.
 Speakers: Mr. A. E. Hyland, Mr. E. Soward, Mr. John Shirlow. Studio Dance Orchestra; musical director, Miss Bessie Gausson. Miss Millie McCormack, soprano; Mr. Norman Turnbull, tenor; Mr. Norman Turnbull, bass; Mr. Norman W. Pili, humorist.
 7.26—Madame Soward, French talk, "Mon Oncle Jules, Part 1."
 7.40—Mr. John Shirlow, "Etching and Engraving, Part 2."
 8—Studio Dance Orchestra, fox trots, "Najou," "I'm Sitting on Top of the World."
 8.17—Miss Millie McCormack, soprano, "Love and Sleep" (Hart), "Spring's Lovable Lady" (Elliott).
 8.17—Studio Dance Orchestra, one steps, "Fluffy Buffles," "Arabia."
 8.27—Mr. Norman W. Pili, humorist, recital, "The Speech Day," song, "Language."
 8.34—Studio Dance Orchestra, waltzes, "One Sweet Day," "Come Back, Old Pal."
 8.44—Mr. Norman Turnbull, bass, "The Friar" (Reeve), "The Gingham Garden" (Pena).
 8.51—Studio Dance Orchestra, fox trots, "My Tango Girl," "Sweet Baby Mine."
 9.1—Mr. Norman Broadshaw, tenor, "I be Hopin' You Remember" (Clarke), "The Bitterness of Love" (Dunn).
 9.8—Studio Dance Orchestra, one step, "Poetry Divines."
 9.14—Miss Millie McCormack, soprano, "Butterflies and Lilacs," "The Fields are Full" (Gibbs).
 9.25—Studio Dance Orchestra, fox trots, "I'm a Sentimental Dreamer," "Hundred."
 9.35—Mr. Norman W. Pili, humorist, song, "Breakfast, Dinner, and Tea";

rectal, "How We Saved the Barge."
9.42—Studio Dance Orchestra, waltzes, "Just a Kiss from You," "Lady Betty."
9.52—Mr. Norman Turnbull, bass, "Rip Van Winkle" (Carroll), "Tally Ho" (Loom).
9.59—Studio Dance Orchestra, fox trots "Because of You," "After the Storm."

10.9—"Argus" and "Herald" news services.
10.12—Mr. Norman Bradshaw, tenor, "When in Your Eyes I Gaze" (Larsen), "Vale" (Russell).
10.19—Studio Dance Orchestra, one step, "Simplicity."
10.26—Miss Millie McCormack, soprano, "My Task" (Ashford), "The Quee-ko" (Lemon).

10.36—Studio Dance Orchestra, fox trots, "Rose of Algiers," "Blue Jeans."
10.46—Mr. Norman Turnbull, bass, "Pagan" (Lohr), "Farings" (Martin).
10.58—Studio Dance Orchestra, fox trots, "Chu Chu Ba," "America."
11—"God Save the King."

RECORDS AND DISCORDS.

Peace reigns once more at Osaka, Japan, after a particularly bitter conflict between the broadcasting and gramophone interests. A gramophone company at Osaka recently startled their customers by offering at surprisingly low prices a number of records of Japanese music by well-known musicians and bands. The gramophone "boom" thus created alarmed the Osaka broadcasting authorities, who, on inquiry, discovered that the records had been made from actual broadcast performances. A stern legal controversy ensued, which was only ended when the contending parties arrived at a compromise to the effect that no further wireless records would be made without consent from the Osaka station.

TEST WITH VOLTMETER.

Although a test with a hydrometer is the only sure way to test the state of charge of a lead accumulator, a voltmeter is also a fairly good indicator if you know how to use it. The instruction cards that accompany most storage batteries give the voltage which each cell should have when fully charged with the charging current still on; but these instructions frequently neglect to mention that this maximum voltage depends on the charging rate. If you wish to rely on a voltmeter to tell you the condition of your battery, check your voltmeter readings with a hydrometer until you are sure of the voltages that indicate charge and discharge for your own particular battery and the charging rate you are using.

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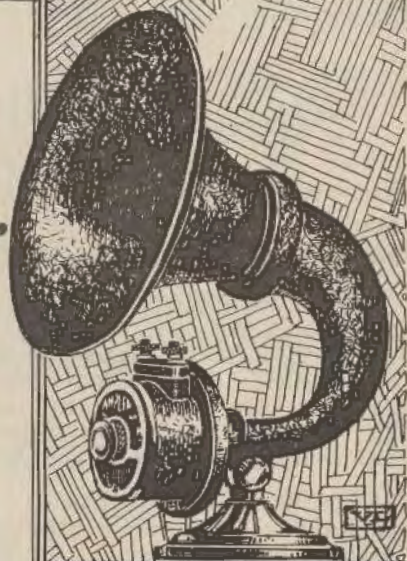
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