

Nearly Twice Usual Size—Best Value in Sydney for 3d.

Wireless Weekly 3^d

INCORPORATING "RADIO IN AUSTRALIA & NEW ZEALAND"

VOL. 14, NO. 25.

FRIDAY, DECEMBER 13, 1929.

(Registered at the G.P.O., Sydney, for transmission by post as a newspaper.)

A·W·A· RADIOLA



R.M.

The Gift Supreme!

You may think of hundreds of gifts, some decorative, some useful, but few will give such pleasure and enjoyment to the recipient year by year as an All-Electric Radiola.

Make your choice a Radiola—and you will truly know the pleasure of giving.

Obtainable from Radiola Dealers throughout Australia.

Amalgamated WORLD WIRELESS **Wireless**
(Australasia) Ltd.

Special Xmas Number

Enlarged Issue.
Two Colors.
Short Stories.
Unusual
Articles.

The JOY Centre



Stromberg-Carlson

Wish You a Merry Christmas

You can make it a Right Merry Christmas by installing a

STROMBERG-CARLSON TREASURE CHEST

That means years of Pleasure for the whole family.

£27/5 The Stromberg-Carlson
Treasure Chest All Electric-3
Loud Speaker Extra.

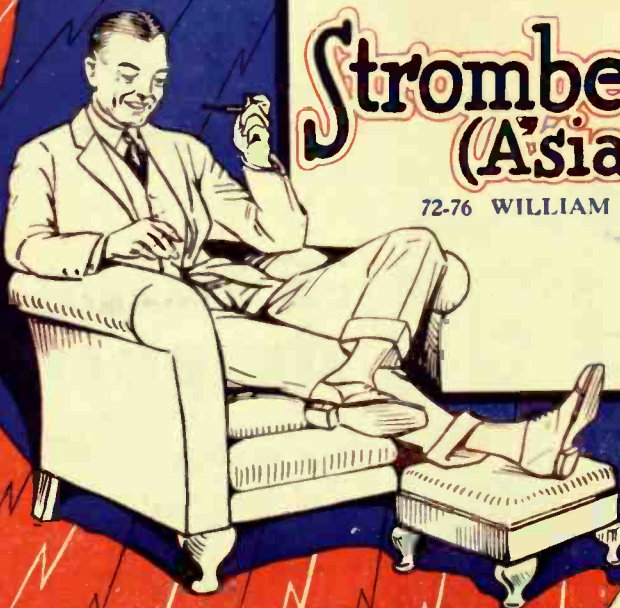
If you want to hear the best in Radio, arrange for a demonstration of a Stromberg-Carlson All Electric Six.

Obtainable from all Authorised Stromberg-Carlson Dealers, who will gladly arrange a demonstration without obligation.

MADE IN AUSTRALIA.

Stromberg-Carlson (Asia) Ltd.

72-76 WILLIAM STREET, SYDNEY



Hello Boys

Your Gift is Problem Solved - buy Radio

Xmas Radio Sale

Free Gift with each 10/- Purchase.

10 PER CENT.

Discount off all Lines

ELECTRIC SOLDERING IRONS 18/6

240 Volt, with Self-Feeding Solder Device, Plug, and Cord.

Neutrodyne Kit 10/6

Bakelite Space Wound. Complete with Angle Brackets, Etc.

4MF CONDENSERS 5/-

650 v. TEST

See Each One Actually Tested before Purchasing.

COMPLETE KIT OF PARTS ALL-ELECTRIC THREE £13/13/-

Valves and First Quality Parts.

100 volt SIEMENS "B" BATTERIES 15/9

Voltage Guaranteed.

CLOCK 30 HENRY CHOKES 15/-

For Eliminators, Electric Receivers, Etc.

THE "TIMMONS" SPEAKER CHASSIS 63/-

Will give you the tone and volume of a Dynamic, incorporates a Filter and Permanent Magnet.

LESS
10%

THE "KODEL" One Valve Portable 65/-

Complete with Valve, A. and B Batteries, Tefag Phones, Aerial, and Earth.

TEFAG 4000 ohm PHONES 12/6

Each Headpiece can be adjusted to give Maximum Sensitiveness. Heavily Plated, Leather Band.

LEWBURY Transformer and Choke 70/-

For that All Electric.

MONARCH SUPER TRANSFORMERS 15/6

Extra Heavy Wound Core, weighing 33oz., giving wonderful Tone and Volume. Try One.

2MF CONDENSERS 3/-

Powerplus or Hydra.

PHILIPS TRICKLE CHARGER 55/-

A Gift that will be Always Giving.

LEWCOS WAVE TRAP 22/6

A Sure Remedy for a Station that's Chipping In.

PRICE'S = RADIO = SERVICE

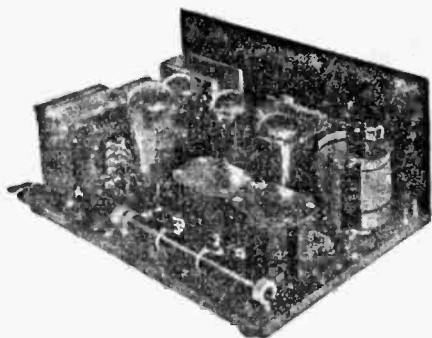
Wingello House,
Angel Place, Sydney.
Box 3326PP.

Make Your Battery Set All Electric

for

A Novice
Can Easily
Build One

£9/10



THE SIMPLICITY
ALL-ELECTRIC THREE

Ask Your Dealer for Leaflet Giving Full Particulars.

HAVE YOU SEEN THE

Pre-Selector Four Circuit

ELSEWHERE IN THIS ISSUE ?

YOU REQUIRE THE

SOUTHERN RADIO POWER TRANSFORMER AND CHOKE

specially designed for this circuit

OTHER TYPES OF

SOUTHERN RADIO POWER TRANSFORMERS AND CHOKES

available for all circuits. Whether you want to build an All-Electric 3-Valve, 5-Valve, or 7-Valve Set, or Power Amplifier, these Transformers and Chokes have been specially designed for your requirements.

Built in Australia for Australian voltages.

GUARANTEED BY THE AGENTS

BRISBANE AGENTS:-
TRACKSON BROS
157 ELIZABETH STREET

ADELAIDE AGENTS:-
RADIO IMPORTS LTD
Gilbert B'ca., Gilbert P'300.

ECLIPSE

RADIO PTY LTD

349-351 FLINDERS LANE MELBOURNE

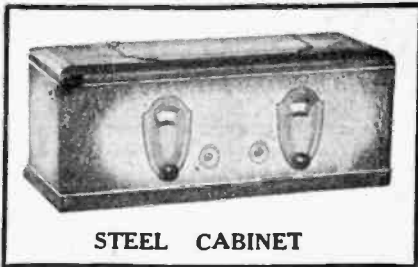
TASMANIAN AGENTS:-
W H KNIGHT & PETERS BROS SA
28 BRISBANE ST. LAUNCESTON
85 COLLINS ST HOBART

NEXT AUSTRALIAN AGENTS:-
CARLYLE & CO.
956 HAY STREET PERTH

32 CLARENCE STREET, SYDNEY 'PHONE, B 2002

PROOF OF THE MIGHTY

“3”



STEEL CABINET



HAND-POLISHED MAPLE CABINET

Scores of original Letters couched in similar strain can be seen at our Office, and copies will be sent on application.

JOHN WILLIAMS, PROSERPINE, NORTH QUEENSLAND, 13/2/'29:—I am more than satisfied with the C.C.M. 3. Some of the sets here have cost as high as £100, and yet they cannot get the good results I get with my set. Among the distant stations I get California, Honolulu, New Zealand, Johannesburg, South Africa, Manila, Japan. I would not exchange my C.C.M. 3 for any set.

A. McLAREN, DUNMORE STREET, TOO-WOOMBA, 27/7/'29:—I now number 157 stations on my C.C.M. 3, and have D.X. Cards (certificates) for all, and these are here to be seen. It is a wonderful set.

W. GUNN, MURDIM, VIA GOOND/WINDI, 12/10/'27:—For once in my life I have got value for my money.

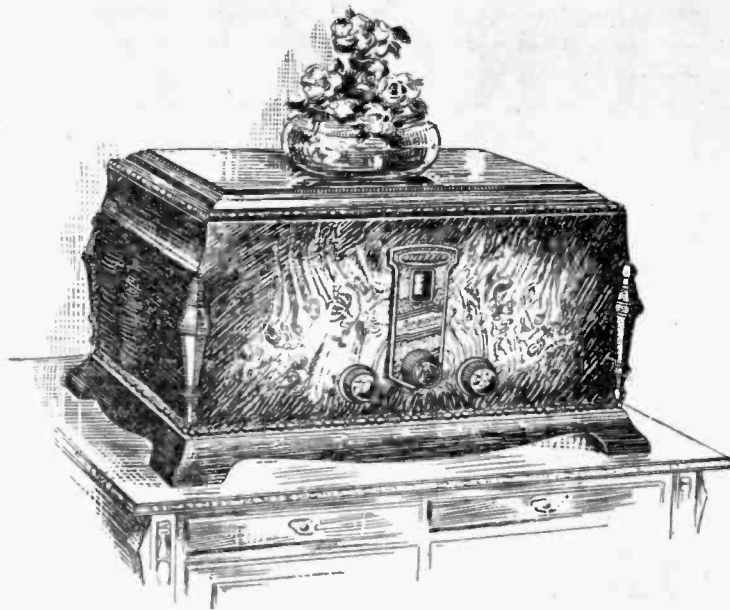
£19'10'-

Highest Quality Equipment. Complete with everything except poles. FREE ON RAIL. Well packed.

BURGESS BATTERIES
PHILIPS PRODUCTS
EMMCO RADIO
PRODUCTS
AIRZONE LINES
ELECTRON LINES
ALL HIGH GRADE RADIO
LINES

RADIO DEPT

C.C.M., ADELAIDE ST., BRISBANE
QUEENSLAND



Sweep the Air with this NEW Receiver

Study the features of the AIRMASTER ALL ELECTRIC THREE. Realise the convenience, simplicity, and economy of this new batteryless set. Three valves only, giving unrivalled tone and costing under threepence a week to run. Complete shielding of the AIRMASTER ensures immunity from interference. With the simplified control the programmes are received at any desired volume, and with absolute fidelity of reproduction.

PRICE—Complete with Valves—
£27 10/-

SPECIAL OFFER

For a limited time only we are presenting every purchaser of an AIRMASTER with a Loud Speaker FREE.

- ☐ AIRMASTER incorporates a jack for magnetic pick-up, enabling electrical amplification of gramophone records.
 - ☐ The handsomely finished cabinet of the AIRMASTER is a model of compactness.
 - ☐ Exceptionally durable A.C. valves are used, ensuring maximum life.
 - ☐ Ample power is provided in the AIRMASTER for the operation of a dynamic speaker.
 - ☐ The AIRMASTER includes a volume control and an illuminated dial.
- FREE INSTALLATION ANYWHERE IN THE METROPOLITAN AREA.

AIRMASTER

ALL ELECTRIC THREE

DEALERS.—In addition to the AIRMASTER, we are distributors for the ALPINE ALL ELECTRIC TWO, the famous BRANDES with selector tuning, and the ALPINE SCREEN-GRID RADIO SETS.

Write or call for particulars
OBTAINABLE FROM

S. E. TATHAM & CO.

'PHONES:
M 4151-2.

160 CASTLEREAGH STREET, SYDNEY

'PHONES:
M 4151-2.

Vol. 14 No. 25
Friday,
December
13,
1929

Wireless Weekly

Incorporating "Radio in Australia & New Zealand"

Address—
Box
3366PP
G.P.O.
Sydney.



The announcer's wife spends an anxious Christmas Eve at home

Uncle Amazes Dad and Dave

A RADIO SET ON OUR SELECTION

A WARM day in the corr-season, dinner over, and Dad and Dave and Joe (the latter kept from school) out at work again.

Dad returned from the paddock, entered the barn, and came out with a bundle of empty bags on his shoulder, which he tossed to the ground.

"Good day, Murty," a voice squeaked behind him.

Dad looked round slowly and saw Uncle.

"You!" he grunted. "Thought you were working for Auntie Montague? You didn't stop long with her, if you were!"

"Neither would you," the other, looking the picture of humility, answered. Then added, before Dad could say anything further, "An' how's everyone been keepin' here?"

But Dad wasn't in a mood to exchange civilities with his brother, who had lived upon him for so long. To Dad Uncle Peter was still a fly in the ointment, a malignant growth.

"Thought when you went away you was goin' for good," he grunted.

"So I was—at the time." Uncle pulled a humble mouth. "But no one could stop for good with HER, with th' tongue she's got, 'n besides, I thought you would be corn-pullin' an' might be short-handed, so I came back instead o' taking another job."

"Oh, yer did!" And Dad showed the white of his eye. "Well, we're wanting another hand—a willing hand—to frighten the crows and th' cockatoos away from th' corn. That's all that's offerin'."

Uncle's shifty little eyes wandered towards the house. He was more interested in the house than the corn, or the crows, or the cockatoos.

"But y' won't find them over there," Dad following his gaze, informed him.

Then Uncle looked all about the farmstead and observed: "The place hasn't changed much since I went away."

"You've been away such a long time," Dad sneered, "nearly three weeks, aint it?"

Uncle didn't hear him.

"You haven't changed much yourself much, either—nor your shirt," Dad added.

"Oh, I got plenty o' others in here," and Uncle gave the faded carpet bag that he carried in his hand a fraudulent shake.

"Well, y' better put it in the barn," Dad advised, "we got no other quarters for you just now, and there's plenty o' bags and sheepskins there, and when you've fixed up a bed for yourself, you can go down an' take over the crows an' cockatoos from Joe—au' see y' take them all over."

"The barn 'll do me," Uncle chirped. "I ain't particular." Then, turning on his heels: "And I got something more 'n clothes in this

bag, that'll surprise you, Murty, when you know what it is."

"Or WHOSE it is!" Dad insinuated. "It would surprise th' POLICE more than me, p'raps." Then, as Uncle hobbled off under the strain:

"And th' wimmen will be plased to have you back to wait on again!" Dad called after him; then went on sorting bags in quest of any that needed patching or mending.

At the house Mother and Sarah had dragged a table to the kitchen verandah to start the ironing on.

"The irons should be hot enough now, girl," mother, tying on an apron, suggested.

Sarah came from the kitchen with one in her hand. "Oo!" she hissed, and, hurrying, dumped it hard on the table, and took a fresh grip of the handle.

"And byan'by," mother went on, sorting out the clothes, "we musn't forget to fill the kettle, and make tea for your father and the boys."

"I won't forget, mother," and Sarah started on some of her own dainty little things.

Mother brought out another basket of clothes.

"Oh, look what I nearly did!" and Sarah stopped to examine an undergarment. "Close up burnt a big hole in it!"

"What—in your new chimmie?" Mother looked concerned.

"No! In these things of YOURS," Sarah giggled.

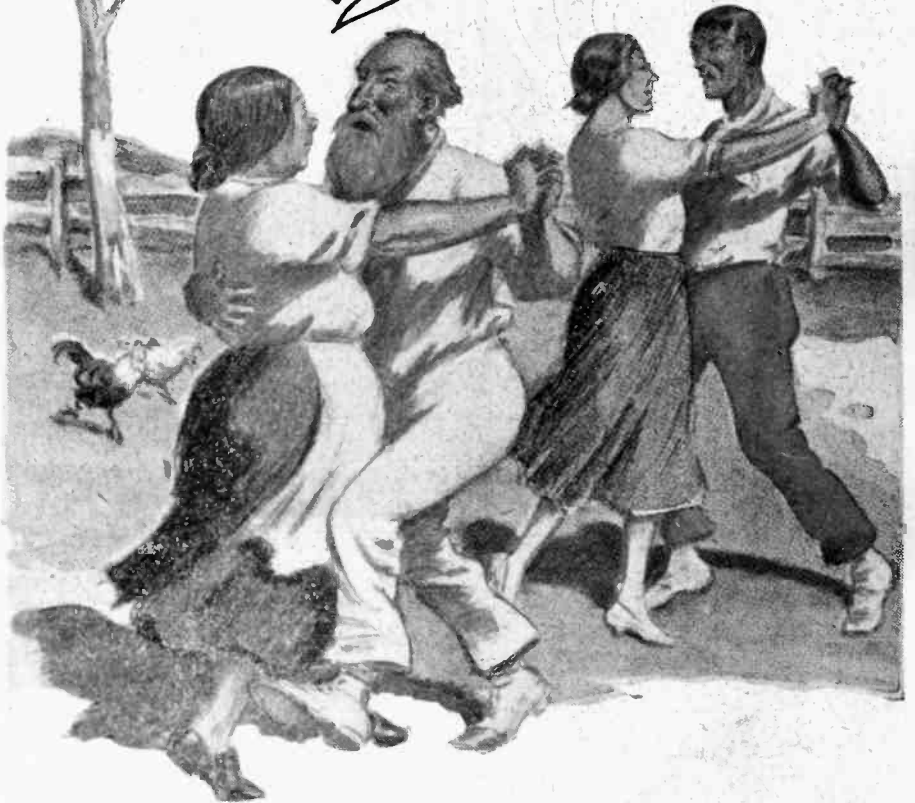
"Show me!" Mother became more concerned. "And my only good ones, too! Not enough to harm them, though," and Sarah took up the iron again.

She ironed away cheerfully for an hour or so, humming airs, dropping saliva on the face of every fresh iron to test its temperature, and trying it out on a rag or on her old sun bonnet.

Suddenly a shout came from the front of the house.

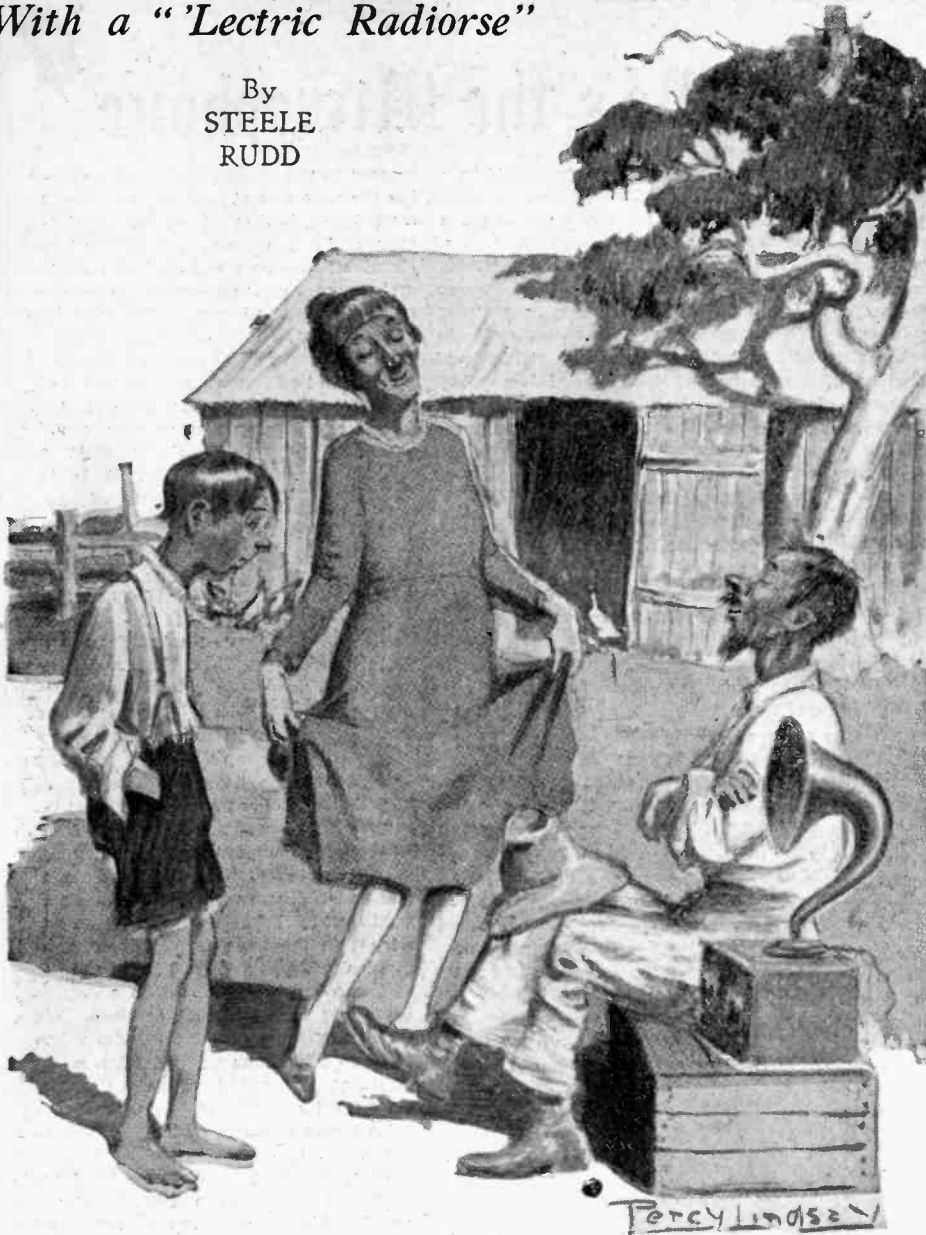
"The MAILMAN!" Sarah cried, dropping the iron, and rushing off through the house.

"She'll go crazy yet," mother chuckled, "if she doesn't soon hear from Billie. But I suppose I was the same myself once, when father used to go up-country. . . Girls now-



With a "Lectric Radiorse"

By
STEELE
RUDD



Percy Lindson

adays are lonely creatures, and their sweet-hearts seem to be the worry of their lives."

"PSHAW!" it wasn't him, after all!" Sarah returning, grumbled, "it was that silly old Bendy Sawplitt going by with pigs—skinny old pigs, too!"

"I nearly turned myself over when I knocked my shin against that old chair the boys left on the verandah, in my hurry!" Sarah complained, lifting up her skirt and unrolling her stocking to examine the part.

Life on the Selection was a round of small and arduous duties, for the womenfolk, in which the smallest event loomed largely. When the ironing was put away, they made the tea and called to Dad and the boys. But the boys didn't require much calling. Their voices could be heard already approaching.

"You know T-T-Tom Dwyer, D-D-Dave?" came from Joe, as they loitered at the yard fence. "He's a pretty b-b-big bloke—b-b-bigger'n you, an' wears s-s-seven boots."

"Must have a lot o' feet if he do," Dave grinned.

"W-w-well, when we was pup-pup-playing dorgs an' kuk-kuk-kangas at school lars

week he w-was the ol' man kuk-kuk-kanga, full o' green stuff, an' could hardly r-r-run."

"Full o' whose green stuff? Ours or Dwyer's?" Dave questioned.

"An' I w-w-was a b-b-bull-dorg," Joe went on, ignoring the question. "An' Jim Dr-Dr-Drygrass was a greyhound, s-s-swift as lightning; And when the gr-gr-greyhound caught the ol' man kuk-kuk-kanga, an' bailed it up, then the b-b-bull-dorg, which was m-m-ME, came up, s-s-snarled at him, s-s-showed his teeth, then jumped at his th-th-throat an' downed him, an' kuk-kuk-killed him."

"Killed him DEAD?" from Dave.

"An' J-J-Jim Drygrass s-s-scalped him." Joe went on, "an' w-w-when I (th' b-b-bull-dorg) was kuk-kuk-cuttin' off his tail with a sh-sh-sheer blade he jumped up an' s-s-swore and kuk-kuk-called me a COW!"

"You're a b-b-bull-dorg, R-R-Rudd," he said, 'an' b-b-bull-dorgs don't k-k-cut th' tails off kuk-kuk-kangas, an' if you try it on m-me again I'll punch y'."

"But wasn't he DEAD?" Dave asked.

"Y-y-yes; an' s-s-s-scalped, too," Joe admitted.

"Well, how did he manage to TALK?"

"He tut-tut-TALKED, that was all. An' I s-s-said to him, 'You'll punch me, will y'?'"

"And you were a bull-dorg?" Dave chuckled.

"Y-y-yes?" he said again, 'an' if you bring that b-b-big slem-mickin' g-g-goat of a brother of yours along w-w-with you I'll punch him, too.' An' that w-w-was YOU he m-m-meant, Dave!" Joe grinned triumphantly.

"BY CRIPES," Dave said, straightening himself up and extending his arms. "Did he say that about me?"

"True as THAT, Dave!" Joe moistened his finger in his mouth and "eris-crossed" himself with it.

"BY CRIPES!" Dave repeated, jabbing the atmosphere with his fist—"let him come here!"

"Yes, l-l-let him kuk-kuk-come!" and Joe let go his left and right and then sailed in all round the compass, side-stepping, grunting, hissing, ducking, and punching holes in the wind.

He was going his hardest when Dad, in response to the calls of "Tea-o" from Sarah, strode along. Dad stood for a moment gazing in astonishment at Joe.

"Here!" he yelled, "what the 'ell's all this?"

Joe dropped his hands suddenly and looked sheepish.

"He's doin' a bit of practice," Dave guffawed—"gettin' himself into form to knock the stuffin' out o' Tom Dwyer."

"Gettin' himself into form for the 'Formatory." Dad stormed. Then, advancing on Joe—but Joe, being far-sighted, crept hurriedly through the fence—"and you make off to school out o' here to-morrow, an' get to your books. You ain't wanted any longer. There's a relation been put on to look after the crows an' cockatoos."

Joe made off inside and surrounded the tea and scones.

Dad and Dave sauntered along together, Dave grinning and Dad growling. They were preceded by Uncle, who came from the wood-heap with an axe on his shoulder, feigning to wipe perspiration from himself with his shirt sleeve.

"Good heavens!" Mother exclaimed, "your Uncle is here!"

"WHAT!" and Sarah turned from the tea-table in astonishment.

"Hello!" he greeted in homely tones. "Hope you're pleased to see me back."

"We're always pleased to see you, Uncle Peter," Mother smiled in her quiet, good-natured way. But Sarah, looking black as thunder, wanted to know what he had come back for.

"Because I'm a real come-back, I 'spect," Uncle answered, mounting the verandah and glancing at the tea-table, where Joe was putting in good work. Uncle removed his old hat and took a place beside his nephew.

"D-D-Didn't y' go away for GOOD?" Joe, stuffing a couple of scones into his shirt to hold in reserve, asked.

"Yes, an' come back for better, be th' look of it," and Uncle started to help himself.

Joe spluttered into his tea-cup.

"You don't seem to have had much wood chopped while I was away, Ellen?" Uncle observed sympathetically as Mother poured out his tea.

"About as much as we had before you went away," Sarah, answering for Mother, snapped. Dad and Dave reached the steps,

(Continued on page 35.)

Between You & Me & the Microphone

WHEN Christmas began to hover his hungry claws over our Friday pay-envelope, and the editor talked of a special Christmas edition, and hinted that something Christmassy would be preferred, our thoughts immediately slid into the old familiar slush-trough. Although this edition is being brought out a fortnight too early, for the sake of the country readers and the Postmaster-General, we were, nevertheless, sufficiently imbued with the Christmas spirit to become thoroughly mushy. We decided to alter our style, this once, to the so-delightfully-charming-quaint essay style, and breathe delicate foolishness into the enraptured faces of all who should pause and read our page. Readers would say, "What a really delightful fellow!" "What a beautiful soul!" "How charmingly inconsequential!" and so on, and in our demoniac old heart of hearts (so we pictured it) we should rejoice that for once our essential innocence—the childish sweetness of our nature—had peeped through the curtains of our rugged, bluff, uncouth, satirical exterior.

SUDDENLY we remembered that at this same time thousands of journalists all over the British Empire would be doing and thinking the same things; so we began to look round for a new angle and an Original Idea.

However, there is no new angle, and no Original Idea. You could say Christmas is a fine institution; you could say it is a bad institution; a wicked institution; an immoral institution; a comfortable, friendly, cheerful, necessary, base, useless, amiable, glutinous, traditional, blessed, disintegrating, beautiful, hypocritical, homely, immortal, or ridiculous institution; but these statements have been made already; these aspects have all been fully and exhaustively considered. The trouble is that there is only one Christmas each year, which makes it worth writing about; but there have been hundreds and hundreds of Christmases and thousands and thousands of journalists to write about them each year, tenderly, sweet thoughts in their minds, their hearts beating anaemically with the milk of human kindness

WE just had a brilliant idea—we thought of telling the story of the Nativity, and making the Three Wise Men bring a wireless set, and, say, a ticket to the State Theatre instead of the customary frank-

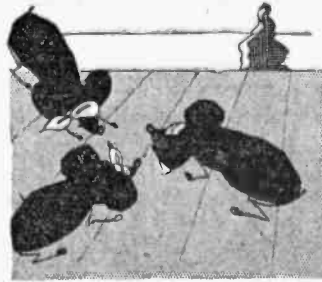
incense and myrrh; but then there'd be a row among our advertisers as to what make of wireless set would get so much publicity, and anyhow.

We have a peculiar affection for those Three Wise Men. They were so serene and calm about the whole business. They saw a star shining over an old stable in Bethlehem, if we remember rightly, and they knew what it meant, and they walked sedately into Bethlehem, bearing gifts. Then, having seen what had been promised them, and having presented their frankincense and myrrh, they went away as sedately as they had come, and were not heard of again. At least, we did not hear of them again, which amounts to the same thing. The point is, they knew their value as an Episode; they acted their part with discretion and restraint, and got out while their fame or popularity was at its height. That was probably a reason why they were called The Three Wise Men.

ANOTHER historical group we have a peculiar affection for is The Three Blind Mice. We wept bitter tears over the Three Blind Mice the first time we heard about them; but by hearing the song frequently repeated, we became inured to its cruelties; and we came to understand eventually that their very blindness was something of a blessing, as it prevented them from seeing how ridiculous they looked without tails; but why the farmer's wife should wish to cut off

their tails, and with so blunt an instrument as a carving knife, we could never understand, unless she did it in a fit of ungovernable temper, which, of course, would require no explanation. A psychologist friend of ours, a Freudian, said that undoubtedly the action had a sexual origin, and perhaps this is so. Nevertheless, it was foolish. When we used to go to school, there was a standing offer of threepence for each mouse produced in a dead condition, and with great industry and the setting of many traps we managed to make about two or three shillings every week. We had to bring each extinct mouse before the suspicious eye of our headmaster, and there was one strict stipulation—each extinct mouse had to be intact, complete with tail and standard accessories. We used to tie five or six mice by the tails to a long string, and

proceed to the headmaster's study swinging the mice to and fro. Then he would count heads, lead the way out to the kitchen, and watch the mice disappear into the stove; then he would produce the one and threepence, or sixpence, the case demanded—a long while ago. Yes. Well, by cutting off the tails of the three blind mice, the farmer's wife lost a whole ninepence, and lord knows what on account of royalties; because, of course, a blind mouse is as marketable as a whole mouse; and this shows what a silly thing it is to have a fit of ungovernable temper or a sexual origin.



WHILE we are talking about Threes, we mustn't forget the Three Directors of the Australian Broadcasting Company, for whom we have a very peculiar affection.

We don't know them very well—don't know them at all, as a matter of fact; we suppose they haven't had time to ask us to dinner, so we could meet them; but yet we suppose they are very nice chaps, and we wish them a merry Christmas and good luck to them. We also wish all our friends in the Broadcasting Company a merry Christmas and good luck to them; and also we wish the artists a merry Christmas and good luck to them. We wish to specially wish P.A.B., who writes to us so often from Queensland, a merry Christmas, and good luck to you, sir. And we wish the public and our advertisers all a merry Christmas and good luck to them, too.

Finally, we wish Mr. Hull and Mr. Meadows and Miss Madden and Miss Carter and Mr. Morse, and George and Bill, and Mr. Muir, and Mr. Cull, and Mr. Butler (our eagle-eyed reader, who has saved us so often from ourselves), and Merton and Miss Trueman, and the composing room, and those dear unimaginable fellows who print us, and also every one of the charming people we can't remember just at the minute, but have on the tip of our tongue—we wish you all a very merry Christmas and good luck to you, and that's that, and thank you very much.



NEW TYPE OF PROGRAMME To Be Offered in 1930

That a distinct improvement will be noticed in the 1930 programmes, is the text of Mr. Doyle's Christmas message to listeners-in, written specially for "Wireless Weekly."

By **STUART F. DOYLE.**

(Chairman of Directors of the Australian Broadcasting Company)

UNTIL the Australian Broadcasting Company takes control of all the "A" class stations in the Commonwealth—and this will be hastened in the New Year, when 5CL, Adelaide, comes under our regime on January 14 and 4QG, Brisbane, on January 30—the results of our five months' labor in the broadcasting entertainment field will not be felt. It will then be possible for us to devote our entertainment knowledge to giving bigger and better entertainment in the interests of listeners throughout Australia.

Our concentration, so far as reorganisation of entertainment effort is concerned, has first been in Victoria, where the ever-increasing number of licenses, and the general satisfaction, has proved that the class of entertainment which we are offering is what the public wants. The public no longer desires stereotyped radio programmes. The demand is now for color and "atmosphere." Not only must the ear be pleased, but the radio fare has to be served up palatably, and a suitable background provided for listeners, so that people who rely for their sole entertainment on wireless can be served in a far more interesting manner than heretofore.

The appointment of a Superintendent of Broadcasting Stations has been made by the directors with the sole desire of consolidating services throughout Australia, so that there will be co-operation and co-ordination between every "A" class station in the Commonwealth. We confidently expect, therefore, as the New Year progresses, our programmes will gradually improve. It is not possible for the listening public to expect meteorical variations in broadcasting programmes. The variation, alteration, and improvement will take place gradually, and it is hoped that listeners will find the new type of programme that will be offered as time goes on as acceptable in New South Wales, South Australia, Queensland, and West Australia, as in Victoria.

There is a certain amount of psychology necessary in broadcasting. So many people are attracted to it. It serves a whole Continent, inasmuch as every phase of life is covered. The listening public is divided into groups. The first likes classical programmes, the second entertainment of a lighter nature. Some people have a penchant for talks, others devour the sporting sessions. The man in the country likes his market reports above all else, the religious broadcasts are a solace to

thousands, the educational sessions are of invaluable assistance to schools and students.

There are not two listeners in the whole of Australia whose tastes are alike, and for that reason every taste must be catered for. That is why broadcasting covers such a big field. If one person is not keen on a classical programme, there is always someone who is. Thus it behoves all listeners to bear with each other, and just as there is co-operation between one broadcasting station and another, so there must be co-operation between one listener and another.

The Australian Broadcasting Company is striving to meet every listener halfway. It is striving to give every listener what he wants, but before this can be an established fact, there must be the bond of tolerance between the listener who likes one phase of broadcasting programmes and the listener who likes the reverse.

The A.B.C. is, I believe, giving service. The public is being treated to a higher musical education than would be possible otherwise, for the world's greatest composers and librettists find their way on to the air. A country without music would, indeed, be desolate, and the transmission of classical, semi-classical, and lighter music given from the stations under the A.B.C.'s control is performing, I believe, a useful service to the Australian community. The educational talks are of great value. These are provided by the most travelled and highly cultured men and women in Australia. They embrace all subjects, from travelogues to the melody of speech, from science and invention to Brahminism and homecraft. They bring the breath of an outside world to the average man in the street. They are given in simple language and on a range of subjects that seems never-ending.

The man who is outback is brought into

close contact with the city dweller, for a good news service is provided for him. The cables that appear in the daily press are read out to him almost as soon as the papers are in the city home, and he is conversant with the world's happenings almost as quickly as his city brother. The Stock Exchange and market reports are also for his benefit, and perhaps the most valuable information of all, and one that he daily waits for in anticipation of the morrow—the weather report, a vital necessity to the country man, and of interest to us all.

Whenever a big national event takes place it is flashed round immediately by means of broadcasting. The eyes of the whole country were focussed on the recent Federal elections. Extensive preparations were made by the Australian Broadcasting Company for the broadcast of the results, and an efficient service was rendered to the public of Australia through the means of wireless. Every outpost in Australia was reached by the preparations our company had made for the broadcast of the results. The same can be said of the Melbourne Cup. This is a sporting event of international importance, and the interest it creates is intense. The Australian Broadcasting Company served the whole Commonwealth with satisfaction by the relays from 3LO (Melbourne). Overseas relays occur with frequency, and whenever programmes that are worth while in other overseas countries are able to be picked up and transmitted for the benefit of our listeners, the relaying novelty is put on the air, so that listeners can have the opportunity of communication with the outside world, which is, after all, one of the many benefits that radio has for us all.

I would like to take this opportunity, on behalf of my co-directors, Sir Benjamin Fuller and Mr. Frank Albert, as well as myself, to wish all listeners a cheery Christmas. I think that Christmas is greatly assisted by the use of broadcasting sets. It enables the happy holiday throngs in all parts of Australia, even away on the highest peak of the farthestmost mountain, to be kept in constant touch with the world, and I am sure there will be at least a quarter of a million happy holiday-makers whose Christmas and New Year holidays will be happier still by having a radio set at their disposal.

INDEX TO THIS WEEK'S PROGRAMMES

Local		Interstate	
FRIDAY, DECEMBER 13.			
2FC, 2BL	42	3LO, 3AR, 4QG, 5CL, 6WF	44
2UW, 2KY, 2UE	45	7ZL	45
2GB	46	SATURDAY, DECEMBER 14.	
SATURDAY, DECEMBER 14.			
2FC, 2BL, 2GB, 2UW, 2KY, 2UE	46	3LO, 3AR, 4QG, 5CL, 6WF, 7ZL	50
SUNDAY, DECEMBER 15.			
2FC, 2BL, 2GB, 2UW, 2UE	52	3LO, 3AR, 4QG, 5CL, 6WF	53
MONDAY, DECEMBER 16.			
2FC, 2BL, 2GB	54	3LO, 3AR, 4QG, 5CL	58
2KY, 2UW, 2UE	53	TUESDAY, DECEMBER 17.	
TUESDAY, DECEMBER 17.			
2FC, 2BL, 2UW	60	3LO, 3AR, 4QG, 5CL, 6WF	64
2GB, 2KY, 2UE	64	WEDNESDAY, DECEMBER 18.	
WEDNESDAY, DECEMBER 18.			
2FC, 2BL, 2UW	66	3LO, 3AR, 4QG, 5CL, 6WF	70
2GB, 2UE, 2KY	70	THURSDAY, DECEMBER 19.	
THURSDAY, DECEMBER 19.			
2FC, 2BL, 2GB, 2UW	72	3LO, 3AR, 4QG, 5CL, 6WF	76
2UE	70		

How to Make Your Some Mysterious Stunts With XMAS PARTY

ONCE more Christmas, the season of celebration and joviality, is here. Unfortunately will be the family which does not have a party of some sort, for it is this occasion of Christmas puddings, gifts, and good fun which is looked forward to most eagerly. Let us see what we can do to make the next Christmas party a greater success than ever.

If you have a party at your house, some of the effects, stunts, or games you can enjoy will be the making of your evening. This article will tell you how to enlist radio in the cause. No costly apparatus other than that usually available is required. No doubt any of your visitors may be able to supply an item you haven't on hand.

Stunt 1.—The Mysterious Gramophone

THERE is a gramophone in the room, and the host suggests a dance. One of the members present is asked to put on a suitable record, say "When Dreams Come True." The company are astounded to hear, as soon as the record is put on, the hymn, "Rock of Ages." The record is checked up, everything found O.K., so another record is tried. This time, instead of the request number, "Good King Wenceslas," the piece, "Hallelujah, I'm a Bum" is reproduced, much to the merriment of the company, who are allowed to inspect the records to see that the name plates have not been interfered with and that the records are quite genuine. Later it is found that the records play exactly as marked, though the host has touched nothing.

HOW IT IS DONE.

In the room where the celebrations are taking place (hereafter we shall call it the sitting-room) a gramophone is placed. A gramophone pickup is plugged into the tone arm in place of the usual mica-disc sound-box. This pickup is left disconnected.

In another room nearby (call it the living-room) another gramophone with a pickup is placed, together with a gramophone amplifier. The simple two-valve amplifier treated recently, and entitled "A Two Valve Amplifier for the Countryman's One," will be O.K. The pickup is connected to the input of the amplifier in the usual manner, i.e. to the primary of the first transformer (or, if the radio set is to be used, between the grid and filament terminals of the detector valve. Two leads should be taken from the output into the sitting-room, and there connected to a loud-speaker. The leads should be placed out of sight, by running them beneath a carpet. Two dummy leads are taken to the pickup of the gramophone in the sitting-room.

When some person puts on a record in the sitting-room nothing is heard. But if a person is placed to operate the gramophone in the living-room he can play any record he likes. Thus, the host requests some jazz record. This request is heard by the operator in the living-room, who picks out some record vastly opposite in character to that requested, then awaits a cough or other sign from the host, at which he puts on the record, which is duly reproduced in the loud-speaker in the sitting-room.



Stunt 2.—The Wonder Radio Set

THE host, with obvious delight, exhibits his new 1931 radio set, and mentions it will pick up any station in the world. He tunes in 2LO London WEAF New York, or JOAK Japan (in fact, any station requested) then sends a radiogram to any station selected by a member of the company, asking for a request number. This may be, say, 2LO London.

A little later, amidst slight static and fading, London is heard giving the weather report, mentioning that snow is causing vast obstruction in Oxford Street, and a gang of a hundred men have been hired to clear the slush away. He follows this by an announcement, "2LO London, British Broadcasting Company calling. We have just received a radiogram from Mr. —, of Sydney, Australia, advising that he is receiving this station. Mr. — is holding an Xmas party, and he requests us to play —." The number is duly reproduced, then each member of the party is called, and best wishes for the season offered.

THE INSIDE STORY.

The same apparatus as was used in the previous stunt is made use of here. The only addition is another loud-speaker, which is connected to the input of the amplifier in place of the gramophone pick-up in the living-room. When the operator speaks into this, his voice will be reproduced in the loud-speaker placed in the sitting-room, and if this latter speaker is placed on the radio set, and two bogus leads taken to the set, it will appear that the reception is genuine. If the amplifier of the radio receiver is being used, there is no need to lay dummy leads. The operator in the living-room awaits some pre-arranged signal, then commences to announce the various stations. He

makes the signals fade by operating a volume control, and static is imitated by screwing up newspaper in front of the loud-speaker, which is acting as a microphone.

Of course, the radiogram is a blind. For the music, he merely connects the pick-up in place of the speaker, and plays the gramophone. The person operating the apparatus in the living-room should not forget to speak with an accent, and throw in some queer jargon when imitating foreign stations. He should not forget, either, when making the bogus weather report, that it will probably be snowing in England.

Stunt 3.—The Ghost Station

THE host walks in with a newspaper, and a puzzled frown on his face. "Listen to this," he says, and reads "Mysterious Radio Station." Numerous reports have been received from various districts concerning a mysterious radio station which has been operating lately. The announcer at this station calls, "Ghost Station, Mars." The P.M.G.'s Department is at a loss to account for these signals, and advise that no station in Australasia is licensed with this call. Scientists have been carrying out tests in connection with the matter, and many are firmly convinced that these signals are genuine Martian communications. The most curious fact is that the station announces

Radio Which Will Make This Year's Festivities a Success



The six tricks here outlined will cost you nothing if you have a receiver, a gramophone, and some old radio gear. But they will afford you an extraordinary amount of fun. Especially will the "Talking Fool" trick mystify those of the party who will attempt to guess how it is done.

trician is out of the room) part hands, and the electrician is called in to find the break in the circuit. This he does by placing the tags of the telephones on the necks of the various people sitting next to one another. When the correct break is found the music will be heard in the telephones. A tiny momentous shock will be felt on the necks of the two who are responsible for the break, but this is not dangerous, and only adds to the zest of the game. When he has found the break the person on the left responsible for the break becomes the electrician. The person who finds the break in the least number of tries wins the game. A gramophone used in conjunction with a pickup and amplifier can be used in place of the radio set if preferred.

Stunt 6.—The Talking Fool

THE host brings forward a ghostlike figure and introduces it as the talking fool, which will not only speak, but answer any questions put to it. There is no small boy concealed beneath the sheet at all. Neither has the host to attach any wires to this apparatus. He merely places it down in the centre, or in some suitable position in the room.

How it is done.

Get a small wooden barrel hoop and two lengths of 1½-inch half-round lumber about four feet long, also two short lengths of wood, four inches by three-quarter inch. Next procure a speaker unit or cone speaker (any other type speaker may be used if these are not available), and attach this to the hoop. The barrel hoop is nailed to the top of the two pieces of half-round lumber. The wires from the unit are carried down between the two pieces of half-round lumber. The two pieces of four-inch-wide wood are used to make a base for the upright pole, and the wires from the speaker or unit are fastened in place at either end of these cross-pieces to two nails, the ends of which project about a quarter of an inch below the under-surface of the wooden support. The idea of these nails is to allow an electrical connection between the speaker unit and two pieces of tin which should be placed on the floor and under the carpet. Two wires are bolted or soldered to the tin sections, and these wires are led to the loud-speaker outlet of your radio set. An old sheet with features drawn on it should be draped over the framework. In this the microphone is used in the input of the first audio. Note that another loud-speaker can be used in place of a microphone if one of these latter is not available.

Christmas Supper

Do not forget that the apparatus used in the earlier stunts mentioned can be used to call the company to supper, etc. It will form a fitting climax. Make sure you have finished all your stunts with it first.

various pieces of scandal regarding Australian statesmen and other public servants."

The hostess suddenly calls and the host excuses himself and goes out. When he returns, he tunes in the ghost station, which, after speaking scathingly of various political personalities, commences to call every one of the party by name, giving some tidbits of amusing information regarding them, after which, the station signs off with a ghost yarn.

How it is done.

Little explanation is required here, since the explanation given in the last stunt will suffice to make clear exactly how the stunt is carried out. The reason why the hostess calls is that the host may take the newspaper with him (the story is, of course, a fictional one), and can thus get rid of it. The bits of information are best obtained by the hostess, to whom any personal news gleaned by others in the know should be handed. For instance, the host may notice young Harry Whatshisname's face brighten visibly when he finds Miss Soandso is present at the party. Mr. Whosis may have been suffering from gout, rheumatism, or toothache, whereat some advice or silly nonsense such as boiling one's jaw in a mixture of cloves and razor-blades may be "broadcast."

Stunt 4.—The Kiss Warning

SUDDENLY a whistle blows shrilly in the sitting-room, or the radio starts of its own accord. The company are led silently to the door, which is quickly opened, and two are seen kissing beneath the mistletoe!

The Explanation.

A sprig of mistletoe is placed just outside the door of the sitting-room. Directly beneath the mistletoe is hidden (under the carpet) a piece of kerosene tin, flattened out to form a plate. The size of this should be equal to approximately one of the sides of a kerosene tin. A wire is connected from this piece of tin to one side of an ordinary switch. The other side of the switch connects to the A minus terminal of the radio battery. The lead from the set that connects to the latter terminal is removed, and to this is connected a length of wire which connects to a piece of brass spring, also hidden under the carpet and suspended over the tin sheet. One end of this should be securely fastened to the floor.

Now, when the switch is on a person standing on the spring below the mistletoe causes the radio to start playing, since the circuit is completed. If the whistle is desired, the aerial of the receiver should be disconnected, and the set placed in an oscillating state. No current will be consumed by the set until the circuit is completed by the spring.

Stunt 5.—The Radio-electrician

WITH the radio set in operation, the assembly form a ring, clasping hands under a counterpane or some other covering. At one spot the circuit is broken, and one person holds one of the output leads that originally connected to the loud-speaker, and the other person holds the other lead. A person not in the ring is supplied with a pair of head-telephones, which he puts on. Two of the company (arranged whilst the radio-electrician

“
 Here's A True Story of Transports
 ENEMY RAIDER
 By
 “BRASSO”
 REPORTED...”

COMMANDER R. A. T. WILSON stood on the bridge at the head of the companion ladder and surveyed the scenery. New York Harbor presented a busy spectacle, for on this day seventy-five thousand members of the A.E.F. were leaving for the little old war. Usually a taciturn person, the Commander at the moment was even more so. There were intricate details, such as troop housing, shiny brasswork, spotless decks, coal supplies, stores, and a thousand and one things requiring his personal attention. Officially saluted and addressed as “sir,” the Commander was also the unknowing possessor of various unofficial titles. In the fo’c’s’le he was referred to as “Dogsbody.” Amidships knew him as “Mudtop,” while the engineers generally dismissed him with “Fungus,” this latter term inspired by the Prince Edward beard affected by his nibs. Upon fraternal occasions, when departments mingled, the Commander was briefly referred to as Rat; so in this tale, which happens to be a true one, by Rat he shall be known. To starboard, Coney Island, closed by order of the U.S. Military Authorities, lay stark and drear, the big Ferris wheel rusty and drab; on the port side a snappy U.S. cruiser. Ahead, the hull of a ship grotesquely camouflaged in a foolish attempt to confuse the U-boats. A stern, trim and impressive, a big British cruiser lay awaiting the order to proceed, for she was the escort necessary to protect the convoy against possible raiders, one of which, the Moewe, was just then operating along the Atlantic sealanes. Farther afield, the greeny-blue water was littered with some fifty ships, all hideously plastered with insane designs in variegated paint, and all flying the British flag. This was about the time your true-born son of Uncle Sam was composing vaudeville ditties entitled “After England Failed,” and howling with laughter over them. Strangely enough, though Johnny Bull was said to be licked to a frazzle, he obligingly placed a portion of his floating tonnage at the disposal of the U.S. Had it not been for John Bull’s ships the Americans would have

had to stage a war on Broadway; for there were, unfortunately, no other ships to be had. Barring neutrals and those vessels whose bones were commencing to rust at the bottom of the sea, the only ships afloat were those flying the red ensign. Aside from the trifling task of maintaining lines of communication to the Eastern Mediterranean, Palestine, East Africa, Salonika, etc., transporting troops from the four corners of the earth to the various fronts, and still keeping the wheels of commerce turning over, John Bull was just then carrying across the Atlantic the soldiers of her new ally, God’s Own Country.

Rat may or may not have been thinking these things as his eyes roved around the famous harbor. Was that a sudden sardonic twinkle in his eyes as his gaze rested upon the Statue of Liberty standing proudly aloof in the distance? Maybe. Crossing the bridge, Rat cast a super-critical optic at every shiny piece of brasswork. His gloved finger caressed the smooth whiteness of every piece of wood. Each square inch of paint came in for its own fierce examination, for Rat was above all a martinet, a lover of things spick and span, and a stickler for having the job done properly. The bridge inspection completed, he descended the ladder to the lower bridge, upon which were the wheel-house, the chart-room, and the wireless-room. The senior wireless officer, who is also the author of this story, stood stiffly to attention. “Everything all right?” quoth Rat. “Aye, aye, Sir,” I answered in my best nautical style. Rat passed in and looked over the gleaming nickel-work of the 2½-k.w. quenched gap Telefunken transmitter, for H.M.A.T. Barunga was an ex-enemy steamer. Fastened to the bulkhead, a sign, “Hochspannung Lebensgefahr,” warned all and sundry to keep off the high tension. The highly-polished ebonite loose-coupler gleamed coldly. The whole outfit was a glowing tribute to the industry of one John Darley, junior wireless officer, and a perfect genius with a brasso cloth. Rat grunted his approval, and departed hence about his fell work.

Opening off the wireless cabin were the sleeping quarters dedicated to the two wireless officers, who, at sea, kept six-hour watches. That is to say, Darley wore the headphones between 8 p.m. and 2 a.m., and I a.m. to 2 p.m. As the most dangerous periods for attack were at dusk and dawn, I was on duty during these hours. In a huge log-book was entered every signal heard during the voyage. Locked in a drawer were the code-books, weighted with lead, and bearing printed instructions to heave them over the side in case of capture by the enemy. The huge, sound-proof door separating the living-room from the wireless-room was kept religiously shut, and under no circumstances was

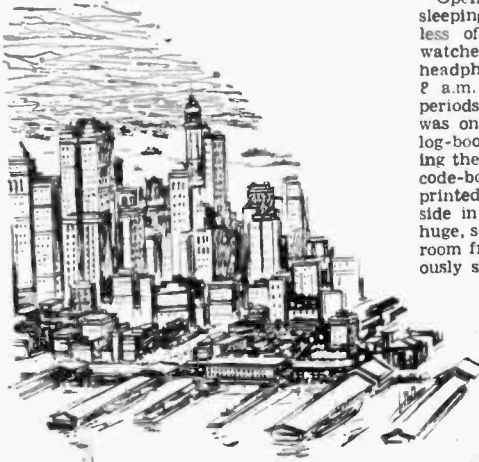
anyone allowed in except the Commander and the officer of the watch. A telephone connected the wireless-room with the bridge above. My orders were not to leave the lower bridge except to scuttle to the bathroom on the deck below. All meals were served in my room, and to keep

away intruders a soldier with a rifle kept guard.

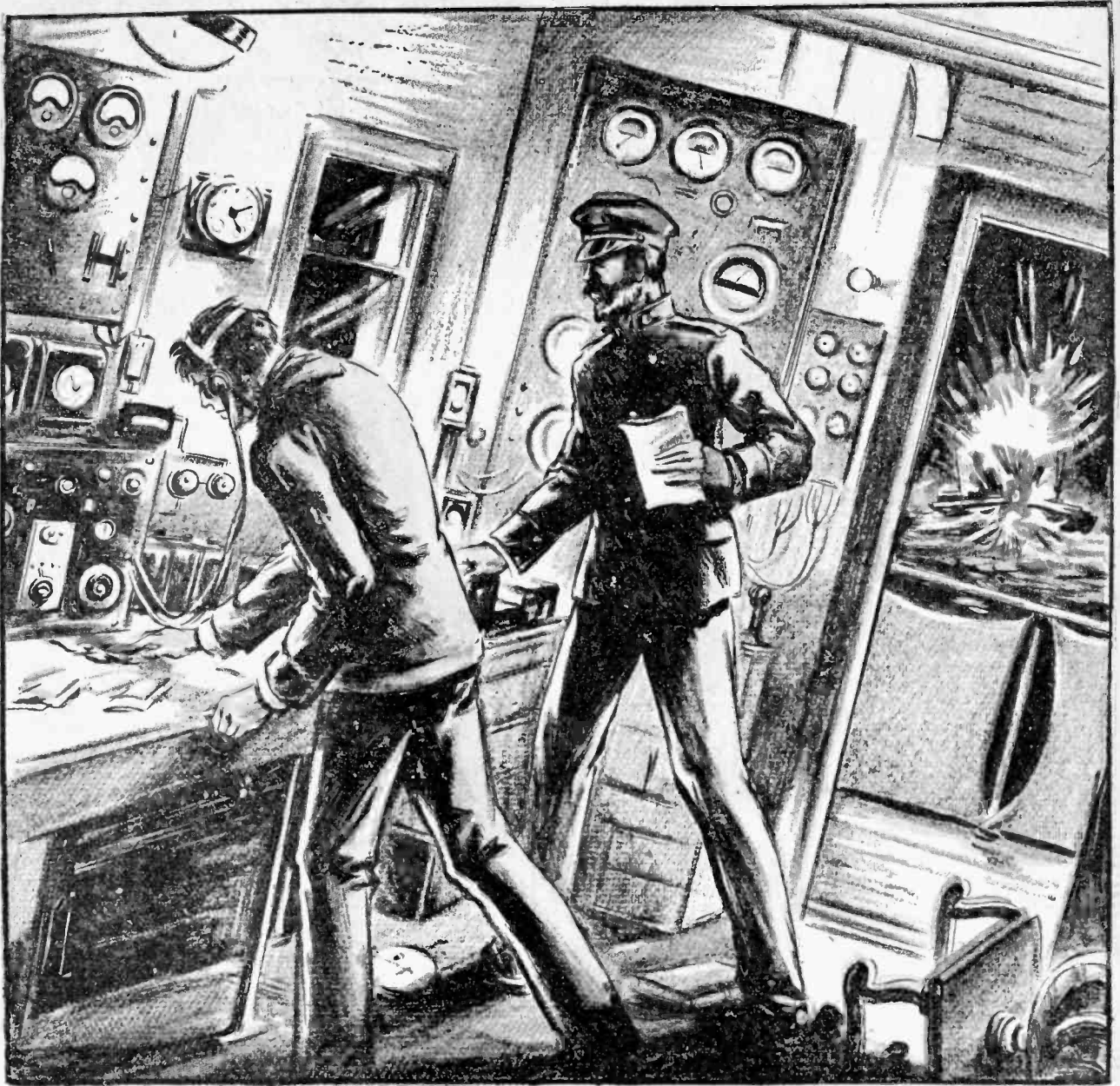
In the early afternoon a flock of seaplanes shot into the blue, wheeling overhead like so many gulls. Three dirigibles, their silver sides gleaming in the sunlight, drifted over and moved in slow, wide circles, a couple of hundred feet in the air. A solitary gun boomed. With one accord every whistle, siren, hooter, bell, klaxon horn, and jew’s harp in the city of New York commenced operations, until the din was terrific. Moving slowly, calm and serene, the British cruiser headed a line of ships out of the harbor. This was the fast convoy, the fifteen-knot liners due to make a quick trip across. The Justicia, Mauretania, Aquitania, Carinthia, and Moldavia, their decks lined with khaki-clad troops, steamed out behind the cruiser. On either side, half a dozen escort destroyers kept perfect line. Their job was to see the convoy out on to the ocean highway, returning then to perform a similar office with the slower ten-knot convoy.

So, about 4 p.m., the harbor echoed with the rattling of anchor chains; there was a general stir, and one by one the ships moved down harbor in single file, commencing the first leg of the long trek across the Western Ocean. Ten miles out the destroyers swept about saluted, and returned to harbor. The winged ships and the dirigibles veered south, and we were alone upon the ocean. The leader ship of each of the three pre-arranged lines took up positions, and each vessel dropped into her allotted station. The little old A.E.F. was on its way to the doggoned war. Gazing at those ships, mute testimony to the unbeaten might of Britain, my mind floated back across the years to a day in 1914, when a similar convoy steamed out of an obscure harbor on the south-west corner of Australia; and, later, to the shores of Gallipoli, on a grey morning, when I leaned tensely over the side and saw thousands of boys headed for the beach at Anzac. And here we were, carting across these Americans, a lot of them mere boys, and each nursing in his heart the same high hopes of a safe return and a swift victory. The Barunga carried a section of an Illinois battalion, but my state of splendid isolation precluded any fraternising with them.

Prior to departure careful wireless instructions had been given. The Aztec, head of the centre line, carried in addition a Royal Naval Commander, and was in wireless control. At certain hours G.M.T., during the darkness, all other ships tuned to 300 metres and listened for five minutes for possible signals from the Aztec. But only in extreme urgency was wireless used, for even then U-boats were known to be operating near the U.S. coast. Where necessary, the Morse lamp was used, usually to reprimand some erring ship for exposing a light. By night all ships steamed in almost pitch blackness, the officers on watch keeping the dim bulk of the ship ahead just in view. A stant a door was opened the cabin lights were all doors had patent catches, so that the in-extinguished. Portholes were fitted with metal shrouds, and even smoking on deck was strictly verboten. I recall one night when Rat went foaming down the ladder and rooted out a couple of soldiers smoking Bull



Torpedoed in the Atlantic—by a Wartime Brasspounder



★ AND THEN THERE WAS THE BOOM OF A TERRIFIC EXPLOSION, FOLLOWED BY THE SCREAM OF A SIREN OF THE SHIP (IMMEDIATELY ASTERN, WHICH HAD BEEN HIT BY A TORPEDO. . . PANDEMONIUM BROKE LOOSE.

Durham Rat had received a terse signal from the ship abreast, "You are lit up like a town." What he said to those Americanese doughboys was a crying shame. There was no more smoking on deck.

At two each morning Darley woke me, murmured "Your go," and I crawled out. In the wireless-room the only light was a bulb hanging about six inches over the log-book secured from swinging with the rolling of the ship by sundry lengths of string, and shrouded with black crepe, so that only the actual page upon which one was writing was visible. In the eerie half-light the skeleton-like apparatus looked ghostly. Rat had a practice of sneaking catnaps during the day and prowling up and down the bridge all night. Each half-hour the telephone from the bridge tinkled sharply, and a voice de-

manded, "Any reports?" The stereotyped reply was, "All's well, sir." And then an entry in the log somewhat as follows: "Bridge phoned 0130."

No one except a war-time brass-pounder can possibly imagine those night watches in the danger zone—and at that time any point north of the equator, south of Greenland, and between America and Europe was literally a danger zone. The ordinary messages of commerce were stilled, and every signal heard was a war message—invariably, of course, in code, save on the frequent occasions when a ship, engaged and outgunned by a U-boat, threw all pretence of secrecy to the winds and screamed for help, or when the deadly torpedo hit unexpectedly. Sitting there, completely alone, in touch only with an ethereal world where death stalked stealthily, one had

difficulty in controlling the imagination. In the deathly black silence I often found myself screwed up shakily awaiting the fearful impact of a torpedo or an exploding mine. And sometimes the sudden shrill of the telephone bell almost sent me bounding through the roof, so that I unconsciously anticipated its warning and placed my hand over the bell to lessen the shock.

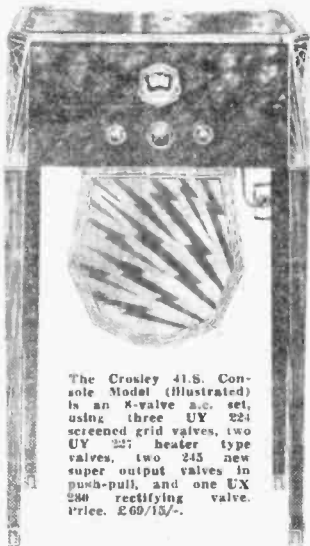
In the air was the ceaseless, hushed murmur of distant wireless. Somewhere away across leagues of dark ocean a sonorous note called XK3, XK3 V MU4. A few seconds later came the reply MU4 V XK3 G. Then followed a message in code, a swift "R," and silence for a moment. Now and then some poor devil, caught unawares in the darkness, shot a swift SOS, SOS, "Blank." 13.46 W.,

(Continued on Page 31.)

READINESS FOR XMAS JOYS



"CROSLY MODEL 31"



The Crosley 31 S. Console Model (Illustrated) is an X-valve a.c. set, using three UY 224 screened grid valves, two UY 227 heater type valves, two 245 new super output valves in push-pull, and one UX 280 rectifying valve. Price. £69/15/-.

1. NAME.—
"CROSLY MODEL 31."
2. TYPE OF SET.—
Crosley Model 31 is a 7-valve All-Electric Receiver, including one U.X. 280 rectifier. It is a grid-to-grid neutrodyne set. It uses a neutrodyne patented circuit developed especially for this instrument. Panelled in burled walnut finish metal.

3. PRICE.—Complete with Valves and Loud Speaker, installed in your own home, £49/15/-. Legs—£2/5/- extra.
4. GENERAL REMARKS.—"This set is constructed with infinite care and painstaking attention to the minutest detail of radio perfection."
5. FACTORY REPRESENTATIVE: International Radio Company, Limited, 229 Castlereagh Street, SYDNEY.

"IMPERIA CONSOLE"

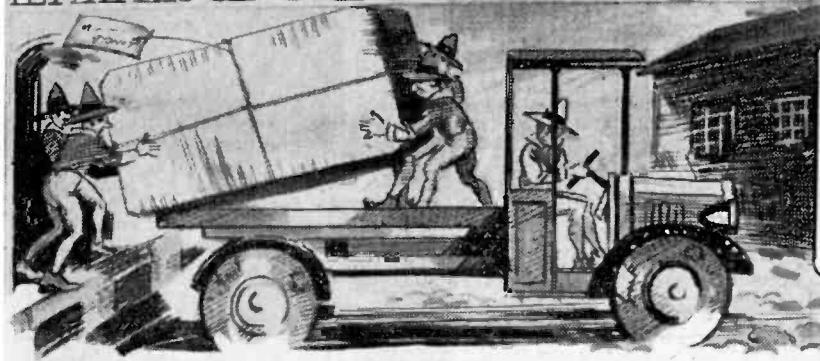
1. NAME.—"IMPERIA CONSOLE."
2. TYPE OF SET.—3 Valves, A.C. and rectifying valve. Gothic design, finished in two-tone effect.
3. PERFORMANCE CLAIM.—"Under favorable conditions will give interstate reception—although we do not stress this when selling sets. Single dial (illuminated).

It embodies the 'Pilot' power pack, which the manufacturer guarantees for 15 years.

4. PRICE.—£32/10/- Complete, installed and working in the home (in Metropolitan area).
5. GENERAL REMARKS.—"More of these sets have been sold this season than any other of any make, and therefore we claim it to be the best value in A.C. 3-valve sets in Australia at the present time."
6. Harringtons Limited, 386 George Street, Sydney.



EXTENDS TO SANTA CLAUS WORKSHOP



Make this a real radio Christmas—A radio set is an ideal gift for your wife, your children, or your friends. You have the wide range of receivers catalogued below to choose from.

"COSSOR MELODY MAKER"

1. NAME.—"COSSOR MELODY MAKER."
2. TYPE OF SET.—3 Valves, battery operation. Home assembly set. No wireless knowledge is necessary—no sawing—no drilling—no soldering—it's as simple as Meccano.
3. PERFORMANCE CLAIM.—"All locals without interference. Interstate in favorable locations and conditions."
4. PRICE.—£10.
5. GENERAL REMARKS.—"All British make. It has 1000 miles range, and 'knife-edge' selectivity."

6. DISTRIBUTORS.—
Jones and Joseph Limited, 235 Clarence St., Sydney.



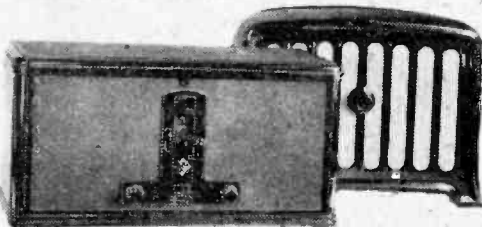
"THE MUSIPHONE"

1. NAME.—
"THE MUSIPHONE."
2. TYPE OF SET.—All - electric three-valve set (excluding rectifier). Table model encased in gold bronze metal container of pleasing design and brilliant lustre.
3. PERFORMANCE CLAIM.—"For those requiring local reception this model will give every satisfaction. You will be astounded at the clarity of tone and ease with which it is controlled."
4. PRICE.—Complete, except speaker, £22/10/-.
5. DISTRIBUTORS.—Electric Trading Company, Wembly House, George Street, Sydney.



"TELEFUNKEN"

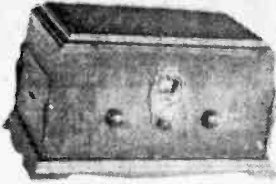
1. NAME.—TELEFUNKEN 40 W.
2. TYPE OF SET.—4 Radio Valves, 1 Full Wave Rectifier, 1 Screen-grid Detector. Famous Telefunken resistance coupled amplification, bakelite cabinet, walnut finish, tuning drum marked in kilocycles. 240 volt D.C. and 240 volt A.C. In Table or Floor models.
3. PERFORMANCE CLAIM.—"A really stabilised screen-grid set with enormous volume. Local stations without aerial or earth. Interstate on indoor aerial. Musical range of 7½ Octaves."
4. PRICE.—£50, with valves, without speaker.
5. GENERAL REMARKS.—"Having a four-position wave switch, tuning range from 200 to 2000 metres is the set for daylight reception in the country."
6. DISTRIBUTORS.—Scott and Company (A/sia) Limited, 187 Clarence Street, Sydney.



"SILVER BELL"

1. NAME.—"SILVER BELL."
2. TYPE OF SET.—Three valve Receiver (excluding rectifying valve)—all electric—single tuning control—metal cabinet—two-tone antique silver finish.
3. PERFORMANCE CLAIM.—"Excellent reproduction and ample volume from all local stations. Positively no interference from stations in any locality."
4. PRICE.—Complete, with loud speaker, £21.
5. GENERAL REMARKS.—"Exceptional clarity and perfect selectivity, which are the main features of the set. No aerial necessary, but can be used. Receiver carries guarantee of mechanical efficiency for 12 months."
6. DISTRIBUTORS.—Economic Radio Stores, 492 George Street, Sydney.





"COLVILLE-MOORE"

1. NAME.—Colville-Moore. A.C.3.

2. TYPE OF SET.—Table Model 3 Valves a.c. complete with en-

closed speaker under Table. (a) Ducoed maple cabinet of pleasing design. (b) Philips power equipment and valves. (c) Super Selectivity. (d) Plenty of volume. (e) Tonal Reproduction unequalled. (f) Twelve months' guarantee and service. (g) Imposing and Binding Warranty issued with every receiver.

3. PRICE.—£34, complete Set Table and magnetic enclosed speaker.
4.—Colville-Moore Wireless Supplies Ltd., 4 and 10 Rowe Street, Sydney.

"ASTOR"

1. NAME.—"The Little Astor Electric."

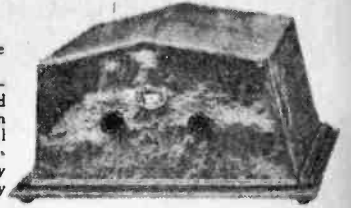
2. TYPE OF SET.—3 valves, new improved circuit, operates on 200-260 a.c. One dial geared control. Obtainable in silver grey figured steel cabinet by Butler.

3. PERFORMANCE CLAIM.—"Essentially a local station receiver. Satisfactory reception guaranteed by the maker."

4. PRICE.—£26. Complete with Amplion Speaker.

5. GENERAL REMARKS.—"Set has no lid. Absolutely foolproof."

6. DISTRIBUTORS.—Amplion A/sia Limited, York Street, Sydney.



"STERLING"

1. NAME.—"Sterling S-G. A.C., Receiver."

2. TYPE OF SET.—Screened grid 4 valve all-electric, excluding a.c. rectifying valve, all of which are Philips. Has one stage of screened grid amplification, followed by detector and 2 audio stages. Single dial control. Handsome cabinet.



3. PERFORMANCE CLAIM.—Inter-State reception with ease owing to the extraordinary high amplification obtainable with the s-g valves. The Selectivity difficulties successfully overcome by a variable control of the aerial circuit.

4. PRICE.—Table model £29/15/, and set illustrated £35/15/.

5. DISTRIBUTORS — Sterling Radio Co., Broughton House, Clarence Street, Sydney.

"SALONOLA"

1. NAME.—Salonola. 1930 Shielded five.

2. TYPE OF SET.—5 Valve a.c. special circuits, dual control. Table model, cabinet two-tone maple.

3. PERFORMANCE CLAIM.—"The entire elimination of all locals. Inter-State and New Zealand at loud-speaker strength. Tonal quality exceptionally good—special amplifier."

4. PRICE.—£49/10/

5. GENERAL REMARKS.—"First class, good looking job."

6.—Home Recreations (Aust.), Limited, 388 George Street, Sydney.



"STROMBERG-CARLSON"

1. NAME.—"Stromberg-Carlson A-62 six valve receiver."

2. TYPE OF SET.—All-electric with one main tuning control and a special super tuner for DX. Philips Valves. Equipped with phonograph pickup, induction motor turntable, and standard dynamic speaker.

3. PERFORMANCE CLAIM.—"Reproduction is excellent, sensitive, good DX."

4. PRICE.—Model A-62, including valves, £44/10/6.

5. GENERAL REMARKS.—The only extra with the above sets is the Speaker and these are available in standard makes from £2/17/6 upwards.

6. MANUFACTURERS — Stromberg-Carlson (Aust.), Ltd., 72-76 William Street, Sydney.



"EMMCO"

1. NAME.—M. P. ELECTRIC 3E.

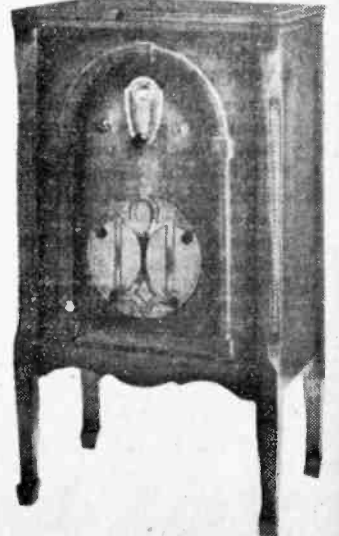
2. TYPE OF SET.—3 a.c. valves plus rectifier, single control with volume adjuster. Attractively finished maple console cabinet with built-in speaker.

3. PERFORMANCE CLAIM.—"The chassis is guaranteed for 12 months against faulty material and workmanship. It is essentially a local receiver for use within 100 miles of the average broadcasting station."

4. PRICE.—£33 complete.

5. GENERAL REMARKS.—"Latest Emmco production and up to usual high standard."

6. DISTRIBUTORS.—Manufacturers Products A/sia Ltd., Clarence Street, Sydney.



Getting Near Christmas



Horace Webb,
Organ Recital,
Sunday Afternoon
next, 2.BL



Lywood Roberts
Producing
The Man in the
Street,
December 18,
2.F.C.



Constance Burt,
Soprano,
2.F.C.
December
15 & 19.



Clifford Lathlean,
Schumann Songs
2.BL December 13.



Al Hammott,
Saxophone,
2.F.C.
December
15 & 19.

LIZA LEHMANN'S song-cycle, "In a Persian Garden," for four solo voices, will be delivered under Mr. G. Vern Barnett's direction from 2BL on Sunday, December 15. The four solo artists will be:—Miss Gladys Carlisle, an English soprano; Miss Amy Ostinga, contralto; Mr. Peter Sutherland, basso; and Mr. Lance Jeffree, tenor.

Liza Lehmann, the composer of this famous song-cycle, was born in London in 1862, and was the daughter of Rudolf Lehmann, the painter. She was taught singing by her mother, who was well-known in the musical world, both as composer and arranger of old classical songs, under the initials of "A.L." Later, she studied singing with Radegger and composition with Raunkilde, of Rome, making her debut in 1885 at the Monday popular concerts.

She was singing for nine years. During that time she had appeared at all the chief concerts in the Kingdom, receiving special encouragement from Frau Clara Schumann. Retiring in 1894 she devoted herself to composition with conspicuous success.

In 1896 her song-cycle, "In a Persian Garden," the words taken from Fitzgerald's translation of the "Rubaiyat of Omar Khayyam," was sung at a private concert in the home of Mrs. E. L. Goertz by Madame Albani, Hilda Wilson, Ben Davies, and Edward Bls-pham. It was afterwards produced publicly at the Monday popular concerts and elsewhere, being received with enthusiasm, both in America and England.

"DICK WHITTINGTON" pantomime will be broadcast from 2BL on December 16. That well-known "dame," Dan Thomas, will be active in the broadcast, and May Crean will take the part of Dick. Four song numbers which have not yet been heard in Australia will be introduced, and also many novel effects. Dan Thomas has played for many years in pantomime. He gave three command performances in the harem of an Indian sultan, and in Africa was vice-president of the Anzac Comfort Fund, for which he raised £3000.

ANOTHER old-time night will be given from 3LO on December 16, when a programme of old-time songs, choruses, and

dances has been arranged. These are "red letter" nights in many country centres, where dances are arranged in the local hall to music provided via loud speakers and amplifiers from 3LO. Favorite artists will assist. Mr. R. H. Spavin will be in his customary place as M.C., and Bendell and Aumont's popular orchestra will provide the music.

THE Australian Broadcasting Company has made suitable arrangements for Christmas week features.

ON Saturday, December 21, at 8 p.m., through 2FC, a performance of "The Messiah," by the Welsh Choral Society, will be broadcast from the Sydney Town Hall, and through 2BL Walter George's Mirthquakers will reign supreme.

ON Sunday, December 22, through 2FC, at 3 p.m., there will be a description from Taronga Park Zoo. At 8.30 p.m., a classic programme will be arranged by Mr. G. Vern Barnett, Christmas carols and other choral numbers will be sung by members of the Sydney Male Choir, conducted by Christian Hellemann.

ON Monday, December 23, Goodie Reeve will provide a comedy interlude through 2FC, at 8.25 p.m., and through 2BL there will be a debate, "1830 v. 1930," arranged by Mrs. Roland Conway. Sir Ben. Fuller will act as adjudicator. Walter George's Mirthquakers will also be on the programme.

ON Christmas Eve (Tuesday, December 24) Aunt Willa will introduce a special Cantata for the occasion "Up the Chimney," concluding her session at 6.40. The next ten minutes will be occupied by the "Hello Man," Aunt Goodie, Aunt Elly, Uncle Ted, and Sandy, and the Captain, who will all give a special Christmas message to the kiddies.

TO further the Christmas atmosphere there will be a pantomime production by Lew James through 2FC of "Sinbad the Sailor." It is hoped to arrange messages through 2BL on this evening from the Premier (Mr. Bavin), Archbishop Wright, and Archbishop Kelly.

THE Broadcasting Company is also negotiating a relay from 3LO, Melbourne, of messages by the Governor-General (Lord Stonehaven) and the Prime Minister (Mr. Scullin). A popular programme will be contributed by "The Harmony Four" (concerted vocal numbers, duets, and solos), R. D. Maunsell and Gwen Sherwood (sketches), Ted Turrell (entertainer), Colston Carter (piano novelties), and a talk by S. H. Bowden, "The Dickens Trall in London."

ON Christmas Day (December 25) 2FC will open at 10.30, and the hours after that will be the same as an ordinary day. 2BL opens at 9 a.m., and the hours will be the same as any ordinary week-day. Through 2FC there will be a Divine Service from the Lyceum at 10.30. From 1 till 2.30 there will be orchestral music, and at 2.30 from the Arcadia Theatre, Chatswood, there will be a special Christmas programme contributed by Nicholas Robins at the Wurlitzer. There will be studio items, solos, and duets by Roger Jones and Anne Luciano. At 8 p.m. there will be a Lyceum concert programme contributed by The Estonian Orchestra; Mischa Dobrinski, violinist; Alexander Hmel-nitski, pianist; Margaret James, soprano; Kenneth Hunt, baritone; Dorothy Nall, monologues; Mona Deutscher, contralto.

THROUGH 2BL on Christmas Day there will be a service from St. Mary's Cathedral at 11 a.m. In the afternoon there will be a special programme arranged by Captain Stevens, assisted by Goodie Reeve, in the form of a novel radio picnic. From 4.45 to 5.45 the A.B.C. Dance Orchestra will comprise the programme. The night presentation will include Dickens' "Christmas Carol" (Scott Alexander as "Scrooge"); also the A.B.C. Male Quartet (vocal), Newtown Brass Quartet, The Antique Trio.

ON Boxing Day 2FC will open at 10.30 a.m.—the Early Morning Session only is cut out—the hours after that will be as usual. At 12.50 the A.J.C. meeting will be broadcast by 2FC. The Evening Presentation features Walter George's "Mirthquakers" and the A.B.C. Players, National Broadcasting Orchestra, Carl Budden Morris, and Wilfrid Thomas (basso).

ON Boxing Day 2BL opens at 9 o'clock instead of 8.15, the hours otherwise as usual. A popular programme at night will be contributed by W. L. Phoenix (saxophonist), Alfred Wilmore (tenor), Ahad Duo, and Methly Read (mouth organ).

The BORED PRINCE

A Fantastic Tale of an Eternal

HERE was once a Prince who possessed everything the heart could desire or the mind conceive. His domain measured many thousands of square miles, and was remarkably fertile, and productive of all imaginable kinds of fruits, flowers, and vegetables; his cities were wealthy and industrious, their artisans the most skillful, their merchants the most acute, their poets and dramatists the most ecstatic in the whole world. And they all loved their Prince, because he was just and kind and merciful (so it was said almost every day in the chief and most respectable newspapers), and he didn't tax them very heavily.

Yet his revenues were sufficient for his needs; his palace was the most gorgeous palace in the universe—not even excepting the local talkie theatres; his servants were the most respectful, handsome, and efficient, and every evening he dined off platinum dinner services set with diamonds, sapphires, and rubies. Every modern labor-saving device, every modern time-passing machine found its place in his palace; for, of course, his artisans and merchants always presented him with the best of their new importations or inventions, which he always accepted with the utmost graciousness and civility. Such was ever his manner to the meanest, no less than to the most powerful, of his subjects.

In spite of all this magnificence, in spite of his ability to command all the resources of amusement known to civilisation, he was bored stiff. The title of this story said he was bored stiff, and in all the stories about magnificent princes hitherto written the prince was bored stiff, and I have no reason for slurring over or concealing the fact that this prince was bored stiff. He was bored stiff.

He admitted it himself. He said "I am bored stiff." He was sitting at the head of his banquet table, and the time was half-past ten on a summer's night. His guests were growing hilarious, their laughter often drowning the large orchestra at the other end of the hall. His players had performed their parts, his singers had sung, his surprises (devised by the cleverest among the producers of his princedom) had surprised; and now his jester was making mirth at the expense of his guests. He frowned, and turned towards his Grand Vizier who leant whiskerily against his carved chair, and repeated, "I am bored stiff."

"So your Highness was saying," answered the Grand Vizier. "It is not an uncommon experience for princes, Sire. Or for anyone else, for that matter."

"I am thirty-three to-day," said the Prince, "and I am bored stiff. It may not be an unusual experience, but it's damned inconvenient. Bored stiff at thirty-three! How shall I fill in the years till I am sixty?"

"It has been done before, Highness by—"

"Greater men than I—"

"Your Highness!"

"We speak facts with Grand Viziers, Wrexham. I know it all. There is no ultimate happiness. I have read Voltaire, that I must cultivate my garden. I am tired of the diletante cultures. I have read Johnson, that I

must resign myself to make the best of my magnificence. I am weary of resignation. My domain is prosperous, my people are contented, my government is successful, my councillors are perfection—"

The Vizier bowed.

"And I am wearied of the monotonous regularity of my life, and half ashamed that I am too much the coward to put an end to it."

"Your Highness is surely unwell! There are yet some—" the Vizier whispered.

"Bah! To tempt me—ME—with naked dancers! No, Grand Vizier, you will dismiss our guests, you will put an end to the revelry I can stand it no longer."

"Tut-tut!" said the Grand Vizier, and dismissed the guests. "His father was the same at his age. However—" And he prepared to be commanded to retire.

The Grand Chamberlain entered. "A man waits outside with a present and a message for your Highness."

"At this hour of the night!" exclaimed the Prince.

"Sire, he is an old man, a soothsayer, stooped with prophecy, and his message is strange and almost impertinent."

"Yes?"

The Chamberlain made a deprecatory gesture. "He says he has the secret of Eternal Happiness, which he will present your Highness."

The Prince laughed. "Now, this is very amusing. This at least promises to be original, and who is so vain as to demand Truth from Originality? Bring him in."

The Chamberlain went out. The Grand Vizier asked permission to withdraw, "for," he said, "I am no longer amuseable."

"Good night, Wrexham," said the Prince.

The Chamberlain returned leading a tall, bent old man, clad in long robes the color of the earth. His beard reached almost to his waist. His face was lined with wrinkles. His eyes glowed with the fire of youth. He was followed by two carters, who carried an enormous cabinet.

The soothsayer made his obeisance to the Prince, and waved to the carters to set down the cabinet before the wall. At a sign from the Prince the Chamberlain retired, followed by the carters.

"You bring a valuable secret, old man," said the Prince.

"A priceless secret, my son," croaked the soothsayer. "A priceless secret. I bring you the secret of Eternal Happiness. All my life has been devoted to finding it. I have studied the stars, the planets, the order of the universe. I have pondered the knowledge of man. I have grown old in the sciences. I have wasted in my laboratory. I have—"

The Prince yawned. "Please make the introduction as short as possible. The day has been somewhat tedious."

"To conclude, your Highness, by throwing my life's endeavors at your feet—"

"I appreciate the compliment."

"I have found the means of tuning in with the essential happiness of the Universe. The order of the universe is happiness, the singing of the spheres, the rhythm of creation, the melody of universality are mine—yours, if you will have them—through the agency of my—"

"That business over there?"

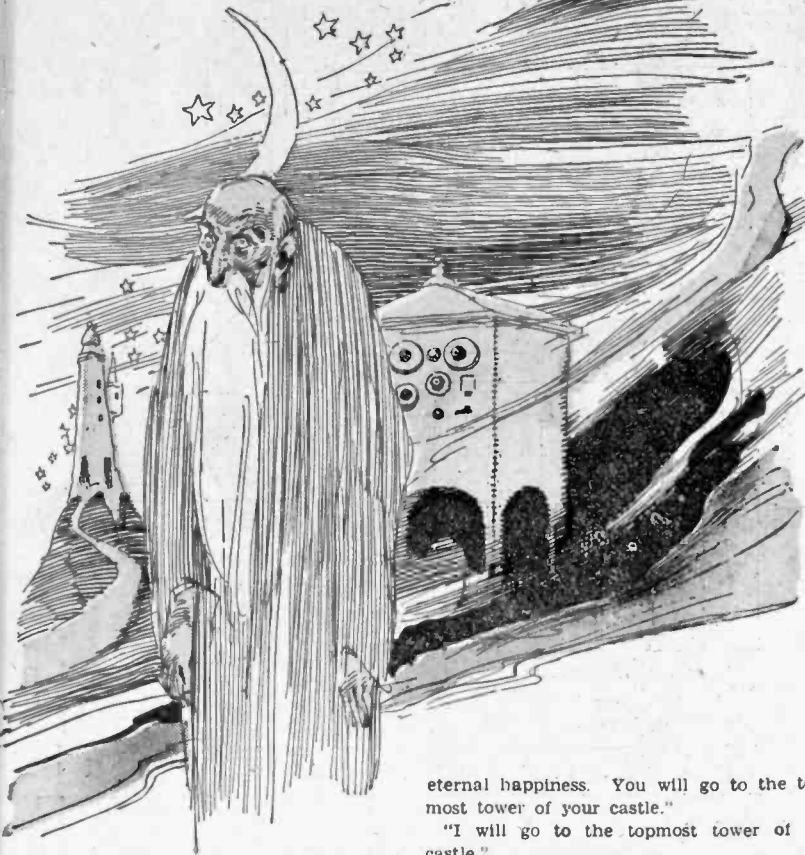
"Exactly, Highness. The Feliciphone." He went over to the cabinet, opened the doors,



Happiness Machine

By

FELIX O'NEILL



The soothsayer laughed. It was not a pleasant laugh.

"Make haste and let me out," said the voice from the cabinet. The soothsayer went up to the cabinet, fumbled, and drew a bolt. The whole front of the cabinet swung forward, and a girl stepped out into the light. To say she was beautiful would be foolish. Her face was a dream of fair faces; her body lithe and supple; her blonde hair gleamed—it was all youth and freshness and loveliness. She walked a few steps into the shadow to exercise her cramped muscles, saying: "Let us go quickly, father. It is concluded as you wished; but I wish to heaven that it had not happened. He was young. He was innocent. Even though his father—let us go quickly, father!"

"Let us go quickly, my daughter," said the soothsayer.

She turned, looked into his face, screamed wildly, and collapsed into the carpeting.

"She is very beautiful," said the Prince, throwing off the soothsayer's robes, "and it is too bad to think her wise old father should have judged me so ignorant of my own castle." He raised her in his arms and smoothed away the glossy hair from her temples. She opened her eyes. They widened in horror. The pupils dilated. She struggled violently to free herself. He attempted vainly to soothe her.

"Let me go!" she cried. "I am a murderess. I resent your compassion!"

The Prince sighed. "Poor child, you must not cry for me—I, also, am a murderer."

Suddenly she realised. Suddenly her head fell back on the Prince's shoulder, and she went into a hysteria of uncontrollable sobbing.

"Poor child," said the Prince. "How very pitiful! How very sad are all these human relationships!" And he felt very compassionate and good and kind and protecting, and he summoned the Grand Chamberlain and told him to prepare the best guest chamber for his unexpected visitor, into whose care he delivered her.

"What a beautiful girl!" mused the Prince when they had gone. "And what a delightful voice!"

He repeated this remark at the wedding, some months afterwards. "Her voice," he said, "is the most beautiful I have ever heard. I fell in love with it when my wife—(Loud Applause)—first spoke to me—it seemed to breathe the spirit of eternal happiness." (Prolonged cheering.)

He raised a monument to her father's memory, with the following interesting inscription:

HERE LIES ONE
WHO
SEEKING ETERNAL HAPPINESS
FOR OTHERS,
FOUND IT
FOR HIMSELF.

which inspired the poets of the time to many lyrical ecstasies.

Which is not, sadly enough, to say that the Prince was happy ever after. "Marriage is a delusion," he confided to the Grand Vizier after his first year or so of married life, often complaining that Beatrice was quite unportable.

"But you are no longer bored, Highness," said the Grand Vizier.

"Does that woman ever give me time to be bored?" asked the Prince, angrily.

"It is not an uncommon experience for princes, Sire," replied the Grand Vizier, "or for anyone else, for that matter."

And the kind-hearted old rascal of a Vizier smiled into his beard, and toddled off comfortably to prepare his master's Budget for presentation at the coming council meeting.

eternal happiness. You will go to the topmost tower of your castle."

"I will go to the topmost tower of my castle."

"And you will wrap yourself in the tapestries which your fathers won in the Battle of Knives."

"I will wrap myself in the tapestries which my fathers won in the Battle of Knives."

"And you will stand in the centre of the room at the top of the tower"

"I will stand in the centre of the room at the top of the tower."

"And you will be made possessor of the secret of Eternal Happiness. It is finished. It is agreed."

"It is agreed."

After the Prince's last response the voice was silent. The bell in the clock tower struck fifteen minutes to twelve. The soothsayer touched the Prince's arm. He started, as from sleep. "Let us go quickly," he said.

Stumbling over furnishings he led the way out from the hall. As they went out the lights came on once again. Everything was as it was before. The Cabinet stood as before, an inscrutable machine, against the wall.

At fifteen minutes past twelve there was a sound of soft footsteps on the carpetings. The soothsayer entered cautiously, peering right and left. Finding no-one, he walked round the room, carefully extinguishing the lights, until only the bright light above his cabinet remained.

Then he paced slowly up to the cabinet, and spoke softly.

"It is done."

The cabinet sighed, shiveringly.

"He was a fool," croaked the soothsayer. "They are all fools. Princes are all fools. He stood in the middle of the room. He waited. The clock struck twelve, and he was still as a statue. At the last stroke I pulled the catch free. He has found his Eternal Happiness."

and disclosed several rows of dials and indicators. "This machine transmutes the rhythm of universal happiness into human speech. You will hear?"

"I will hear."

The soothsayer turned and faced the Prince. "But on one condition."

"You will speak to your Prince of conditions!"

"Otherwise the demonstration is valueless."

"And the condition?"

"That you perform the universal commands without questioning."

The Prince thought for a moment, nodded, and looked up. "I accept the condition."

"Your Highness is a true Prince. Your Highness will listen." He turned the dials, one after another. At first there was a subdued rumbling, then a low squeal, which gained in volume until it filled the room with unearthly sound.

The Prince shuddered. The soothsayer continued to move the dials. The squeal subsided; then, faintly, there was a voice. Slowly it grew more distinct, grew, and increased in richness. It was a soft voice, a woman's voice, and it was calm and smooth and even. The Prince was now listening entranced. The soothsayer turned to him. "Is it not wonderful?"

The Prince did not hear him.

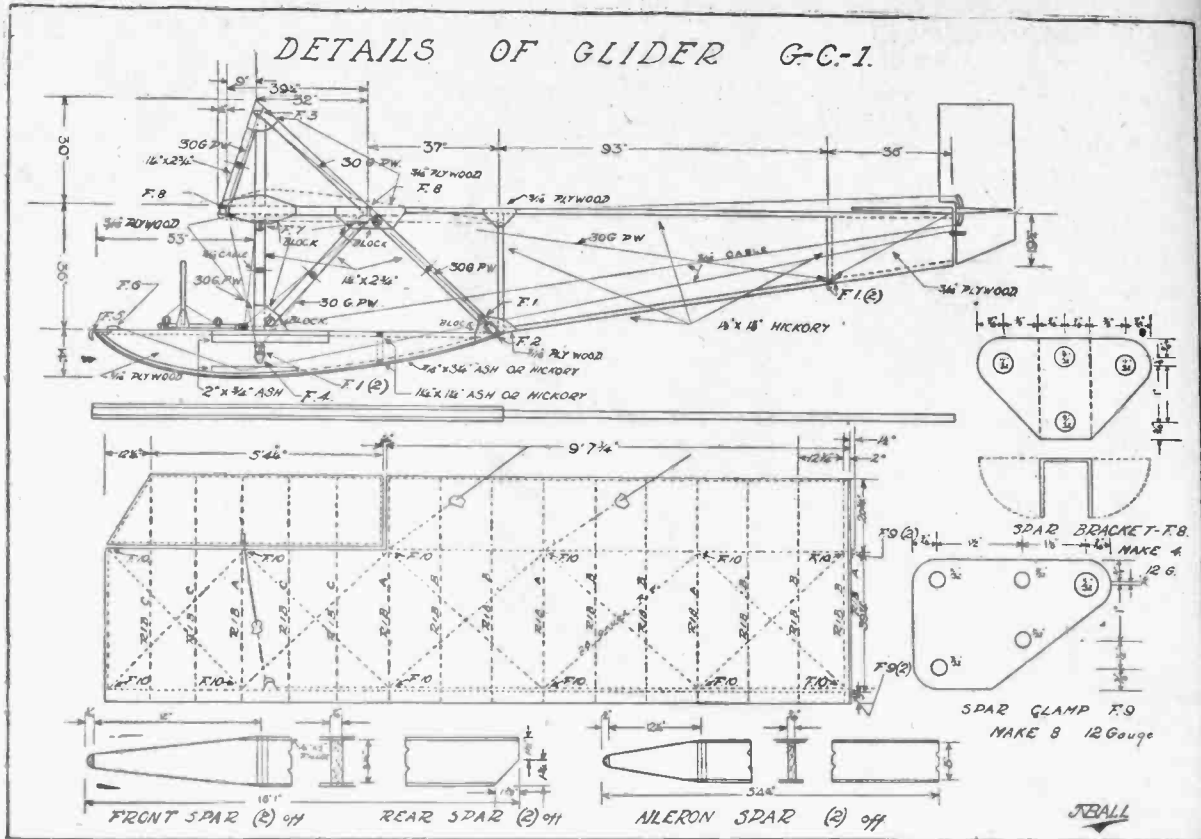
The lights in the Hall flickered, and were out.

A cool, sharp breeze blew in from an open window, wreathing the curtains into strange and terrible shapes. Small statues seemed to live, and leap from their pedestals in the moonlight. The voice became intelligible.

"I am the spirit of the Universe. I am the secret of Eternal Happiness. You will follow my directions."

"I will follow your directions."

"At the stroke of Midnight you will know



How To Construct A

WHEN asked to draw plans of a glider for "Wireless Weekly" I was at first somewhat nonplussed. I was surprised

at the lack of real information that can be obtained on glider building and flying in this country. While, on the other hand, I was astonished to note in how many cases opinions differ as to design and method of flying the gliders. As a very keen student of aeronautics I have been working for the past year, and at considerable expense, getting data on this type of aircraft, and now I believe I have sorted the wheat from the tares, and hope to be able to present it for my readers.

At the present time I am constructing a glider, which I hope to see finished in about two months' time. My glider is more advanced in many respects than the one described here. In the first case, it is a secondary glider, built solely for soaring flight, or, in other words, "dynamic" gliding. The wing span is 40in., and the weight of the finished glider will be in the vicinity of 140lb.

However, the building of a so-called simple training glider is no easy matter. It should not be attempted by anyone who is not well versed in the use of tools. I do not say that a modern glider can be built by the ordinary boy, but a group of boys, under proper supervision, can build a glider and learn to fly

By J. BALL,

A young Australian aircraft experimenter, is the writer of this article. He supplies details of a glider designed on proved principles. It can be made for a moderate sum by anyone skilled in general handicrafts, and will afford the constructor all the thrills of real flying with few of the dangers.

it with complete safety. In other words, a glider is an aeroplane in every respect, and not a toy, and only individuals or properly selected groups of students are advised to attempt it. If there are any boys who can use tools well and have a sound knowledge of aeronautics, combined with plenty of patience and great enthusiasm for their work, my advice to them is to "hop in" and get started.

THE MONOPLANE GLIDER.

AFTER much investigation and study of the data which I had accumulated, I decided that a high wing monoplane glider of the German type would be the most easy to construct, at a cost which I estimate in the

vicinity of £10 to £20, according to the skill of the builder and the local costs of materials.

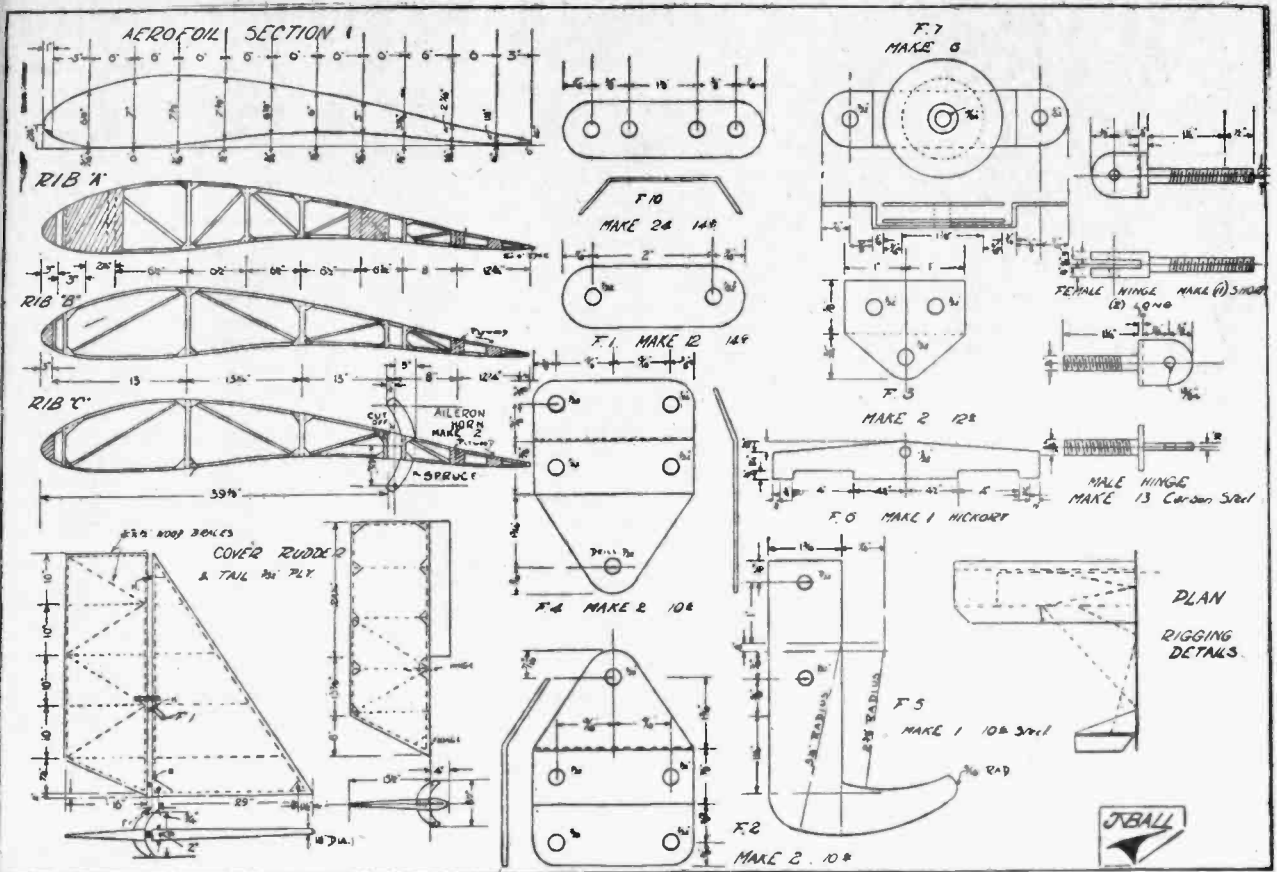
The glider is a comparatively simple affair in construction, but only the best materials and bona-fide aeroplane fittings, such as cables, pulleys, wing brace links, spar varnish, dope, aeroplane linen, timber, and joints brackets must be used.

The fuselage is to be constructed of the best Sitka Spruce (commonly known here as aeroplane spruce), of straight grain and sized to correct dimensions. Steamed parts must be carefully handled, care being taken not to "burn" the wood in bending. Streamline all outside struts according to drawings. This, of course, need not be done, but remember that streamlining a strut adds to the efficiency of the machine, because the drag is then reduced to a minimum.

Take care in selecting timber for ribs. Use 1in. x 1in. spruce, and one-eighth three-ply for "gusset" plates of either maple or spruce.

All joints in the fuselage are to be bolted with plates wherever insertion calls. Take time in constructing fuselage and wings, be patient, and erection later will be much easier.

As a type of very simple construction, I selected the single runner glider. The runner is best made of selected ash or hickory which is sound, straight grain, and quarter-



MAN-CARRYING GLIDER

sawn, kiln dried stock. The skid clamps should be of either materials. Never tolerate timber for any aircraft parts which is in any way affected with knots, resin pockets, or other timber faults.

This glider will give much satisfaction if built correctly. Machines of this type have reached heights of 100ft. from a 35ft. starting take off, in an 18 m.p.h. wind. A glider of this type should withstand the severest tests and display the finest of flying qualities. The life of such a glider, with careful handling, should run into thousands of flights. In the event of a damaged plane repairs can be easily and cheaply made, providing the machine is built correctly in the first place.

The glider builder should put every effort, and his best at that, in building his wings, for, as I have stated before, in this direction, the glider depends on much for its safety and efficiency.

I can truthfully state that a person of average persistence, with a dash of mechanical ability, one who can think for himself, plan out the little things that are not in the drawings before him, can be reasonably sure of success in his undertaking of building a glider that will fly.

CONSTRUCTING THE WINGS

In building the wings, as I have stated above, every reasonable care must be

Gliding is the world's most thrilling sport, and in a few years may become the most popular. Just as much skill is required as in ordinary aviation, but it is much nearer the average man's means. For less than the cost of the usual radio receiver you can build the machine described in this article. Glider clubs are being formed all over the world. "Hop in' and get started," advises Mr. Ball.

taken of the all-important ribs that go to form the wing curve and shape. To make the ribs correctly to the contour and directions shown on the plan it will be best to set out one on a thin, hard board, and then cut and finish the board accurately to the shape of the rib. This template can be used to set out a jig board, on which the ribs will be constructed, checked, and finished.

Make an outline true to about 1-32in., according to the measurements given for the aerofoil. Make a negative by fastening 1in. x 3-16in. strips to wood plate to give outline. Cut accurately, and lay all parts of first half-rib into jig, and glue all joints, including

gusset plates of 3-ply. When glue is set, remove ribs and build up with other members when properly fitted into jig of reverse pattern.

Referring to the drawing of the wing or panel, it will be noticed that each wing or panel consists of 5 "A" or compression ribs, 7 "B" or intermediate ribs, and 4 "C" ribs. The rib "A" in the wing near the aileron horn will, of course, be cut for proper length.

Building the ribs may be a tedious and tiring job, and will no doubt put your patience to a test. But persevere, and you will find the rest of the wing construction is comparatively easy. Lay out spars and drill for all fitting bolts. Slide ribs into position, bolt all fittings into place, and glue and nail ribs to spars, using shims wherever necessary to ensure solid fit. Half-inch by 20 panel pins are recommended for nailing ribs to spars; never use screws of any description. Insert trailing edge strip and glue into place. At this point assemble all bracing wires, tighten wires, and align wing true to 1/4in. Install aileron cable through pulleys, and see that everything is ready before putting on fabric.

Take care in making ailerons. Make ribs with same care as in wing, and assemble complete, cutting out aileron horn from 1/4in. 5-ply birch.

(Continued on Page 31.)

Wireless Weekly

Incorporating "Radio in Australia and New Zealand."

FRIDAY, DECEMBER 13, 1929.

THIS CHEERFUL SEASON

WITH this issue of our paper, one of the best we have ever put out, if you will pardon our saying so, we wish you all a merry Christmas.

Readers interested in the technique of receiver-construction will be delighted with Mr. Hull's latest evolution, the "Pre-selector Four," which transmutes the baseness of an iniquitous political principle into the pure metal of good radio reception; and all readers will be pleased with the several short stories and other features, which, added to our usual features, make this issue an exceptionally knowledgeable holiday companion.

We are supposing, of course, that you are going away during the holidays; and if you are we hope you will not go away without a wireless set of some kind or other. Remarkable advances have been made in the construction of portable sets, so that it is now possible to get perfect reception over great distances with these admirable and compact receivers.

"For Heaven's sake!" say some people, "why on earth should we carry the city round with us on our holidays, when all we want to do is to get as far away from it as possible?"

But it is not the city you will carry about with you; it is the spirit of Christmas, an older institution than radio, and a greater inspiration than cities.

Christmas is the season of cheerfulness and goodwill. When Christmas approaches, the most hard-hearted listener has a good word or two for Mr. Doyle's programmes. When Christmas approaches, the youngest announcer is forgiven for a slip of the tongue. When Christmas approaches, rival traders smile on meeting in the street, forget about the new tariff, and agree not to give anybody a discount; newspapers begin toy crusades and charity subscription lists; shop windows are filled with toys and seasonable trifles; wine cupboards are stocked; friends begin to remember they haven't written to you since last Christmas. We declare a truce in the polite wars of civilisation, to thank heaven and ourselves that we are human.

That it can spread and make national, that it can join a whole nation of individuals in the cheerful peace of Christmas, is the triumph of radio. It becomes no longer a machine, but a part of our national unity and mutual understanding.

BETTER THAN ORIGINAL MUSIC?

IT is not often realised that the rendition from the loud-speaker may actually exceed the original rendition in point of musical beauty.

It is a positive fact that the loud-speaker rendition is often superior to the prototype, and the reason is simple enough.

In radio broadcasting, public address and sound recording practices the listener is really making use of a number of electrical ears of marvellous adaptability and selectivity, as contrasted with the normal pair of human ears. For instance, in picking up an orchestra selection there may be as many as a dozen microphones, if need be, scattered throughout the orchestra, and connected with a mixing panel, so that every sound, in the desired proportion, can be blended in the ensemble effect. The violin, for instance, can be amplified out of proportion to the heavy piano and bass viol and 'cello, resulting in a preponderance of violin music. When the singer comes on, one microphone is employed for picking up the voice with any desired degree of amplification or gain, so that the singer, even when whispering, can predominate a 50-piece orchestra. Indeed, the most successful singers appearing before the microphone actually sing in a soft voice, sometimes even in a crooning whisper hardly audible to a listener in the studio, a few feet away. Yet that whisper can be amplified so that the charming effect of the whisper is retained,

although the voice predominates the ensemble.

The microphone has given us an entirely new musical technique. We can select and reject, accentuate and reduce, and direct attention to any feature of a musical ensemble.

"OLD-TIME Journals and Journalists" will be the subject of the talk which Mr. Wilfred Blacket will give from 2FC on December 16. The first edition of Mr. Blacket's book of reminiscences of the Bar, entitled "May It Please Your Honor," has already been sold out, and was published in 1927. While he was studying for the Bar Mr. Blacket was employed on several papers, and was for two and a half years sub-editor of the "Bulletin." He did not gain a seat in Parliament, although at this period of his career he contested a seat as a Protectionist in Newtown and Canterbury.

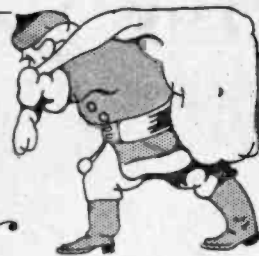
In 1887 he was called to the Bar, and took "silk" in 1912. He had a large practice in criminal cases and constitutional cases before the High Court. In 1909 he presided over the Tramway Commission, the Railway Traffic Congestion Commission, and was sole commissioner in the consolidation of the Statute Law. He has acted as sole commissioner in the Federal Capital Commission, and in several other public inquiries.



Christmas News is Not Always Good News

*Christmas Mail Bag
Brings Budget of
Cheerful Letters*

The Safety Valve



Dear Sir,—As an old listener, I thought I ought to write to your paper at this festive season of the year, and made a few cheerful remarks, because I have noticed your "Safety Valve" page has been a little uncharitable lately, and it would not do to be absolutely uncharitable towards anyone during the Christmas season. So I was always taught, but perhaps, as my children tell me so often nowadays, I belong to the old school; however, I have no doubt you will appreciate my sentiments.

Do not mistake my meaning. I see no reason why one should be especially charitable towards the gentlemen who control the Australian Broadcasting Company's programmes. I am an almost continuous listener, and I wish to say that I can always find something of interest in the programmes of 2FC and 2BL. When 2FC's broadcasts do not interest me I switch on to 2BL, and generally find that my tastes are catered for, almost throughout the day and night, by one or other of these stations. I should not care to particularise, as by mentioning some names and leaving out others which do not come readily to my mind (such is their number!), I may do injustice to many people whose talks or songs or playings have so well amused my recreative hours; but what interest and instruction have I derived from the midday and evening talks, especially the evening talks! What pleasure from the songs of so many capable singers! Special orchestral broadcasts, and broadcasts of well-known pianists and violinists, have held me and my family enraptured through many a long evening. And I must not forget the many clever plays and sketches, and the operas, in all of which I have taken a deep interest.

Perhaps it is to come from the sublime to the ridiculous, yet I must confess that I always listen for the market reports and the news, for it is my good fortune to have many interests, and the early and exact reports of the day's trading on the Exchange and so on are very real services to me.

My little grandchildren take a keen delight in the charming children's sessions, and my daughter-in-law, who has just come into the room, urges me not to forget the sessions for women, from which she says she derives much entertainment and instruction. But it were useless for me to attempt to exact calculation of the many benefits which have accrued to us through our wireless set, so I will content myself with wishing the gentlemen who control the Australian Broadcasting Company, and all who take part in their programmes, a very merry Christmas, and long lives to continue their useful and entertaining services.—I am, etc.,

Turrumurra. AN OLD LISTENER.

Hats Off to B's

Dear Sir,—I am quite in agreement with your correspondent, "Microwatt" (Nov. 22) regarding quality of transmissions. I also take off my hat to the engineers in charge of station 2GB for their splendid efforts and results. Stations 2BL and 2FC appear to suffer from Bassitis, for usually their melodies are drowned in the drumming and pounding of bass notes. Surely the A's are not too proud to learn from the B's. Good "canned" music is preferable to mutilated "human" remains.—Yours, etc.,

Elizabeth Bay. J.D'A

No Moans

Dear Sir,—Some of the "Safety Valve" critics are yelping over nothing. I will leave the country man out, as he deserves every consideration, especially in news. What are you city and suburban blokes screaming and moaning about the programmes for? You get everything possible in music, song, and speech. Human nature can give no more. You have six stations to choose from—remember you only pay for two—and yet you are howling and moaning. One bloke wants the time. Answer, "Buy one; they're cheap enough." Another says something about hum—a hum is like a moan, so don't moan and you get no hum. Another says hum is due to traffic. Does he mean bees walking about? Remember that a B.C. station is not a beehive. Disappointed says he has to go to bed. I go to bed, mate, and the beautiful music sends me to sleep. Put your speaker in your dugout, and you will find you will be in slumberland, hushed to sleep with beautiful strains. Another chap said hideous noises; that is his own noise, per "Safety Valve." Bypass that noise, and you won't hear it. J.S.K. says he gets blip blurr and something else. Is this a new egg flip?

In conclusion, I ask you one and all to cut this crying for the moon out. This page could be used for something better than moans and groans, e.g., amateurs' suggestions, of which I have several. I have been a reader since 1924, and don't moan.—Yours, etc.,

Waverley. A. HARMAN.

Abused

Dear Sir,—I think that this excellent page has suffered much abuse at the hands of such correspondents as J.B. ("W.W.," 6/10/1929), who expressed his opinion of "W.W." as follows:—"A few good radio notes and a lot of bunk." I am pleased to say that with him I do not agree.

A few pages of radio are all right, but we want variety, and I feel sure that the more of this we get the better it will be for "Wireless Weekly."

Christmas is approaching, and I feel that we should be a little more cheerful about things.—Yours, etc.,

North Sydney. SATISFIED.

Talk, Talk, Talk

Dear Sir,—In accepting your invitation in "Safety Valve" column, I beg to refer you, listeners-in, and the A.B.C. to your editorial of October 25, "Is there too much music on the Air?" and endorse your remarks thereon, that wireless from its inception was for broadcasting musical entertainment.

Now, alas, Sir, what are we getting? Talk, talk, and more talk, and by request, as the A.B.C. states, which I very much question. To quote that old saying, "talk is cheap"—possibly that's why we are getting it.

On September 24, old-time dance night, I had a party on, and the A.B.C. put it over then, music good, time splendid, and the party induced me to write in appreciation, with a request that the items be shortened up, allowing for more round dances. I regret to say I made a blunder, for what did they do to us the next old-time dance on October 22?

I refer you, and listeners-in, to your own comment thereon, editorial page, November 1, on the only night they give us once a month, crowding the studio with country press delegates, talking to their cobbers in the country. The band evidently had no room to play, as they gave us records for some dances and the eternal piano, which only a flash of lightning could keep time to. Talk, talk, talk—a nice musical evening's enjoyment spoilt.

I have noticed the better production of programmes from 3LO and 3AR, but, alas, Sir, the fever, or commands, have reached them, and they are crowding in talk on dance and band nights.

A band night from 3AR, October 14, started with a 15-minute talk about what books we should read, and was allowed to encroach on the half-hour; the next, a good band selection, was cut in half; later on one was cut out, and with a hurrah rush they picked up the time by 10 p.m. A good musical band night spoilt by book talk.

There is no doubt Victoria is ahead of us in good programmes, but the trouble is the reception through static and fading. Interstate is also ahead of us in adhering to published weekly programmes, which are seldom altered. But in New South Wales we have to go by the dailies, which must be very annoying to country listeners who do not get their daily in time.

Now, Sir, my "Safety Valve" is only half exploded, but am dubious of that pruning knife, and I also regret the fact of you only allowing one page of programme comment, and half that taken up by one-lungers with their bunk of 60 stations, etc.

Yours, etc., W.H.S.

Hurstville.

Tivoli Burning

Dear Sir,—In your issue of October 4, the Hon. Geo. Black, M.L.C. is reported to have said that the Tivoli Theatre was burnt down "about 1904 or 1905." That is not so. The Tivoli was burnt down on September 12, 1899.

Yours, etc.,

LOUIS H. PAUL.

Balmain.

THE

An Ultra-Modern

By ROSS A. HULL

PRE-SELECTOR

Brilliant reproduction of radio programmes or gramophone records, full a.c. operation, and high selectivity, are the features of this set. It is to be described later in simplified form with three valves only.

a.c. 4

TO those who have followed the "Curves Ahead" page the name of this receiver may have some significance. To others it probably will not. It will be as well, then, to describe the set in general terms before proceeding to tell of it in detail.

Essentially the receiver is a self-contained, full a.c. operated, four-valve affair, with a stage of screen-grid radio frequency amplification, a screen-grid detector, and two audio stages. The receiver is, we think, thoroughly modern, but we do not for one moment suggest that it is anything extraordinary. It was not designed for distance-getting, and there is no particular reason why its range should be any greater than any good four-valve set using a well-operated screen-grid radio frequency amplifier in the average location. It does have greater selectivity than the usual single r.f. stage receiver, however, and this characteristic should make reception of stations from other States possible in locations where the more usual receiver with two tuned circuits fails on account of broad tuning.

What the receiver will accomplish very splendidly is the reception and reproduction of radio programmes as music. This, of course, is the one obvious thing that all receivers should be able to do, though it is the one thing that has been most neglected in this country so far. In glancing at the circuit, it may seem strange that three tuned circuits and four valves are used in a set which has as its prime function musical reproduction. Nevertheless, there are definite reasons for the arrangement of the set in this manner—reasons which have been so neglected that we plan to use up considerable space in the discussion of them.

The second function for which the receiver is thoroughly suited is the reproduction of gramophone records. Most receivers are fitted with terminals for a pick-up, but most of them are only capable of gramophone reproduction which is of greatly inferior quality to that obtained when the records are played over the ordinary mechanical machine. Just why the pick-up terminals were provided in those receivers, or why they are ever used, is somewhat of a mystery to us. In this set the

provision for the pick-up is part of the basic arrangement of the receiver. Operated from a good pick-up, the reproduction is, to our way of thinking, mighty fine.

Possibly the receiver could be considered as unnecessarily elaborate and expensive on account of the high voltages and by-pass condensers that are strewn everywhere. Un-

doubtedly it is more complex than the usual four-valve sets that we find all round us. We believe, though, that the complications are justified. Most readers of this stuff will know by now of our firm conviction that if there were half the number of listeners in Australia to-day with receivers that were twice as good the whole broadcasting game would be in a firmer position.

In describing the construction of the receiver we are to depart somewhat from our normal procedure. In the past, just as soon as we described a set we had a whole flock of letters asking how it could be built without the gang condenser, or with one less valve, or with a base of some other size, or possibly with a couple of extra valves in front. Such variations as that are always possible, as are a host of minor changes in the circuit arrangement and the constants. And so we plan to tell of the set exactly as we at first built it, then proceeding to describe the type of modification for which we think there would be a demand. At least two articles will be necessary in order to treat every detail, and we firmly recommend that no enthusiast should start the construction of the set until he has read all there is to be said.

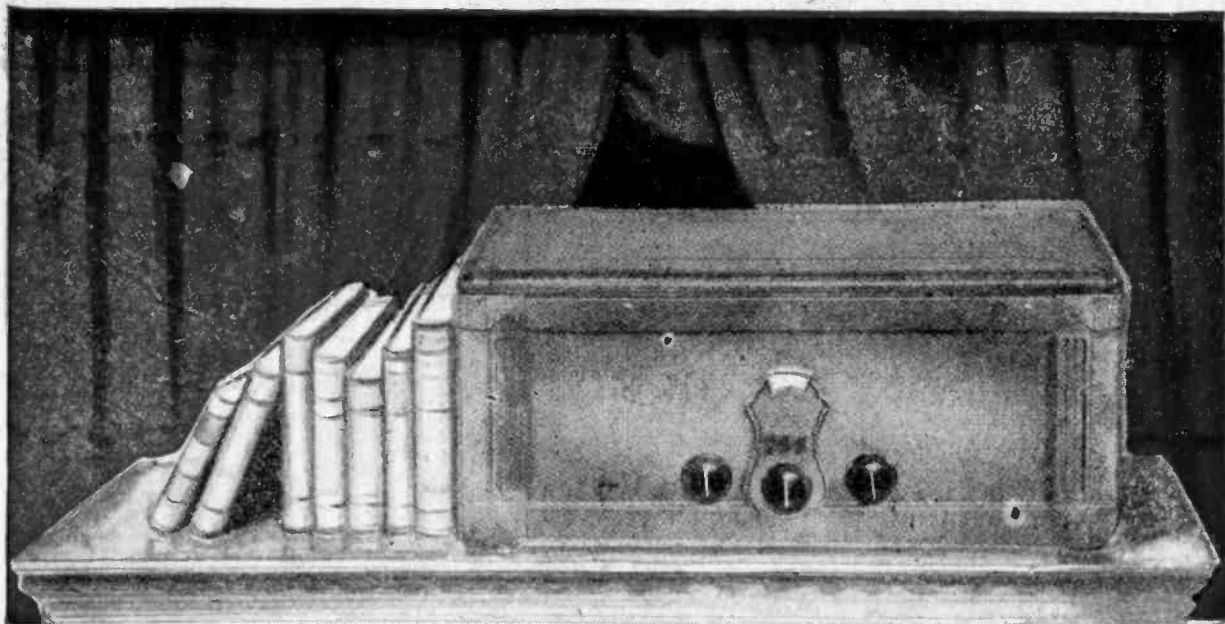
Let us first talk of the double-tuned or "band-pass" input circuit, and the justification for three tuned circuits in the set.

It is not generally realised that the tuned circuits of a receiver may have a very drastic effect on the reproduction of the receiver. In any receiver at all the ordinary tuned circuit will cause a reduction in the high notes of the received music to some extent. Of course, in the one-valve set, or in sets with a single tuned circuit, this high note loss may not be appreciable if reaction is not used. In receivers with a pair of good tuned circuits, however, this loss can be as high as 80 per cent. at even a frequency of 5000 cycles—a loss which naturally has a serious effect on the reproduction, and one which is far greater than that usually encountered in the audio amplifier. When ordinary tuned circuits are used to couple the aerial to the first valve and to couple between valves a reasonably high degree of selectivity cannot be obtained without this

LIST OF PARTS USED IN PRE-SELECTOR FOUR

- Two E-442 Philips Valves.
 One UY-227 Radiotron Valve
 One UX-245 " "
 One UX-280 " "
 L. to L5. Three Unit coil kit, described in text.
 C5. Three-Gang Stromberg-Carlson variable condenser.
 C6. Five-plate Radiokes Midget variable condenser.
 T1. One Ferranti AF3 audio transformer.
 T2. One Philips audio transformer.
 C1. Four 5 mfd. fixed condensers.
 C2. Five 1 mfd. fixed condensers.
 C3. One 1 mfd. fixed condenser.
 C4. Three 4 mfd. fixed condensers.
 All "Chanex" 1000-volt rating.
 R1. Three 10,000 ohm resistors, No. 953
 R2. One 900 ohm, No. 959.
 R4. One 2250 ohm, No. 951.
 R5. One 1200 ohm, No. 956.
 R7. Two Power pack resistors, No. 953
 R6. One centre-tapped 50 ohm, No. 356
 R9. One Volumgrad 50,000 ohm resistor No. 940. All of these are "Pilot"
 R3. One Ferranti 40,000 ohm resistor.
 One Southern Radio Power Pack Unit—comprising transformer with 350 volt each side of centre-tap, and filament windings for 5 volts, 4 volts, and 2.5 volts. Also including filter choke.
 Three UY sockets.
 Two UX sockets.
 Folded Aluminium Base 12in. x 19½in. with space at least 1in. deep underneath.
 Note.—The Standard AC 3-32 Cabinet but with aluminium base is suitable.

Receiver of Unusually High Performance



sacrifice of high musical frequencies. Since the high frequencies are so essential to crisp and brilliant reproduction of music, the problem of retaining them, while at the same time gaining selectivity, is being given wide attention. The problem would not exist if the broadcasting stations transmitted on just one wavelength or frequency, as many people would seem to think they do. The unfortunate part of it is that the stations send out a whole bunch of frequencies or wavelengths at a time, and all of them must be received with equal effectiveness if the receiver is to reproduce all that is transmitted. An ordinary tuned circuit responds more to the wavelength or frequency to which it is tuned than to any others. For this one reason its use must result in the reduction of some frequencies to a more or less serious degree. The receiver with the ideal tuned circuits would respond to a band of frequencies including all those put out by the broadcasting station, but not to any others. The ideal cannot at present be attained, but at least we can advance towards it by the use of some such arrangement as that to be described.

When two tuned circuits are coupled together in a suitable manner the combination has quite different characteristics to those obtained when the two circuits are used before and after a valve amplifier, as in the usual receiver. They no longer have a greater response to one frequency than to any other, but an equal response to two different frequencies. In other words, we get two tuning peaks instead of one. It is a double-tuned circuit of this type that is used as the "pre-selector" in the receiver under discussion. The combination of L2, L3 is so arranged that it has two tuning peaks so close together that they could hardly be detected if the ganged condensers

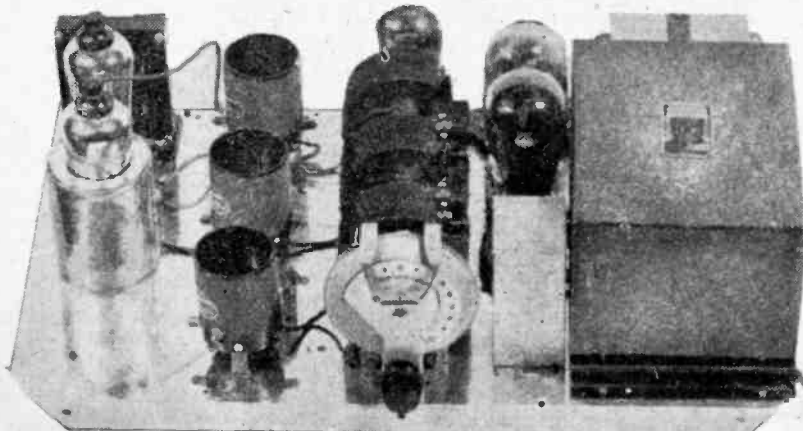
C5 were tuned across a station, and yet wide enough apart to admit the high musical frequencies into the receiver. Though the tuning could, therefore, be said not to be as sharp as the ordinary arrangement, it really gives greater selectivity, since the response to frequencies other than those being transmitted by any one station fall away more steeply than in the "sharper" but less selective single circuit.

The fact that this "pre-selector" has two tuning peaks means that the high frequencies in the received music will actually be amplified to a greater extent than the others. This is not serious, as it happens, since the single-tuned circuit L5, used to couple the r.f. valve to the detector, introduces another tuning peak in between those provided by the input circuits, and so produces a flat top characteristic which is at least a little nearer than usual to ideal. Of course, these tuning peaks cannot come at the right spots unless the adjustment of the coils and condensers is given very careful attention. It is quite a simple matter, if the tuned circuits do not "track," to get broader and generally more unsatisfactory tuning than would ordinarily be the case.

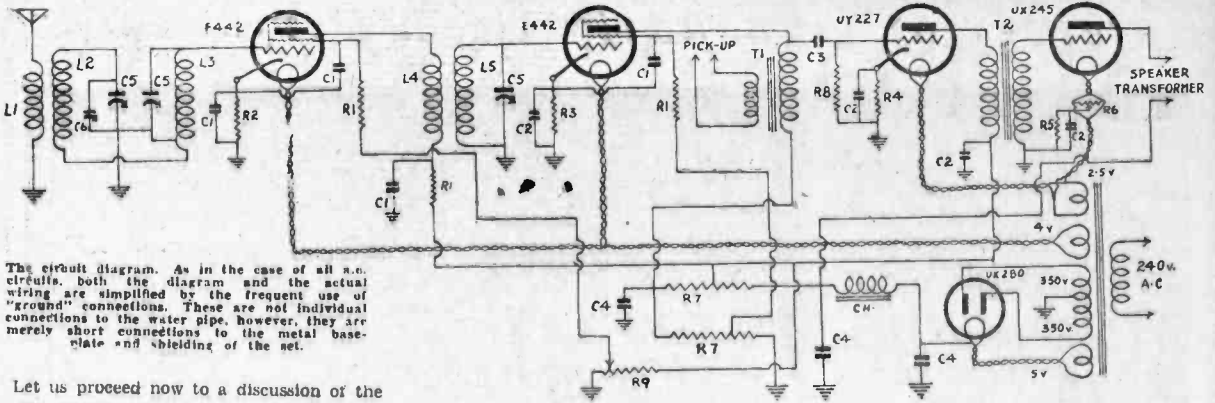
There is another definite justification for the double-tuned input circuit aside from considerations of musical reproduction. It is in the elimination of a peculiar type of interference which is somewhat typical of the screen-grid receiver which does not have a very selective input circuit. This is another matter which we have treated on several occasions in the "Curves Ahead" page. The interference is due to the modulation of weak signals by the transmissions of near-by stations, and is not remedied by any improvement in the selectivity of the tuned circuits following the first r.f. valve. Experimenters with screen-grid valves may have noticed that when the set was tuned immediately below or above a station such as 4QG there was no interference whatever, and that the set had all the indications of high selectivity. They will have found, however, that as soon as the set was tuned right on to 4QG a background of 2FC, or perhaps 2BL, appeared. The reason for this is that a strong local signal is able to excite the grid of the first valve, even though the input circuit is not tuned to it, and to appear in the plate

circuit in rectified form.

This rectified signal is then capable of modulating the weaker signals and causing the curious interference described. Other jumbles of stations and heterodyne whistles can be produced in a somewhat similar manner, and even the highest selectivity in the circuits after the first valve will not eliminate them. The remedy is a highly selective input circuit, which prevents the unwanted local stations from getting even as far as the grid of the first valve. The "pre-selector" in this receiver serves the purpose.



★ A view of the chassis of the set, with the panel and the cans shielding the coils removed.



The circuit diagram. As in the case of all a.c. circuits, both the diagram and the actual wiring are simplified by the frequent use of "ground" connections. These are not individual connections to the water pipe, however, they are merely short connections to the metal base-plate and shielding of the set.

Let us proceed now to a discussion of the actual circuit arrangement used. The coils L1, L2, and L3 comprise the "pra-selector." L1 is the usual aerial coil at the bottom end of the secondary. L2. The complete first tuned circuit comprises not only L2 and C5, C6, but also the lower section of the coil shown as L3. In the construction of the coils L2, L3, they are first made to have the same number of turns. Then the turns required for coupling are taken off L2 and added at the filament or ground end of L3. These added turns are indicated below the point at which L3 is grounded. The actual coil construction will be detailed later. The two tuning condensers across these coils are part of a three-gang condenser. The remaining condenser section is that across the secondary of the r.f. transformer, L4, L5. The trimmer condenser, C6, is used to compensate for the de-tuning effect of the aerial. It does not need to be touched when receiving strong signals, but provides a necessary means of accurately tuning the coil L2 when greater sensitivity and selectivity are required. L3 feeds the grid circuit of the r.f. valve just as if it were the ordinary secondary. The cathode of this valve is connected to the metal base plate through a resistor, R2. The plate current of the valve must flow through this resistor, and the drop produced in the process provides the negative bias necessary for the correct operation of the r.f. valve. The bias resistor is by-passed by the condenser C1. This condenser serves not only as a radio frequency by-pass, but also aids in reducing any possible voltage "ripple" resulting from incomplete filtering in the power unit. The screen-grid of this first valve is by-passed to the cathode with a similar 5 mfd. condenser, and is isolated

from the supply system as far as radio frequency currents are concerned by the resistor R1. This screen-grid lead goes to the moving contact of R9—a high resistance potentiometer, which serves to vary the screen-grid voltage and which functions as the volume control.

The plate of the r.f. valve feeds the primary of the r.f. transformer in the usual manner. This primary is wound in the form of a hank or bunch, and is mounted at the ground end of L5. The by-pass condenser C1 and the filter resistor R1 complete the plate circuit. L5, C5 is the usual type of secondary feeding the grid of the detector. In this case, however, it is able to function more effectively on account of the fact that there is no grid current flowing through it. This is made possible by the use of a "plate band" detector instead of the usual grid lead and condenser detector.

This type of "plate" detection is coming into quite wide use in other parts of the world on account of the improved musical quality it can provide, and also on account of the greater selectivity made possible. The disadvantage of the ordinary three-element valve used in this manner, however, is that its sensitivity is extremely low. The use of a screen-grid valve greatly improves the sensitivity, while still retaining most of the desirable characteristics of the three-element valve. Its sensitivity is approximately that of the usual three-element grid detector. As in the case of the "1930 Super-Het.," a problem is presented by the fact that the plate impedance of such a screen-grid detector is possibly of the order of a couple of megohms. The same solution is applied as in the super—

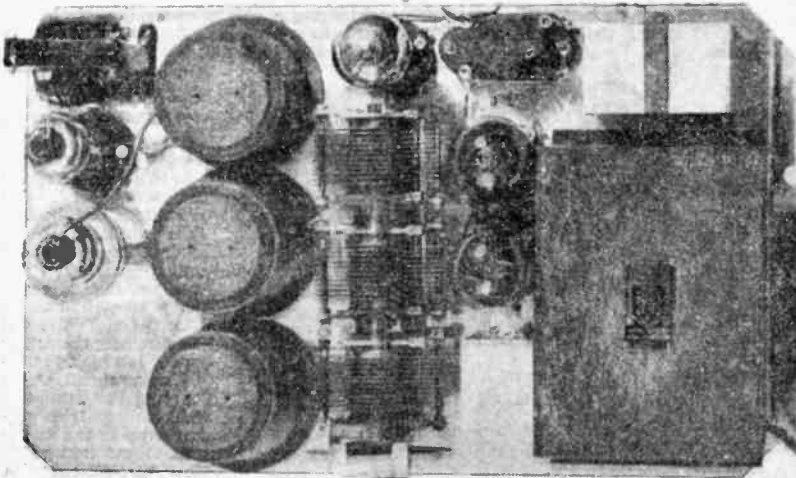
the use of a very high inductance choke. In this set we have used a Ferranti AF3 successfully, instead of the AF5 used in the super; but it would seem that the latter transformer is to be preferred. For those who are not familiar with the super, we would explain that the secondary of the transformer is used alone as the choke. This leaves the primary available for the pick-up and permits a permanent connection if desirable. It is essential, though, to place a switch in series with the pick-up, so that the circuit may be broken for radio reception. Otherwise the pick-up acts as a short on the primary, and the decrease in the inductance of the secondary greatly impairs reproduction.

The detector is arranged with a bias resistor in the manner of the first valve, but in this case the plate current is lower and the bias requirements greater. A 40,000-ohm resistor is, therefore, used for R3, other values possibly being desirable in certain cases.

The output of the detector is fed to the first audio grid through the coupling condenser C3. The grid return for the audio valve is provided by the grid leak R8, while the bias is obtained by a resistor between cathode and ground as before. The output of the first audio valve feeds the power stage through an ordinary audio transformer, and the connections are quite usual. By-pass condensers, as can be seen, are used freely.

The power valve is an important item in the receiver, and we do trust that no one will write in and ask if a Z405, an X406, or some other hopelessly feeble "power valve" would do. The UX-245, in the manner in which we operate it, is capable of an undistorted output of 1.6 watts, and we are prepared to insist that every single milliwatt of that power is necessary to allow real reproduction even in the average room. This valve is of the directly-heated type, and its filament is supplied from the 2.5-volt winding of the transformer. The bias arrangement differs slightly from the others in that the centre-tap of the filament wiring (provided by resistor R6) is connected to ground through the bias resistor R5. No output transformer is shown in the circuit, but it is quite essential. As we operate the receiver with a moving-coil speaker the output transformer is contained in the speaker unit itself.

The apparatus of the power supply is also contained on the same base-plate which supports the receiver proper. It consists of a transformer and choke unit, several large filter condensers, and a voltage divider. The wiring of the power unit shown is that used in the original receiver, but it is probable that simplification could be made with advantage. Should this be found to be possible, the simplified arrangements will be detailed in the next article. In that article, of course, we will describe the windings of the coils, the lay-out and mounting of the apparatus, and, if possible, the completion of the receiver.



A plan view of the completed receiver

IMPROVED RESULTS AT LESS COST!

IF A BOSOM FRIEND OFFERED TO IMPROVE YOUR RADIO SET AND REDUCE YOUR OPERATING COSTS BY 50 PER CENT. YOU WOULD SIT UP AND TAKE NOTICE

We have done this and more for hundreds of our customers---- we guarantee to do the same for you.

“B” Battery replacements are the biggest item in radio upkeep and they are the cause of most radio troubles .

Everyone knows this, but

do YOU know that for less than the price of three heavy duty “B” Batteries you can draw your power direct from the light socket or power point, and eliminate wasteful “B” Batteries and their troubles for al time?

YOU CAN DO THIS

Without any alterations to your set by using a reliable “B” Battery Eliminator, for instance

THE FAMOUS ECONOMIC

“B” BATTERY ELIMINATOR

IN ART METAL CABINET

£3/13/-

Complete

or

Home Assemble Kit

£3/3/-

IT COSTS BUT A FEW PENCE PER YEAR TO OPERATE. YOUR SATISFACTION IS GUARANTEED.

Clear Printed Picture Diagram and Instructions free with Kit.

IT IS ESPECIALLY APPROVED BY THE ELECTRICITY DEPARTMENT AMPLE POWER—NO HUM—NO DANGER—NO ALTERATIONS TO SET.

Economic Radio Stores
25 ROYAL ARCADE, SYDNEY

And at
126A PITT STREET;
UNION STREET,
NEWCASTLE;
PARRAMATTA.

Please mail more details re your advt. 11/12/29.

NAME
ADDRESS



THE
 'Go Getter'
MULLARD
PM 4 DX

Detects all Stations
 near and far —



Mullard Loud
 Speakers speak
 volume of quality.

Possessing all the most desirable
 features of a real live "go-getter"—
 persistency—sensitivity—and the
 ability to "nose out" new stations
 —Mullard PM 4 DX valves are
 recommending themselves more
 and more to radio enthusiasts.

No station is too hard to receive
 —none too condensed for the
 Mullard special detector to raise.

Those who hanker after more—
 and still more stations should use
 Mullard Special Detector Valves.

2 volt 4 volt 6 volt
 PM 2 DX PM 4 DX PM 6 D

All 13/6 each

Ask your Dealer for Booklet describing
 Mullard Valves and Speakers, or write
 A. Beal Pritchett (Aust.) Ltd., 17 Parker
 Street, Sydney, or 150 Queen Street,
 Melbourne.

15-29

Mullard
THE · MASTER · VALVE

Automatic Volume Control at Low Cost

EFFECTIVE musical reproduction in the broadcast receiver makes the use of a high-powered output amplifier essential. Such an output amplifier, however, is prone to accentuate atmospheric and other extraneous noises on account of its ability to handle sudden incoming voltages, which may be very much greater in amplitude than those of the received signals.

The old type of output amplifiers could never make much more noise than the signals being received because of the limitations of the valves used. The modern amplifiers, however, can respond fully to sudden loud sounds, even when they are many times the strength of the signal.

This disadvantage is noticeable only when listening to programmes coming from appreciable distances, but it is nevertheless a problem of its own. One very simple, and possibly very effective solution has been suggested by Boris S. Naimark, in "Radio." His plan is to connect a neon tube across the output of the set in such a manner that it will shunt off any voltages which are high enough to break down the gas in the tube. We quote his own words:—

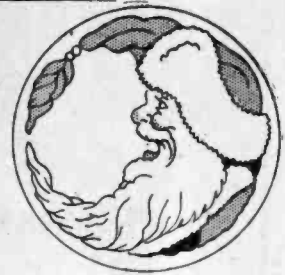
"Various systems for the automatic control of volume from a radio set have been found also to be effective in minimising the annoyance of static crashes and bursts of sound when a fading station comes back. Such a control also reduces any other noise, like the howls from a radiating receiver, so that they are no louder than the incoming signal.

The basis of a simple and inexpensive volume control is a neon glow lamp, and a variable resistor having a range of from about 10 to 10,000 ohms or more. This combination is connected across the lead from the receiver to the speaker.

"The screw base should be cut from the lamp with a pair of tin snips so that the resistance compound within the base can be removed, care being taken not to break the delicate glass bulb or fragile lead-in wires. After soldering the extension leads on to the lead-in wires and cutting off the bottom of the base which has been removed, this base is used as a mould for a new base made of melted paraffin, resin, or sealing wax, which will harden and protect the glass and lead-in wires.

"The volume control on the set is adjusted so as to give the desired loudness of sound from the speaker, and the variable resistor is adjusted so that the neon lamp does not glow at all or only at brief intervals. Any interference which has a greater intensity than that of the received signal will "spill" through the shunting neon tube.

Curves Ahead



"Static is thus reduced to ineffective "plunks," and the howls of a regenerator to an inoffensive squeal. The neon lamp acts as a safety valve which does not permit the noise to rise above the sound level of the signal. The only indication of the presence of an excessive noise is the glow of the neon tube."

The Design of Audio Transformers

WE hear claims from time to time from the manufacturers of audio transformers concerning the improvements resulting from their use of "Stalloy" or some other core material. When one studies the various treatments of audio transformer design which have appeared in the technical press it becomes evident that there is more to the core question than at first meets the eye. Concerning this point we reprint some remarks which appeared in a recent issue of "Radio":—

"The problem of designing audio transformers which will faithfully amplify 60, and even 30, cycles, corresponding to the tendency to thus extend the lower limit of broadcast transmitters and of loud-speakers, is primarily one of increasing the input inductance of the transformer, although an increase of the plate impedance of the tube is also effective. The inductance of the

transformer depends upon the number of turns of wire on the coil, the size of the core, and the permeability of the core material. Adding primary turns causes a loss of high frequencies, due to coil capacity, so high permeability nickel alloys are being used to an increasing extent. These alloys of nickel and iron have high permeability at low flux densities, the conditions encountered in audio transformer primaries.

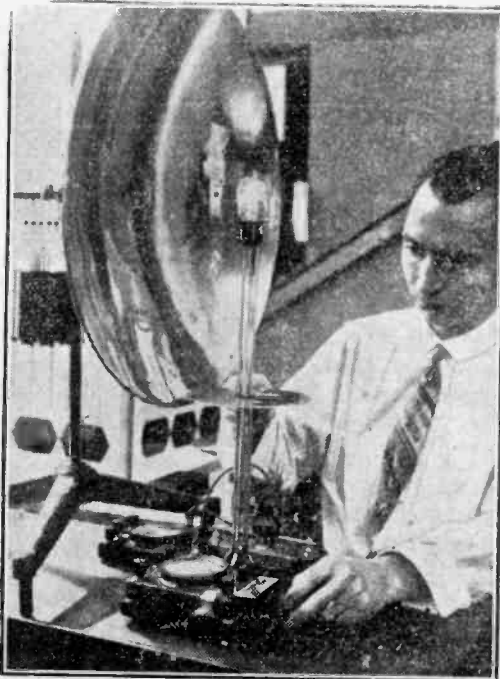
"However, these alloys have some disadvantages. The high permeability is maintained over a rather limited range of flux density, and falls off rapidly at higher or lower values. They saturate easily. This difficulty is becoming more important as the plate currents of the vacuum tubes are increased.

"A more serious objection is that the transformer is permanently damaged by an increase in field strength, such as might result from accidental connection in a circuit without a C battery, or where a C battery is run down or where the plate current is abnormally high. Such temporary increase in flux through the core permanently changes the characteristics of the material.

"On the other hand, silicon steel is not permanently affected by increases in flux. The frequency characteristic of the transformer is, of course, affected by core saturation while it exists, but the effect is not lasting. These considerations render the nickel alloy transformers particularly valuable for special laboratory work, or in commercial installations where care is taken to insure proper operation. All the electrical advantages of the nickel alloys may be obtained with silicon steel by adjustment of other factors in the design.

"It has been found that when the lower end of the characteristic had been extended as desired, by changes in the coil and core, there was a tendency toward resonance at high frequencies as well as a falling off of amplification. These difficulties were overcome by changes in coil design. The resonance effects at high frequency are due to leakage reactance, i.e., flux not linking both primary and secondary coils, and by coil capacity. The loss at high frequencies is due to internal coil capacity, principally in the secondary. It was found possible to reduce both these effects by a form of coil construction which sandwiches the primary between two sections of the secondary. This type of winding not only reduces leakage reactance by increasing the coupling between the primary and secondary, but also reduces the internal capacity of the secondary by breaking it up into two pieces.

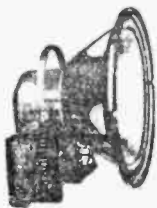
"In many of the better-grade transformers, silicon steel has been used as a core material. The coils are of the sandwich type. The result is a transformer possessing a practically flat frequency characteristic from 30 to 6000 cycles, furnishing faithful rendition of programmes. Acknowledgement for information contained herein is made to papers published by the General Radio Company."



AN ULTRA SHORT-WAVE TRANSMITTER FOR WAVES OF 11 CENTIMETRES WAS RECENTLY EXHIBITED AT THE ANNUAL GERMAN RADIO SHOW. NOTE THE REFLECTOR.

HOWEVER FINE THE SET
 IT TAKES A
DYNAMIC
 SPEAKER
 TO MAKE ITS FINENESS
 ✓ AVAILABLE
 ✓ PERMANENT
 ✓ SUPREME
 -AND MAGNAVOX ALONE MAKES THE
 DYNAMIC SPEAKER

As built into Australia's Finest All-Electric Radio and Phonograph Combination!



MAGNAVOX DYNAMIC X-CORE SPEAKER UNIT No. 405

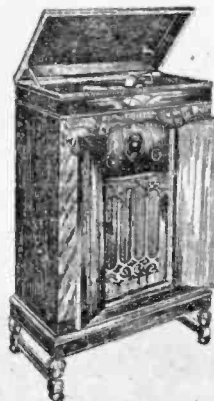
(20 Volts A.C.) 16 1/2 in. Cone
 Price. £8/10/-

For use with all types of Sets or Amplifiers where 210-240 Volts A.C. house lighting current is available. Supplied with cord fitted with "ON" and "OFF" switch

Carries Lifetime Guarantee of Original Standard of Performance
 Wholesale and Retail Distributors for Magnavox Speakers:

MICK SIMMONS LTD.

HEADQUARTERS: HAYMARKET, SYDNEY



The RADIOLA DUOFORTE

An exquisite instrument embodying the highest perfection of the electrical recreation of music either by record or from the air.

Price £125.

Deferred Payments

Let us demonstrate this incomparable instrument in the privacy of your own home. If desired, arrangements can be made to TRADE-IN your present receiver or old phonograph.

"ENEMY RAIDER REPORTED . . ."

(Continued from Page 13)

30.12 N., torpedoed"; or perhaps, "Chased and gunned." One got a morbid interest in following the course of the "chased and gunned," jotting down the last despairing messages, until perhaps a shell found the wireless cabin, and the message broke off sharply in the middle and there was silence. All these things were automatically entered in the log. All reports of submarines, SOS messages, or anything else of a suspicious character, were written down and sent to the bridge. This was accomplished by ringing the bridge phone and saying briefly, "Quartermaster, please." A few seconds later heavy oods descended the ladder outside. There was a challenge from the guard, and then the door opened, and the light went out at once. The burly form of the quartermaster crept forward in the gloom, clutched the message form, muttered, "Aye, aye, sir," and backed out again. At ten minutes past two a.m. this same quartermaster brought me a huge mug of coffee and toast, and again at six. I welcomed his coming as a long lost brother. For a time I filled him up with lurid tales of death and destruction upon the high seas, swearing him to secrecy upon the score of them being confidential wireless reports. These entirely untruthful tales, the hardy sea salt repeated with embellishments to the man at the wheel, binding him also to secrecy. This individual, when relieved, descended to the fo'c'stle and passed on his version to an open-mouthed crew, placing them under a strict veil of silence. By breakfast time the whole ship seethed with rumors of fearful doings during the night. This afforded me much childish amusement until Rat, with a nose like the rodent after which he was called, unerringly located the source of the furphys, and accordingly handed me a lemon. At even intervals GMT. I tuned to 2000 metres and copied the war warning transmitted by the British Navy stations dotted along the Western and Eastern Atlantic seaboard. Dead on the second came the high, clear note, "ABMV. ABMV. ABMV, de BZL, war warning begins, enemy raider reported operating along route between Liverpool and West Indies, disguised as five-masted sailing ship"; or, if there were nothing to report, stating tersely, "No warning issued." And so it went on, vital messages, routine messages, danger messages, hour after hour, day after day.

In my hours off watch I pow-wowed in the chart-room with the navigation officers, by whom I was always referred to as "The Hermit." Or perhaps I exchanged "howdys" with the Yankee military guards who took turns in shielding me from the vulgar gaze. Seeing me diving in and out my doorway, but never shifting more than a few yards away from the door, I formed the conclusion that these lads regarded me as some kind of queer individual with a penchant for imitating the habits of the otter. As Darley and myself were never off watch together we seldom had a heart-to-heart, for nothing is more annoying than trying to conduct a conversation with another party while headphones are clamped over your ears. Darley early contracted the banjo habit, but my bitter complaints soon put an end to this; so most of his time was spent exchanging hot air with the American officers, during which he acquired a rich, creamy American accent. This he aired at me several times until I rudely interrupted with "Bull."

On the third day out an innocent-looking ship detached herself from the tail end of the convoy, steamed out about a mile to port,

MATERIAL

The following Warehouses supply timber and parts for the construction of aircraft:—

ASH AND HICKORY,
D. HARDY AND SONS,
Glebe Road,
Glebe.
DOPE, VARNISH, ETC.,
GEE LONG AIRCRAFT SUPPLY CO.,
Geelong,
Victoria.

PLY-WOOD, SPRUCE, TURNBUCKLES,
FABRIC CABLE, AND ALL AIRCRAFT
FITTINGS

ROSENFELD AND CO.,
208 Clarence St.,
Sydney.

From the above Firm ply-wood may be obtained in varying thicknesses, either 1-16in., 3-32in., 1/4in., 5-32in., 3-16in., and 1/2in. (brch), while the best Sitka spruce will be dressed to any size required.

For the supply of all aircraft fittings this firm is recommended to give you complete satisfaction, as all fittings are of the highest quality at reasonable prices.

after which she returned to her hole as and suddenly commenced firing with half a dozen six-inch guns. She subsequently proved to be one of the famous Q ships; at the moment she was indulging in a little gun practice, a peaceful, harmless member of an apparently unescorted convoy, and no doubt longing for the appearance of a raider to get in some real shooting. So we plugged on towards the point where we were to pick up the escorting destroyers which were to shepherd us through the worst of the danger zone. The spot in question was located 100 miles W.S.W. of Scilly Isles. A new alertness became the order of the day as we neared the fateful waters. The guard outside presented a queer appearance as he ambled up and down with a lifebelt strapped to his shoulders, for all troops were now compelled to wear them. On the afternoon of the sixth day smoke on the horizon heralded the approach of the six waiting destroyers, which soon formed up on either side. An hour or so later a dozen trawlers appeared, forming a further protecting ring.

And so dusk fell, giving me a peculiar, subdued sense of floating on the edge of tragedy. I slept fitfully, owning myself a sheer unashamed case of wind up. With almost relief I donned the phones at 2 a.m. looking forward to the unseen company of the air. The ether was full of the loud clamor of hurrying messages, for we were now comparatively close to a hundred stations working overtime.

About 4 a.m. the little, tell-tale signs of dawn came creeping in the chinks of the door. A moment I looked at this, stretching and yawning; and then there was the boom of a terrific explosion, followed by the scream of the siren of the ship immediately astern, which had been hit by a torpedo. I lowered the window shutter with a bang and peered forth. Closer still, there came the boom of our gun as the gunners took a pot shot at a vanishing periscope. Pandemonium broke loose. Within a few moments dozens of depth bombs were dropped by the destroyers tearing around the spot where our shell had landed. The fearful concussion of each explosion set the Barunga shaking like a leaf. Already awash, the ship astern was settling down quickly, the water around dotted with hundreds of floating men. I watched fascinated as she went down and down, finally, within ten minutes, disappearing from sight. Trawlers and destroyers were on the spot immediately, picking up the survivors. And so the convoy moved steadily on, the gap closing up, and the escort, with the exception of two destroyers, taking up stations as before. That evening we arrived, without further incident, off Liverpool. Quite accidentally I overheard Rat, now relaxed and genial, observe to the American O.C.: "Well, Major, as the Governor of North Carolina said to the Governor of South Carolina—"

How To Construct A Man-Carrying Glider

(Continued from Page 21)

Wings and ailerons can now be covered. Use "A" grade mercerised cotton, drawn tightly, and cemented with dope at all edges to framework and to ribs on rear half of lower surface. The nose of the wing before the application of the fabric should be covered with plywood bent to shape, glued in place, and nailed with 1in. x 20 panel pins to filler strip on top and bottom of spar between ribs. A very thin gauze of aluminium is also recommended for this purpose. Silt fabric at proper points for guy wires and control cables, and reinforce with fabric patches.

COVERING THE WING

THE covering having been previously cut and stitched up to required size to cover the plane, will be drawn on to the plane starting behind leading edge plywood and pulling across to the trailing edge, half of course, will be on the upper side and half on the lower. The fabric will be carefully and evenly pulled taut, and tacked down temporarily, all seams being straightened by pulling the fabric at each end. After this, all surplus fabric will be cut off, and the two ends of the fabric sewn up, taking care to turn in the edges of the fabric, the joint being along the centre of the trailing edge and, where the aileron gap occurs, along the top edge of the rear spar.

Having sewn up all the edges neatly, the next operation is stringing the wing to keep the fabric tight to the ribs. This is done with a light, fine string, which is passed through the fabric from the top to the bottom round each rib, about every 4 inches, and knotted at each turn, taking care to knot up fairly tightly.

One point to be avoided is making notes with the stringing needle where it is not intended a string should pass through: the only hole permissible being the intended one.

No. 1 kite cord is recommended as being quite strong enough for this stringing.

DOPING THE WINGS

TWO good coats of approved aircraft dope should be applied, with at least two hours' time allowed between the coats. It is best, if possible, to dope planes in a room of moderate temperature, and one where this temperature may be maintained. For doping use a good quality brush, about 4 inches wide.

After doping the wings, the next thing to do is the "stripping." This consists of again doping the line of stringing, and at once laying a strip of frayed edge or tape over the stringing on to the wet dope, and finishing it off smooth with the brush. It is advisable to cover the trailing edges of the planes in a similar manner.

In this manner ailerons, tail plane, rudder and elevators may be doped. After applying the dope any good finishing varnish can be applied.

CHRISTMAS MAIL

THE Post Office has asked us to remind our readers to post their Christmas greetings and gifts in good time for delivery before Christmas. To avoid the possibility of late delivery, with its consequent disappointment, you should

SHOP EARLY, PACK SECURELY,
ADDRESS PLAINLY, AND
POST EARLY.

Mark your packets, "Don't open until Xmas."

The Big News in Radio!



CROSLEY MODEL 21
SREENEED GRID BATTERY SET.

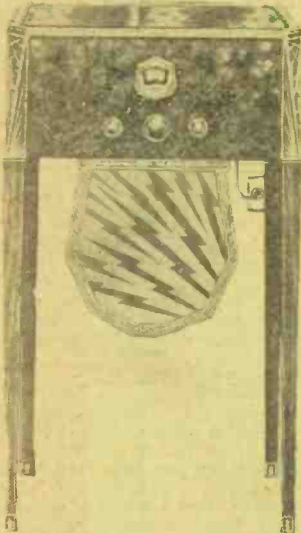
Crosley Model 21 is in the same case as used in Crosley Model 31. It can be supplied with Legs or without Legs.

Crosley Model 21 is supplied for storage battery operation, where A.C. current is not available.

This Crosley Model 21 incorporates three U.Y.222 Screened Grid Storage Battery Valves, one 201A detector Valve, one 201A first audio Valve, and one 171A power output valve. Included in the complete price of this Set is the new Type "E" Dynacone Speaker.

Crosley Model 21, complete with Valves and Loud Speaker—£29.
Legs—£2/5/ extra.

MODEL 31. 7 VALVE



CROSLEY 31

Panelled in burled walnut finish metal, and strikingly decorated in white metal, Crosley Model 31 is an outstanding achievement in table model Receivers.

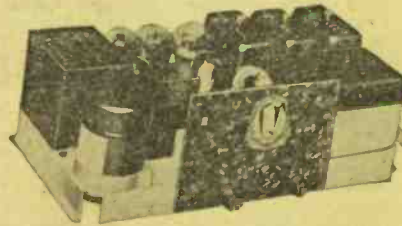
Constructed with infinite care and painstaking attention to the minutest detail of radio perfection, Crosley Model 31 is, at the same time, the most remarkable value in radio history. Mass production methods alone permit the sale of this Receiver at its price.

Crosley Model 31 is a 7-Valve all Electric Receiver, including one U.X.280 rectifier. It is a grid-to-grid neutrodyne set. It uses a neutrodyne patented circuit developed especially for this instrument.

Model 31, complete, with Valves and Loud Speaker, installed in your own home—£49/15/.
Legs—£2/5/ extra.

**FINER RADIO AT
NEW LOW PRICES**

MODEL 41S SCREEN GRID



CROSLEY 41S SCREEN GRID

Crosley Model 41S uses the following valves:—Three U.Y.224 Screened Grid Valves, two U.Y.227 heater type Valves, two U.X.245 new super output Valves in push-pull, and one U.X.280 rectifying Valve.

Crosley Model 41S—£69/15/- complete, installed in your own home.

Legs, £2/5/- extra.

Send for Free Catalogue No. 30

INTERNATIONAL RADIO Co., Ltd.

229 Castlereagh Street, Sydney

CROSLEY 41



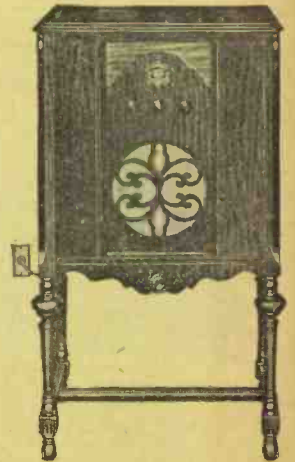
Crosley Model 41 is a Receiver that combines the essentials of beauty and radio performance. The metal case is finished in burled walnut and decorated in white metal.

The Crosley Model 41 is an 8-valve All Electric Receiver.

Crosley Model 41—£59/15/- complete in your own home.

Legs—£2/5/ extra.

CROSLEY 32



Crosley Model 32 is a rich, full-toned instrument. Housed in a beautiful walnut veneer console, custom built to Crosley standards of excellence, Crosley Model 32 meets the demand for finer radio at lower prices.

The built-in Dynacone, foremost armature type Dynamic Speaker, reproduces the finest gradations of tone.

Crosley Model 32 is an 8-valve All Electric Receiver, including the U.X.280 rectifying valve.

Crosley Model 32, complete and installed in your own home

£65/-/-



- UX 226 15/- each
- UX 171A 19/- each
- UX 245 30/- each
- UX 280 30/- each
- UY 227 27/6 each
- UY 224 32/6 each

**NEW YOUTH FOR
YOUR RADIO SET**

IF you want to know how young your radio set is, slip in a set of Champions. . . . Then, quick as you turn the dial, you hear new, beautiful reproduction that you never knew was in your set. For Champion tubes have never failed to give more naturalness of tone and long-lasting, reliable tube service. They're made by the Champion lamp makers—famous since 1900 as makers of the world's fine electric lamps.

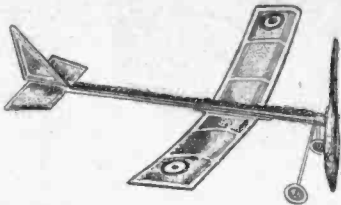
Champion

Send for Free Catalogue.
INTERNATIONAL RADIO CO., LTD.,
229 Castlereagh Street, SYDNEY.

THE BOYS' MODEL SHOP

WALTHER & STEVENSON LTD.

395 GEORGE STREET, SYDNEY (Right Opposite Dymock's). Box 785G.

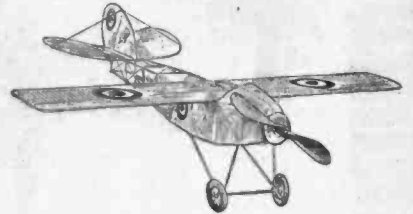


THE WARNEFORD "SWIFT" 28in. Span . . . 15/6
 THE WARNEFORD "DEMON," 23in. Span . . . 11/6
 THE WARNEFORD "MOTH," 18in. Span . . . 6/6
 All these have swivel shock absorbing chassis, minimising propeller breakage. Postage, 1/6.

WARNEFORD FLYING MODEL AEROPLANES

ARE MOST SUITABLE FOR OUT-DOOR FLYING.

Built by the same man who won the Sir Charles Wakefield International Cup for Model Flying Aeroplanes, against keen American Competition.



JAP WIRE-FRAME MODEL AEROPLANES.

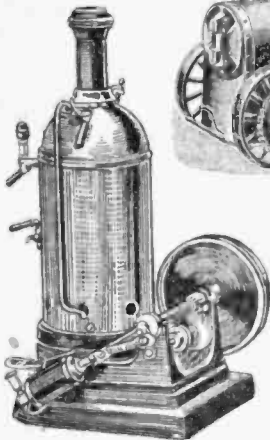
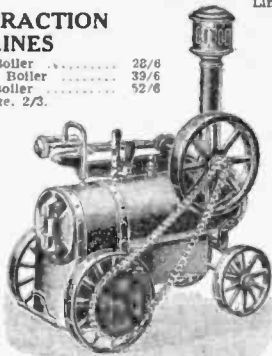
No. 16, as illustrated, 21in. span, 13/6. A big range of Jap. Models from 1/8 to 31/6. Post, 1/8.

MATERIALS FOR BUILDING YOUR OWN MODELS

Write for a list of these—Fresh Lines are coming along every month.

STEAM TRACTION ENGINES

No. 5021 with 6in. Boiler 22/6
 No. 5022 with 8 1/2in. Boiler 39/6
 No. 5023 with 7in. Boiler 52/6
 Postage, 2/3.



STEAM DONKEY ENGINE

11in. high, with Gearing Drive, 50/-.

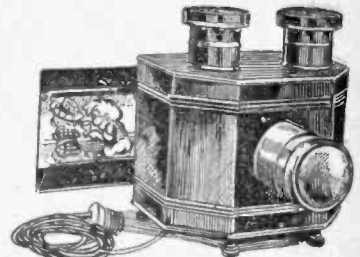
8in. high, without Gears, 35/-.

Postage, 2/3.



THE POPULAR DAISY AIR RIFLE

No. 20 LITTLE DAISY, 29in. 5/8
 No. 12 DAISY SINGLE SHOT, 31 1/2in. 7/8
 No. 11 350 SHOT REPEATING 12/6
 No. 30 500 SHOT REPEATING 15/6
 No. 3 1000 SHOT REPEATING 18/6
 Postage, 1/9.



THE RADIOPTICON POST-CARD PROJECTING LANTERN,

electric light, plugged in to your lighting socket. No slides needed; just any postcard, colored or otherwise, snapshots, Ginger Meggs, out of the "Sunday Sun," or even flat objects, like a watch can be projected on to the screen enlarged to 6 or 7 feet wide. Suitable for illustrated lectures.
 No. 421 with Double Lens 70/-
 No. 401 Junior Model 40/-
 Freight Extra.



THE WONDERFUL GYROSCOPIC TOP.

A SCIENTIFIC TOY, ILLUSTRATING THE PRINCIPLE OF THE GYROSCOPE. No. 20, 2in. Gyro, 1/6; No. 13, with 2 1/2 Gyro, 2/9; No. 14, 2 1/2 Gyro, 3/9; No. 18, with 2 1/2 Gyro, 7/6; No. 7, with 3 1/2 Gyro, a big top, 9/6 each. Postage 9d and 1/-.

Write For Our 144-Page Catalogue, Crammed Full of Interest to Mechanically-Minded Boys.

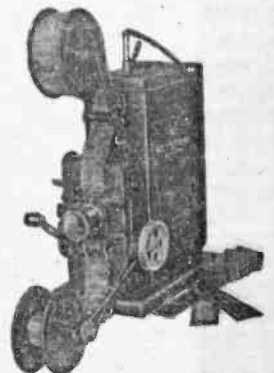
MODEL LAUNCHES.

"Miss America" Steam Launch, 26in. 22/6
 Stuart-Turner "Henley" Steam Launch 3/7/6
 "Isis" Steam Launch, a wonderful job £12/12/-
 "Magician" electric launch, 24in. 67/6
 Clockwork Launches, from 6/6 to £14.

We also have a good range of Launch Engines, for your own Models.



STEAM MODEL LAUNCH



KEYSTONE HOME MOVIEGRAPHS,

using Standard Picture Film, in spools up to about 200ft. We can supply used film in various lengths at from 2/6 to 3/6 ea. They are lit by a 100 watt household lamp, with screw socket, and will give a picture 6ft. and over in width. Prices: 37/6, 63/-. With extra feed and take-up sprockets, £5/19/6 and £7/10/6. Dry-cell Model for use where there is no electric service, 37/6 and 83/-. They're all in our catalogue.

A Radio Set On Our Selection

(Continued from Page 7.)

"L-L-Look out!" Joe said, nearly shoving Uncle on to the floor in his haste to get past him and disappear.

"Oh!" Dad grunted, on seeing Uncle alone at the table. "You weren't long finding the tea out!"

"FATHER!" Mother disapproved.

But Dad was not to be silenced: "And found it a lot quicker than you did the cock-a-toos," he added.

Dave, guffawing mercilessly, took a seat opposite Uncle.

"I was thinkin' of cuttin' a bit of wood for der wimmen, before going after the cock-a-toos!" Uncle, blowing at his tea to cool it, explained.

"Mind it don't cut your toe!" Dad warned satirically. "You might get laid up!"

Dave guffawed at the wrong moment, and spill the hot tea into his lap.

Uncle chuckled at his discomfiture, and said he did th' same thing himself at Auntie Montague's last Sunday."

"Was that why you left her?" from Dad.

"No," Uncle corrected, pulling a sulky face, "th' ol Tartar wanted a man to work night an' day for 'er, that's why."

"Oh!" was that all?" Dad said.

Joe, excited, came running back to the steps. "I s-s-say," he stuttered, "here comes Auntie M-M-Montague. There's s-s-something up with her."

"Laws! and she's on foot," Sarah, looking out, endorsed.

Dave looked up meaningly at Dad and mumbled, "CRIPES!"

Dad, remembering the threat Auntie Montague had made to him when they quarrelled at the railway station, that "she would come to his house and have it out with him in front of Mother and all the family," gulped down his tea and sat back in readiness.

"If she is coming here to insult me in my house," he said, striking the table, "by the lord I'll take and throw her down the well!"

His threat startled everyone—everyone except Uncle. He had taken a shivering fit before Dad spoke; but no one seemed to notice his distress.

Round the corner of the house came Auntie Montague, flushing and puffing, her bonnet wagging on her head, and swishing a green gum bough that she carried in her hand. On to the verandah she stepped, firm and resolute. Mother and Sarah attempted to greet her with smiles and words of welcome. Auntie Montague ignored them both.

"Where is that fellow? He's here—I know he's here. Where is he?" and, pushing Sarah aside, she faced the tea-table, which was located at the far end of the verandah.

"Look here, woman," Dad snorted, rising to his feet.

But Dave rose, too, and grabbed hold of him.

"THERE he is! I knew it!" Auntie burst forth. "Oh, you REPROBATE!" And to everyone's surprise, more especially to Dad's, she rushed round the table and furiously attacked Uncle with the green bough. You'd think she was knocking a swarm of angry bees off him, or something! Poor Uncle! While Auntie Montague was blindly belting him he sank beneath the table and crawled out at the other end like a dog. Then, assisted by Joe, who dragged him off by the neck, he managed to escape.

"Oh, it wer' HIM, wer' it?" Dad said, with a changed look in his face.

"HIM!" Aunt Montague shrieked, "of course it was him: who else could it be? Frightening everyone with a infernal machine someone sent him, or he STOLE, and wasting his time over it! Oh, the good-for-nothing ROGUE that he is! Going to sleep in the paddock, too, and me feeding and buy-

ing him clothes to mind my best dairy cows on the lucerne, and he letting them burst themselves on it! My God! SIX of them—SIX of them—" and Auntie Montague dropped into a chair and blubbered noisily. "That's MISFORTUNE!" Dad said, solemnly.

Mother and Sarah put their arms around Auntie, and muttered words of sympathy to her.

"And he did that, did he!" Dad commented again. "Well, I'd make him pay for them."

At that Auntie Montague sprang to her feet, and, shaking off her consolers, screeched at Dad:—

"PAY for them! Pay for them! How could a ill-bred, useless brother of yours like him pay me SIXTY POUNDS?"

Dad, eyeing her thoughtfully, elevated his chin and stood combing his whiskers with his fingers; while outside in the barn Joe kept shaking Uncle and asking:—

"B-b-but what w-w-was it y' d-d-DID to her?"

"This is what she's mad about," Uncle answered, rising and opening the carpet-bag. "Not her ol' cows! It's somethin' what she don't understand, Joe; nor anyone round here. It's th' latest invention of th' world, and I got it sent to me on cash order."

"W-w-what th' diggin's sort o' thing is it?" wonderingly from Joe as Uncle tenderly produced an instrument he had never set eyes on before, or anything resembling it.

"Electric set o' wireless, Joe, a radio. You can hear anythin' that's spoke, or sung, or played, anywhere in th' world, in it."

"Oh, I n-n-know know y', Joe grinned, as Uncle proceeded to build the set, right there in the barn. "It's a c-c-CATCH y' got, to give a b-b-bloke a shock with. You b-b-better c-catch D-Dad, an' D-Dave with it. I'll go an' b-b-bring them; but I w-w-won't tell them w-w-what it is."

And while Joe rushed back to the house Uncle went on with the installing inside.

"I s-s-say," Joe stuttered excitedly, "Uncle's g-g-got a 'lectric radiorse, that that can t-talk an' s-s-sing, an' play anythin' in th' w-w-world. C-c-come an' s-s-see what it's l-l-like. Dad, an' you, too, D-D-Dave." And out he rushed again.

"There you ARE," Auntie Montague claimed triumphantly. "What did I tell you? Th' fool has an infernal thing of some kind, wherever he got it, and does nothing but waste time and make mischief with it!"

"CRIPES!" Dave said. "I'll go an' see what it is. Come on, Dad."

Dad, thinking hard, complied.

"Why can't we ALL go?" Sarah laughed. "Why not—come along Auntie." Mother agreed cheerfully. And though the latter still wore an agitated look, she joined mother, and off they all strutted.

Entering the barn in single file they lined up, and with curious looks in their eyes stood, watching Uncle Joe, standing proudly beside the busy expert, grinned at them.

At last Dad broke the silence.

"What th' 'ell's this y' got?" he asked.

"You'll 'ear what it is in very few moments," Uncle, without taking his eyes from his work, answered.

Dad tapped himself insinuatingly on the head with his finger, and looked at the others. They all understood, and laughed—all but Auntie Montague. She seemed to be contemplating a rear attack on Uncle.

"It's a radio," Uncle mumbled indifferently "Th' noo model."

There was a burst of mirth, to the accompaniment of which Auntie Montague

raised her hand threateningly, but mother drew her to her.

"Thought you said it wer' a 'lectric radi-crse?" Dave guffawed at Joe.

"That's w-what he t-t-told me it w-w-was," Joe affirmed.

"But what th' 'ell's it FOR?" Dad inquired further.

"For listenin' in to all what's goin' on in th' world, pretty well—as you'll 'ear in a minute," Uncle replied, as he completed building the set.

Another round of mirth.

"Did y' make it yourself?" from Dad.

"'Spose I did—in a way," Uncle mumbled again.

"Well, y' better go an' make yourself a strait-jacket, now," Dad advised, "and while we're all here, we'll put you in it."

"Let Uncle alone, Father," Mother protested, "till we see what he's going to show us."

"Well, now," Uncle, ignoring the jibes and insinuations, started to explain, "this here is the receiver . . . and here—(pointing his lean finger about the set)—here's the grand loud speaker."

"That m-m-must be Y-YOU, Dad!" Joe suggested. Dad scowled at Joe. "And here's th' tone-filter," Uncle went on. "And this thing y' see here is the dynacone!"

"Th' WHAT?" Dave asked, grinning.

"Th' DYNACONE."

"Ah!" and Dad winked at the others, "you ain't forgot your Latin, Peter."

There was another chorus of mirth, in which even Auntie Montague was forced to join.

"Him what laughs last," Uncle said, humbly, "laughs th' longest. . . . So now we'll hear if there's anything on in Sydney or Melbourne or Brisbane," and with a flourish of his hands he proceeded to switch on. . . . A long-drawn moan came from the instrument. It was greeted with yells of hilarity. Gently Uncle turned with finger and thumb. The long-drawn moan changed to a series of croaks and jerks and gurgles.

"CRIPES!" Dave guffawed, "It's tryin' to imitate a rooster crowin' when he's head's chopped off!"

"Here," Dad said, touching Uncle on the shoulder, "is this a noo sort o' corn-sheller you're experimentin' with?"

Without answering, Uncle kept moving his finger and thumb. Then suddenly the playing of a jazz band burst loud and full from it. The listeners-in jumped back in astonishment: then stared at each other, and at the radio, also at Uncle. The rattle and banging of the band flooded the barn.

"Well, I be darn'd!" Dad said. While Dave's mouth opened so wide that he couldn't say anything Uncle sat down calmly beside the set, and, crossing his legs, closed his eyes as though he had created a new world, and decided to rest after it.

Like Dave, none of the women could speak in their amazement.

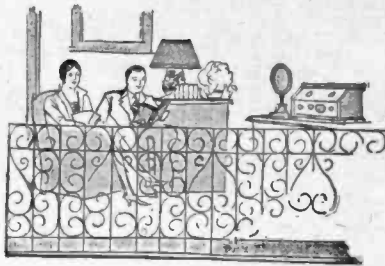
"Peter," Dad, stepping close to old Uncle, roared above the band, "I never ever thought so before, but you've got th' brains o' the family! Put it there."

Uncle modestly held out his little hand, and Dad shook it: then patted him on the head.

"CRIPES! HERE!" Dave suddenly finding his voice, shouted, "We can dance to that!" and grabbing Sarah for a partner, bounded round to the music of the band.

"Lord, yes—here, old woman!" And Dad, seizing Mother, went off after Dave and Sarah. Joe looked with an inviting grin upon Auntie Montague.

"Not—not YOU, you WASPI!" she snapped. Then, turning to Uncle, "Come on, you wizard, we might as well." And lifting him to his feet she whirled him and jumped him up and down to the rhythm of the jazz till a fit of coughing that came upon him compelled her to steady down and administer pats on the back to revive him.



Columbia
Trade Mark

RADIO BATTERIES
GREATEST CLARITY, VOLUME & DISTANCE



*Improve
Radio
Reception*

COLUMBIA Radio Batteries insure the greatest clarity, volume and distance. Made in a correct size for every receiving set, they improve the reception of all sets; last longer and are the most economical.

Always insist upon Columbia. Obtainable at all first class dealers.



Factory Representatives

ELLIS & COMPANY (Aust.) Ltd.
Aberdeen House, 204-206 Clarence Street
Sydney, N. S. W.

ELLIS & COMPANY (Aust.) Ltd.
562-4 Bourke Street
Melbourne, Vict.



PUBLIC WARNING!

Our Distinctive Boxes are Your Safeguard

SUBSTITUTES cannot give such good results as the true Electron Aerial, so . . . MAKE SURE THAT YOU GET THE GENUINE ARTICLE—INSIST ON BUYING ELECTRON WIRE AND SUPERIAL, ELECTRON'S SUPER AERIAL, IN OUR DISTINCTIVE BOXES ONLY.

Electron products are world-famous. No other Aerials are made by the same process, or with the same scientific regard to detail. Some Aerials are offered to deceive, made to look like Electron, coiled like them, but avoid deception. Do not buy another Wire made to look or sound like Electron or Superial, that cheats you of something you prize—look at the name and the distinctive box.

Our Aerials are insulated throughout their length, and being protected, cannot collect verdigris. Each one is a complete Aerial and lead-in. No separate lead-in, insulators, or other costly accessories are necessary, and even a mast need only be used if desired.

There are two kinds; Electron Wire in the square box (white and blue), and Superial, Electron's Super Aerial, with exceptionally heavy vulcanised insulation and packed in an oblong box, printed red and orange.

PRICES:

SUPERIAL 4/6
 ELECTRON WIRE 2/9

If unable to obtain, write, enclosing remittance, to one of the following Sole Agents:—

The Chartres Trading Co.,
 Remington House,
 Liverpool Street,
 SYDNEY.

Canada Cycle & Motor Agency, Ltd.,
 Corner Creek and Adelaide Streets,
 BRISBANE.

Lawrence & Hanson Electrical Co., Ltd.,
 172 William Street,
 MELBOURNE.

Hartleys Pty., Ltd.,
 270-272 Flinders Street,
 & 148 Swanston Street
 MELBOURNE.

Noyes Bros. (Melbourne), Pty., Ltd.,
 P.O. Box 779,
 409-501 Bourke Street,
 MELBOURNE.

Kiernan & Co.,
 291 Elizabeth Street,
 & 48-50 Bourke Street,
 MELBOURNE.

A. G. Healing, Ltd.,
 167-173 Franklin Street,
 MELBOURNE, C.I.

Louis Coen Wireless Pty., Ltd.,
 63 Swanston Street,
 MELBOURNE.

J. N. Taylor & Co.,
 121 Grenfell Street,
 ADELAIDE.

A. G. Healing, Ltd.,
 132-134 Grenfell Street,
 ADELAIDE.

Proprietors:—

The New London Electron Works Ltd., East Ham, London, England

Why do LEVENSON'S RADIO

Do the Bulk of Sydney's Wireless Trade?

Compare Our Prices and Quality—That's the Answer.

BUILD YOUR OWN AC ALL ELECTRIC RADIO

Simple Illustrated Booklet, 1/-. Free with parts. Simply worded and explained, whereby the mere novice can construct his set. No Hum—No Batteries—No Trouble—Just plug in—that's all. Best quality components supplied only. Results assured.

Parts for set cost £4/19/4; Parts for ABC Power Pack, £5/7/-; Valves and Raytheon Tube, £4/19/-. Total, £15/5/4.

See It in Our Window. We Extend the Help of Our Technical Branch if Required.

<p>"Quam" High Grade Variable Condensers. .00035, .0005, 6/6. Pyrex Glass and plates, 4in. dial, 35/- everywhere.</p>	<p>Genuine Hard Rubber, Polished Black Panels, 1-8in. Thick. 24 x 7 7/ 18 x 7 5/1 12 x 6 3/ 6 x 7 1/9 Worth Double.</p>	<p>Build Levenson's Accumulator Charger, 50/- everything. Charges 2, 4, and 6 volts. Not a trickle charger. Charts supplied. Anyone can build it.</p>	<p>Build Levenson's Tom Thumb 3-valve Portable Radio. A perfect little set. Light weight. Anyone can build it. Charts supplied, 6d free with parts. £7/17/6 everything.</p>
<p>Bremer Tully Vernier Dial 15/-, Now 4/. Excellent in each detail.</p>	<p>4 Volt 1 Unit Hard Rubber Cased Accumulators, 50/. Now 30/. 6 Volt 70/-. Now 50/-</p>	<p>English 1 Hole Mount .0001 Reaction Variable Condensers, 5/6.</p>	<p>Don't throw away your old Valve Bases. We allow 1/- discount for them off any new valve.</p>
<p>Bremer Tully Variable Condensers. Worth 16/6. My price, 7/6. Beautiful in Construction. Perfect in Action.</p>	<p>Amplion AR19 Loud Speakers. £6/10/. NOW 50/-. Amplion AR88 Loud Speakers. 90/-. Now 1/2-price, 45/-.</p>	<p>Just Landed. English adjustable Coil Winders, 32/6. Splendid for the Amateur.</p>	<p>4in. Dials, Black or Mah., 1/6. 3in. Bakelite Dial, Black or Mah., 6d and 9d each. Large Arrow Knobs, 1/. Small Arrow Knobs, 9d.</p>
<p>Portable Set Cabinets, 39/6</p>	<p>Like a Flash Valves— 4 volts UX199 .. 8/6 6 Volts UX201A 6/6</p>	<p>Marco Shielded Non-Solder Rheostat 30 ohms, 2/6</p>	<p>De Jur 3 Coil Interstate Tuner made on Moulded Bakelite, 15/6. Chart supplied.</p>
<p>Build your own "B" Eliminators for sets up to 3 valves, £2/8/6 everything. For sets over 3 valves, £4/5/6 everything. Simple chart, 6d free with parts. Thousands build them. Nothing hard about it.</p>	<p>Like a Flash Heavy Duty 45-volt "B" Batteries, upright type, 25/ value. Nothing better, 15/-.</p>	<p>By-pass Condensers, 1000-volt Test. 1 mfd. 2/9 2 mfd. 3/3 4 mfd. 7/ and 9/6 Beware of cheap lines offering—more so when to use with Eliminators. We were caught, and had to destroy thousands.</p>	<p>Thousands of variable Condensers, all capacities, excepting .0005 10/6 to 21/-. Now 3/6 each.</p>
<p>De Jur Gramophone Pick-up with Tone Control and Adapter £2/12/6</p>	<p>200,000 Ohms Variable Resistance Wire Wound, 8/-. For Eliminators or Volume Controls</p>	<p>Wates' English 3 in 1 Volt Amp Meters, 10/6</p>	<p>Electron Insulated All Copper 100ft. Aerial .. 2/6</p>
<p>Eisemann's High Grade Headphones, 4000ohms, 21/-. Now 1/2-price, 10/6. Magnus Professional Headphones, 35/-. Now 1/2-price, 17/6.</p>	<p>"Compact" Variable Condensers. Brass plate .00035, 10/6. Now 4/9. Note, New Duty, 3/6 each.</p>	<p>Stromberg Carlson High Grade Loud Speakers, £5/5/. Now £3. A few left only at this price.</p>	<p>3-gang Commercial type Mounted Condensers, with illuminated Dial and Rheostats, £4. Now £1.</p>
<p>Lissen English Loud Speaker Unit 13/6</p>	<p>Bremer Tully Short Wave Kit, £4 Now £2.</p>	<p>Bremer Tully Twin .0005 Variable Condensers, 35/-. Now 13/6.</p>	<p>Single or Double Jacks 2/6, Now 1/-</p>
<p>Lissen New-process "B" Batteries. 60 volts 13/6 100 volts 22/6 9-volt "C" Batteries, 2/6.</p>	<p>Remember Resistance Coupled Amplifiers. 3-stage 10/6 2-stage 8/6 Worth 3 times as much.</p>	<p>Indoor Frame Aerials, German made. Worth £10. Now £2. Perfectly made, on metal compass swivel base (collapsible).</p>	<p>Diora Vernier Midget Dial, 3/-. Alpha De Luxe Vernier Dial, 6/6. Emmco Metal Vernier Dials, 3/-. Preferred Metal Dials, Vernier, 2/3. Preferred Bakelite Vernier Dials, 3/9.</p>
<p>Lissen R.F. Choke (English) 6/9</p>	<p>Ediswan 2 Volt V.T. Socket Valves 10/6, Now 2/6</p>	<p>5 Valve Midget Coil Kit, 3 costs 5/-. Worth 15/6</p>	<p>Sub Panel Brackets, aluminium, 2/6 p.</p>
<p>Lissen English Audio Transformers, 12/6. Bakelite Case. Super Audio type, best made, 24/6.</p>	<p>B.T.H. English Valves, VT and UX Bases, 2, 4, and 6-volt series, 13/6, 22/6, NOW 6/6.</p>	<p>Lissen British Gramophone Pick-up, with attached Tone control, 15/-.</p>	

Send stamp for catalogue, including 4/- Free Concession Coupon.

Now in course of preparation, Levenson's 1930 Handbook and Catalogue, 160 pages, 1/- each. Ready January, 1930. Send Orders Now.

Levenson's Radio

THE PALACE OF WIRELESS,
226 PITT STREET, SYDNEY.

Branch 86A Pitt St., between Hunter St. and Martin Place.

Special attention to country orders. Satisfaction assured. We are the largest Mail Order Wireless Goods Distributors in Australia. Order in confidence.

GIVE AN EVER-READY



PRESENT THIS XMAS!

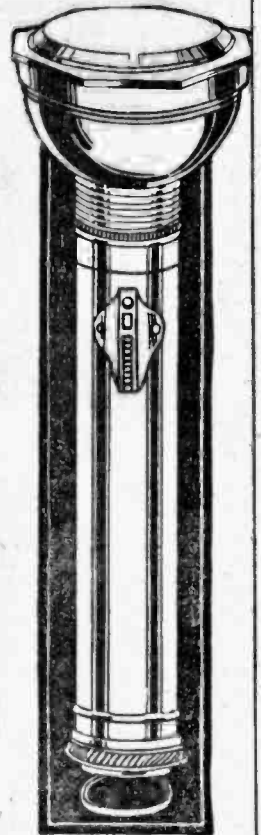
The famous "Ever-Ready" line of all-British Dry Batteries and Lamps and Torches enables you to select a really fine and useful gift for Xmas.

You can confidently choose any "Ever-Ready" product, because back of it is over a quarter of a century's experience and skill in manufacture.

An "Ever-Ready" Lamp or Torch is particularly acceptable, especially to anyone who

is holidaying at Xmas or New Year. As with the Dry Batteries, there is a range of Lamps and Torches to meet every need and every pocket. Visit the nearest radio or electrical dealer to-day and make your selection. An "Ever-Ready" always pleases!

At right is shown the beautiful "Ever-Ready" No. 2203 Electric Portable Searchlight. Projects a beam 500 yards without distortion. Can be focussed for near or distant lighting. Intermittent or permanent light as required. Ring attached for hanging up torch when not in use. Price, 19/9 complete. "Ever-Ready" Lamps and Torches range from 3/3.



Above shown is the famous "Ever-Ready" SUPER SERVICE 45 Volt "B" Battery, most popular of the great "Ever-Ready" line of "B" Batteries. For all Multi-Valve Sets. Wonderful value at 24/6.

Other "B" Battery types are:

HEAVY DUTY 45 VOLT, 20/-

W.P.	31½ Volt.	9/6
W.P.	42 Volt.	12/6
W.P.	63 Volt.	18/-



"Ever-Ready" Standard Dry Cell, above, is used for Dry Cell Radio Valves, Bells, Telephones, Buzzers, Ignition, etc.

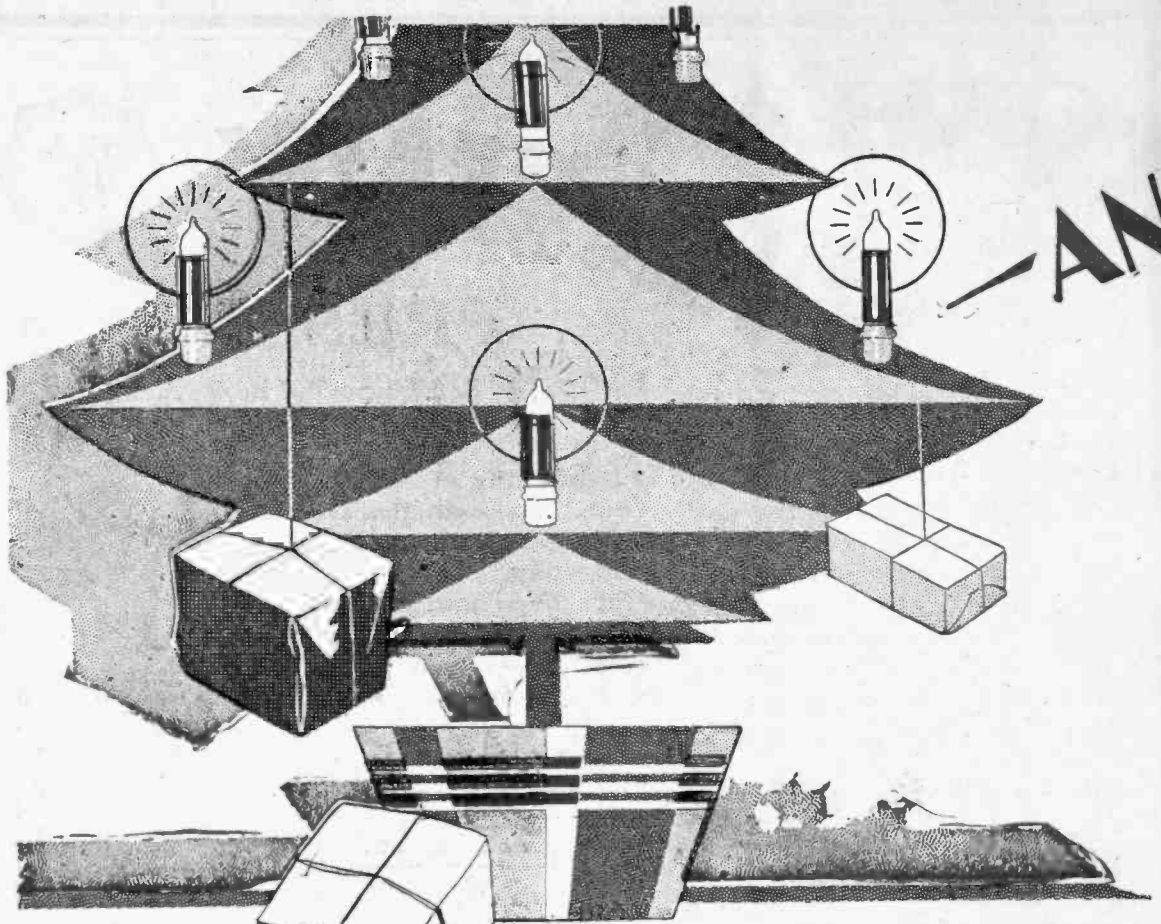
1½ Volt size, 3/
4½ Volt size, 9/



Below is the most popular Bias or "C" battery on the market — the "Ever-Ready" No. 126. Improves tone and volume of reception and lengthens life of "B" Batteries. Priced at 2/9.

**EVER-READY
DRY BATTERIES**

**EVER-READY
LAMPS & TORCHES**



AND



PHILIPS

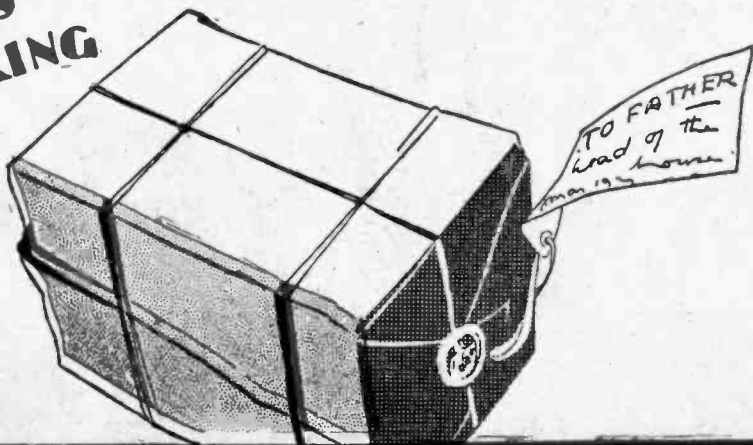
YOU SHOULD HAVE SEEN
the good things
the Philips Christmas Tree
carried!

"To Dad from Bill"—and wasn't Dad just tickled to death when he opened up a new set of Philips Valves for that short-wave set of his. Mother was particularly pleased when she saw the beautiful new Philips Speaker which Uncle John had sent her. She had always quietly disliked that big horn speaker in the drawing-room.

Nearly all of the family were radio enthusiasts and seemed to get radio presents, and of course only the best is good enough for Christmas, so they all got Philips. Dad was perhaps the most pleased when young Harry opened an interesting looking parcel and brought to light a Philips Trickle Charger and Power Unit, for it meant that no more hard cash had to be laid out to supply Harry with batteries for his super-set. In fact, the whole family were delighted with their "Philips" Christmas.

PHILIPS

WHAT'S THIS INTERESTING LOOKING PARCEL?



Local Programmes, Friday, December 13

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
 7.3: This morning's news from the "Daily Telegraph Pictorial."
 7.8: Austradio Musical Reproduction.
 7.45: Mails and shipping.
 7.48: What's on to-day?
 7.50: Children's Birthday Calls.
 8.0: Music from the Studio.
 8.15: CLOSE.

MORNING SESSION—10.30 a.m. to 12.30

- 10.30: Announcements.
 10.32: To-morrow's sporting events, by Oscar Ziska.
 10.45: HORACE WEBER at the GRAND ORGAN.
 11.0: HOUSEHOLD HELPS: Cooking by Mjss Ruth Furst.
 11.10: CABLES (Copyright), A.P.A. and Sun-Herald News Service.
 11.15: MORNING DEVOTION.
 11.30: Austradio Musical Reproduction.
 11.53: British Official Wireless Press.
 12.0: "Big Ben," Stock Exchange and metal quotations.
 12.5: ROSALIE WILSON, "Interior Decorating—Antiques and Furnishings."
 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
 1.30: CLOSE.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch Hour Music.
 2.0: Stock Exchange, second call.
 2.2: A glance at the afternoon "Sun."
 2.7: Austradio Musical Reproduction.
 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: MODERN SONGS.
 2.45: PIANOFORTE REPRODUCTION.
 3.0: DR. EAROLD NORRIE will speak on "Outstanding Personalities in Australian History—Charles Throsby."
 3.15: JOSIE DONOVAN, pianoforte solos—
 (a) "Marilyn" (Alter).
 (b) "Rustle of Spring" (Sinding).
 (c) "Tinkle Toes" (Wenrich).
 (d) "Flora" (Wheeler).
 3.25: SONGS OF TO-DAY.
 3.35: MODERN DANCE MUSIC.
 3.45: MELODY MEMORIES.
 4.0: "REDGUM" will speak on "Gardening."
 4.15: JOSIE DONOVAN, pianist—
 (a) "Valse No. 1" (Durand).
 (b) "Syncopating the Scales" (Schutt).
 (c) "Valse No. 5" (Godard).
 (d) "Patsy" (Perry).
 4.28: Stock Exchange, third call.
 4.30: CLOSE.

EARLY EVENING SESSION—5.45 to 7.55

- 5.45: Children's "Good-night" Stories, told by the "Hello Man," assisted by the Farmyard Five.
 6.45: Dinner Hour Music.
 7.20: A.B.C. Sporting Service.
 7.25: Special Country Session. Stock Exchange resume. Markets. Weather Forecast. Late news service from the "Sun." Truck Bookings.
 7.58: To-night's Programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

- We offer you to-night Organ Music, Saxophone Solos, news songs, and comedy numbers, and Brunton Gibb will give a talk prior to our cross-over to 3LO at 9.17 for the relay. Through 2BL a Sound Film Feature, Song Groups, the National Broadcasting Orchestra, conducted by Horace Keats, Claude Corbett's Sporting talk, and smart monologues complete a popular entertainment. The attention of listeners is drawn to the announcement Madame Evelyn Grieg will make through 2BL when details of our Instrument Competition on the 20th December will be given.
 8.0: FROM PITT STREET CONGREGATIONAL CHURCH—Organ Recital, arranged by Lillian Frost—
 (a) "The Harmonious Blacksmith" (Lux).
 (b) "Album Leaf" (Larbaestier).

(For index to week's programmes see page 9)

- 8.10: FROM THE STUDIO: CHARLES SADLER, Entertainer—
 "As the Victor of Fun in a Humorous Sketch, "Yes, I Think So" (Squiers and Cecil).
 8.17: AL HAMMETT, Saxophone Solos—
 (a) "Valse Emily" (Gurewich).
 (b) "Technicalities" (Doerr).
 8.24: FROM PITT STREET CONGREGATIONAL CHURCH—Organ Recital, arranged by Lillian Frost—
 (a) "A Southern Fantasy" (Hawke).
 (b) "Evensong" (Johnson).
 8.34: FROM THE STUDIO: BILLEE CRESSWELL, Popular Vocalist—
 (a) "By and By, Sweetheart" (Valentine).
 (b) "Some Sunday in the Summertime" (Clifford).
 8.41: AL HAMMETT, Saxophone Solos—
 (a) "Serenade" (Drigo).
 (b) "Valse Vanity" (Weidoeff).
 8.48: CHARLES SADLER, Entertainer—
 "The Fact Is" (Grey and Ayer).
 8.55: THE COUNTRY MAN'S WEATHER SESSION—
 (a) "New South Wales Forecasts."
 (b) "Inter-State Weather Synopsis." Yachtsman's and Fisherman's Forecast.
 8.57: BRUNTON GIBB in "Random Remarks."
 9.12: BILLEE CRESSWELL, Popular Vocalist—
 (a) "Blue Hawaii" (A. Baer).
 (b) "Your Smile" (Pollack).
 9.17: R E L A Y FROM 3LO MELBOURNE.
 10.15: FROM THE STUDIO—Announcements. Late Official Weather Forecast.
 10.20: ROMANO'S CAFE DANCE ORCHESTRA, conducted by Binnie Abrahams.
 11.30: CLOSE.
 NATIONAL ANTHEM.



Brunton Gibb.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 353 Metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G.P.O. Chimes and Announcements.
 8.16: Music for every mood.
 8.40: Meteorological data for the country.
 8.45: Mails and Shipping Information.
 8.50: Memory Melodies.
 9.0: This Morning's Story.
 9.30: A Musical Interlude.
 9.40: British Official Wireless Press.
 9.45: New Music.
 10.5: News from "Daily Telegraph Pictorial."
 10.10: Austradio Musical Reproduction.
 10.40: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley.
 11.0: G.P.O. Chimes. Close Down.
 MIDDAY SESSION—12 Noon to 2.30 p.m.
 12.0: G.P.O. Chimes and Announcements. A Pianoforte Recital.
 12.30: LUNCH MUSIC.
 1.0: Afternoon news from the "Sun."
 1.5: Memory Melodies.
 1.20: Radio Rhythm.
 1.25: Austradio Musical Reproduction.
 2.0: A Pianoforte Recital.
 AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.
 2.30: Half an Hour with Silent Friends.
 3.0: FROM THE BALLROOM OF THE ORIENTAL: Sydney Simpson's Syncopators in Dance Music.
 3.12: FROM THE STUDIO: MARJORIE PRITCHARD, Popular Vocalist—
 (a) "My Sin is Loving You" (De Sylva).
 (b) "Let Me Call You Sweetheart" (Freedman).
 3.19: FROM THE BALLROOM OF THE

- ORIENTAL: Sydney Simpson's Syncopators in Dance Music.
 3.30: FROM THE STUDIO: MARJORIE PRITCHARD, Popular Vocalist—
 (a) "Heart of Mine" (Silvers).
 (b) "Sing a Little Song" (Conrad).
 3.37: Modern Ballads.
 3.45: CLAIRE E. BYRNE will give a talk.
 4.0: FROM THE BALLROOM OF THE ORIENTAL: Sydney Simpson's Syncopators in Dance Music.
 4.12: FROM THE STUDIO: Music—Grave and Gay.
 4.45: The Trade Hour—Demonstration Music.
 5.45: Weather Information—Close Down.

THE DINNER HOUR—6.15 to 7.55 p.m.

- 6.15: DINNER QUARTET.
 6.45: BOY SCOUTS' CLUB, conducted by Mr. Norman Lyons.
 7.5: The Country Man's Market Session—Wool, Wheat, Stock, Farm Produce, Fruit, and Vegetable Markets.
 7.20: DINNER MUSIC.
 7.45: Austradio Musical Reproduction.
 7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION—8 to 10.30

- 2BL offers the Weekly Sound Film Feature to-night, the National Broadcasting Orchestra, conducted by Horace Keats; and Myra O'Neill and Clifford Lathlean in song groups. Madame Evelyn Grieg will tell listeners of the Instrumental Competition which we are holding on December 20, and Claude Corbett's sporting talk will attract many listeners.
 8.0: 2BL WEEKLY SOUND FILM FEATURE.
 8.23: FROM THE STUDIO: MYRA O'NEILL, Soprano—
 (a) "Cradle Song" (Strauss).
 (b) "When I Love You" (Martin Cole).
 8.30: THE NATIONAL BROADCASTING ORCHESTRA, conducted by Horace Keats.
 (a) "Songs of Uncle Sam" (Hosmer).
 (b) "Pale Moon" (Knight-Logan).
 8.42: MADAME EVELYN GRIEG will announce details of our Instrument Competition, to be held on December 20.
 8.46: MYRA O'NEILL, Soprano—
 (a) "The Answer" (Terry).
 (b) "Estrellita (Little Star)" (La Forge).
 (c) "Joy" (Harvey Gaul).
 8.53: THE NATIONAL BROADCASTING ORCHESTRA—
 (a) "A Darkey's Dreamland" (Bidgood).
 (b) "Selection of Molloy's Songs."
 9.5: DOROTHY NALL, Monologues—
 (a) "Gardening" (Barnett).
 (b) "Song of Sixpence."
 9.12: MISCHA DOBRINSKI, Violinist—
 (a) "Serenade" (Pergamend).
 (b) "La Gitana" (Kreisler).
 (c) "Humoresque" (Tschalkowsky-Kreisler).
 9.19: CLIFFORD LATHLEAN, Basso—
 (a) "Twos in the Lovely Month of May" (Schumann).
 (b) "From Out My Tears are Springing" (Schumann).
 (c) "The Rose and the Lily" (Schumann).
 (d) "I Gaze Into Thy Tender Eyes" (Schumann).
 (e) "I'll Breathe My Soul and Its Yearning" (Schumann).
 (f) "I Murmur Not" (Schumann).
 (g) "The Flutes and Fiddles are Sounding" (Schumann).
 9.26: Weather Information for the Man on the Land.
 9.28: CLAUDE CORBETT will give a sporting talk.
 9.45: THE NATIONAL BROADCASTING ORCHESTRA—
 "Princess Charming" (Arr. Higgs).
 9.55: DOROTHY NALL, Monologues—
 (a) "Nobody Knows What I Know" (Burchell).
 (b) "A Digger's Tale" (Dennis).
 10.2: MISCHA DOBRINSKI, Violinist—
 (a) "Charmeuse" (Clarke, arr. Dobrinski).
 (b) "First Movement from Concerto in G Minor" (Bruch).
 10.9: THE NATIONAL BROADCASTING ORCHESTRA—
 "Four Ways Suite" (Coates).
 10.25: Late News from the "Sun."
 10.30: NATIONAL ANTHEM. CLOSE.

(2GB on page 46; remainder of local programmes on page 45.)

EXAMINATION FOR 7 DAYS FREE!

The World's Best Book on Radio DRAKE'S RADIO CYCLOPEDIA



**EVERY TYPE OF
Radio Equipment is
Clearly Explained**

A Few of the Fully Illustrated Articles from Hundreds, Equally important, in Drake's Radio Cyclopeda.

- A. C. Tubes—Complete Receivers.
- Amplifiers—Audio Frequency, Radio Frequency, Phonograph and Power Types.
- Antennas—Coupling, Dimensions, Tuning, etc.
- Balancing—Types and Adjustments.
- Batteries and Chargers of All Types.
- Coils—Construction, Design, Number of Turns, Inductance.
- Condensers—Tuning, Straight Line, Multiple, Electrolytic, Mica, Paper, etc.
- Frequency Meters—Construction, Operation.
- Grid Bias—Proper Values, How Obtained, etc.
- Interference—Location and Elimination.
- Loops—Design, Construction, and Use.
- Oscillation—Causes, Control, and Prevention.
- Oscillators—A. F. and R. F., Construction, Use.
- Power Units—Plate Current, Filament Current, Combination Types, Rectifiers, Filters, Chokes, and Voltage Controls.
- Radio Principles—Broadcaster to Loud Speaker.
- Receiving Construction—Drilling, Wiring, Tools, Soldering, Wires, Materials, etc.
- Receiver Layouts and Specifications—In 240 possible Combinations for Complete Units.
- Reception—Fading, Static, Logging etc.
- Regeneration—How Obtained and Controlled.
- Resonance, Reactance, Resistance, Impedance.
- Screen Grid Tubes—Receiver Designs.
- Selectivity, Sensitivity, Volume Control.
- Shielding—Design, Construction, and Effect.
- Single Control—Construction and Design.
- Television—25 pages with illustrations.
- Transformers—A. F., R. F., and Power Types.
- Troubles—Systematic Location and Remedy.
- Tubes—Amplifiers, Detectors, Rectifiers, Operation, Testing, Restoration, etc.

**NEW, REVISED, AND
ENLARGED EDITION**

**1035 Pages — 1100 Illustrations
Diagrams and Layouts, Short-wave
Sets, and Trouble Shooting.**

Design, Layout and Construction

of such things as tools, drilling, correct wiring, characteristics of constructional materials, and all things useful in radio practice. Every new thing in radio is covered in detail.

All Electric Sets, Screen Grid Tubes, Television, Etc.

beginner are cared for by including the fundamentals of radio, and of radio-electricity, treated from a standpoint that assumes no previous knowledge whatever.

Alphabetical Order Allows Quick Reference

imaginable name under which the information might be classed.

The important articles deal primarily with receivers and reception. They do not stop with the electrical end, but go also into the mechanics of design, layout, and construction, treating

The alphabetical arrangement lets the experienced worker refer directly to the one thing in which he is interested at the moment without hunting through non-essentials. The needs of the

Each rule, fact, method, plan, layout, and diagram is instantly picked out and separated from everything else by placing all subjects in alphabetical order, with cross references for every

FREE EXAMINATION

ANGUS & ROBERTSON LTD.,
89 Castlereagh Street, SYDNEY.
C.P.O. Box 1516DD.

Please send me for free examination and without obligation a copy of Drake's Radio Cyclopeda. If I decide to keep it I will send you 30/- (post 1/- extra) within seven days of receipt—otherwise I will return the book to you immediately, when my obligation ends.

Name

Address

"W.W." 13/12/29.

6.30: Dinner music. 7.30: Weather. 7.40: Stock Exchange. 7.42: Review of to-morrow's sporting fixtures. 7.57: Features of to-night's presentation.
EVENING SESSION.—8.0: Chimes. 8.1: Beryl Scott, entertainer, at piano. 8.3: Sporting anticipations, by Russell Sandeman, sporting editor of "Truth." 8.24: Archie and Wattie, novelty entertainers. 8.40: Beryl Scott, entertainer, at piano. 8.47: James Conarty, "Helpful Hints to Garden Lovers." 9.0: Announcements. 9.2: A.B.C. Revue Company, produced and presented by Harry Graham. Artists: Harry Graham, entertainer; Dorothy Manning, soprano; David Lyle, tenor; Reuben Betts, crooning baritone; Beryl Scott, pianist. 10.0: What's on the air to-morrow. 10.5: Temple Court Dance Band, conducted by Merv. Lyons. 10.59: Weather report. 11.0: Close down. "God Save the King."

7ZL

Tasmanian Broadcasters Pty., Bursary Bldg., Elizabeth St., Hobart (Wavelength, 516 Metres).

11.30 a.m.: Sonora recital. 11.34: Midlands weather forecast. 11.35: Sonora recital. 11.55: Tasmanian stations' 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping information; mail notices; housewives' guide. 12.8: Sonora recital. 12.30: News; announcements. 12.40: Sonora recital. 1.5: Railway auction sales. 1.10: Sonora recital. 1.30: Close down. 3.0: Chimes. 3.1: Sonora recital. 3.4: Weather. 3.5: Sonora recital. 4.15: Personalities; readings. 4.30: Close down. 6.15: Children's corner, with "Uncle David." 7.10: Records music. 7.50: News session. 7.40: An hour with Enrico Caruso, tenor, and Louise Homer, contralto. 8.45: James Counsel, "The History and Development of Music." 9.45: News session. 10.0: G.P.O. clock chimes the hour. 10.1: Close down.

**Friday, December 13
2UW**

Radio Broadcasting, Ltd., Faling's Building, Ash St., Sydney (Wavelength, 287 Metres).

MIDDAY SESSION.—12.30: Request numbers. 1.0: Chimes; music. 1.15: Talk on Homecraft, by "Pandora." 1.40: Music and request numbers. 2.30: Close down. 4.30: Musical programme.

EVENING SESSION.—5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: Request numbers. 8.0: Recital of popular music. 9.0: Comments on foreign affairs by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close down.

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 280 Metres).

MORNING SESSION.—10: Tune in to the ticking of the clock. 10.3: Popular fox-trots. 10.15: Calls and announcements. 10.30: Women's session; home hints and information, Mrs. Gray. 11.0: A few laughs. 11.5: Pianoforte selections. 11.15: Calls and announcements. 11.20: Musical interlude. 11.30: Request numbers. 11.40: Music and vocal items. 11.55: Where to to-night. 12.0: Closing announcements.

CHILDREN'S SESSION.—6.0: Birthday calls, request numbers, and kiddies' entertainment, Uncle Bert and Uncle Mac. 7.0: Musical interlude. 7.5: Birthday calls. 7.15: Sporting feature; turf topics; review of candidates and their prospects for to-morrow. Mr. Geo. A. Davis. 7.40: Request numbers. 8.0: Hawaiian steel guitar selections. 8.10: Women's information service, Mrs. Gray. 8.30: Music and vocal items from the studio. 9.10: Full description of main 15-round event. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney (Wavelength, 293 Metres).

EARLY MORNING SESSION.—7.15: Breakfast time hour orchestral music. 8.0: Clock and chimes. 8.1: Orchestral selections. 8.30: Weather forecast; close down.

MIDDAY SESSION.—10.0: Women's session, conducted by Miss Dorothea Vautier, with musical selections. 11.30: Old-time orchestral and vocal music. 12.0 (noon): Close down.

AFTERNOON SESSION.—1.0: Orchestral and vocal music. 1.45: Organ recital. 2.0: Close down.

EVENING SESSION.—6.30: Wendy's hour with the children and birthday greetings. 7.15: Health talk by T. Gordon Marsden. 7.26: Music. 7.55: Programme announcements and news from the "Sun." 8.0: Clock and chimes. 8.1: Overture, "La Traviata," selections. 8.10: Vocal and instrumental concert. 10.15: Close down.

"Here's News"

Owing to the new customs duties on Radio Sets and parts prices have been increased and are being increased daily. For instance, Philips 3003 B and C Eliminator was £10/15/-, the price to-day is £12/15/-. This is just one example.

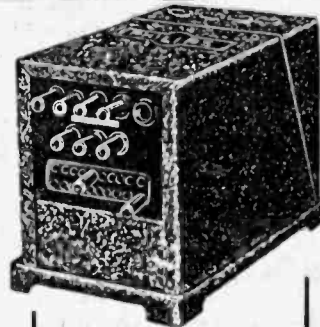
GET IN EARLY

and purchase right now. Later you will appreciate our advice.

**AN XMAS GIFT,
3 ONLY.
BRIANAIR GRAMPHONES.
USUALLY, £22/10/.HALF-PRICE, £11/5/.USE YOUR RADIO SET WITH
A PICK-UP ON THIS
GRAMAPHONE.
Deposit 17/-, 4/- Wkly.**

**LIMITED
Shipment Only.
"SONGBIRD"
B BATTERIES.
HEAVY DUTY. 15/6.
Worth 25/-.**

**AN XMAS
GIFT FOR
YOURSELF.
BUILD THE "SIMPLICITY"
3-VALVE, ALL ELECTRIC,
WITH THE MAKERS' PARTS.
NO SUBSTITUTES.
£14/3/9.
Deposit £1 2/6,
5/- Weekly.**



**WE
CARRY A
FULL STOCK
OF PILOT PARTS,
ELIMINATORS,
AND KITS.**

**IS 13 UNLUCKY?
INSPECT NO. 13
WINDOW
FOR SET AND
RADIO PART
BARGAINS.**

PHILIPS SPEAKERS.

Baby Grand	£ 3 10 0
Buff Baby Grand	3 12 6
Triple Baby Grand	3 15 0
PCJJ Junior	4 10 0
PCJJ	5 10 0
Peter Pan	6 10 0
Seventette	7 0 0

We can supply any type of Speaker.

**PHILIPS 3009
ELIMINATOR**

B. and C., £8/15/-.
**PHILIPS' 3002 ELIMINATOR,
B UNIT, £7/15/-.**
 AND MANY OTHER MAKES
IN STOCK.

**MAGNAVOX X CORE
New Type Speakers.**

All types of units,
from £5/15/-.
 £ 5 d
 Dynamic 404, 240v. A.C., 7 15 0
 Dynamic 405, 240v., A.C., 8 10 0
 Cabinets are not procurable
for 405 unit.

**AN XMAS
GIFT FOR
YOUR WIFE,**

**FROM OUR ELECTRICAL
DEPT.**

Stewart Irons	21/9
Creda Irons	27/6
Hotpoint Special	28/6
Hotpoint Standard	35/-
Sunbeam Iron	50/-
Westinghouse Auto	56/-
Electric Hot Water	
Jug	32/6
Marlon Toaster	30/-
Hotpoint Toaster	50/-
Hecla Kettles, from	45/-
Hecla Griller	£1/18/6
Hecla Cooker	£5/7/6
Hecla Combination	
Cooker	£8/18/-
Empire Vacuum	
Cleaner	£8/10/-

And Many Other Electrical Lines.

**BRYANT'S, LTD.,
VERY EASY TERMS.**

Metropolitan Area Only.

Amt.	Weekly Payments.			
	£	s	d	4d
10	15	0	0	2 6
15	1 2	6	0	3 6
20	1 10	0	0	5 0
25	1 17	6	0	6 6
30	2 5	6	0	7 6
40	4 0	0	0	9 0
50	5 0	0	0	11 0
60	6 0	0	0	12 6
				15 0

**LARGER AMOUNTS
MAY BE
ARRANGED**

10 per cent. added to cash prices for terms, which cover the whole period.

**AN XMAS
GIFT FOR
YOUR HUSBAND.**

Elseman Headphones	9/11
Para Headphones	10/6
Siemens Headphones	11/6
Crystal Set, complete	£2/10/
Columbia Tones, from	7/-
Fiat Type Tones	1/11
Short Wave Adaptors, Dresner, complete	£6/10/-
Phillips Gramophone Pick-up	
Webster Pick-up	£5/5/-
Dresner Short Wave Coils	25/-
Wasp Short Wave Coils	£3/-
Wasp Short Wave Coils	£3/-
Paget Gramophone Motor	£8/5/-
Portable Gramophones, Rexoport	from £4/4/-
Batteries, Accumulators, and all Radio Parts are Sensible Xmas Gifts.	

BRYANT'S Ltd., Home Furnishers,
Electrical and Radio Dealers,

545-547-549-551 George Street, Sydney

Local Programmes, Saturday, December 14

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 Metres).

- EARLY SESSION—7 to 8.15 a.m.**
 7.0: "Big Ben" and meteorological information for the man on the land.
 7.3: This morning's news from the "Daily Telegraph Pictorial."
 7.6: Austradio musical reproduction.
 7.45: Mails and shipping.
 7.48: What's on to-day?
 7.50: Children's birthday cake.
 8.0: Music from the studio.
 8.10: Condition of the Roads, supplied by the Main Roads Board.
 8.15: CLOSE.

MORNING AND AFTERNOON SESSIONS

- 10.30: Announcements.
 10.32: A.B.C. Racing Observer.
 10.45: Studio Music.
 11.0: **HOUSEHOLD HELPS:** Week-end suggestions by Miss Ruth Furst.
 11.10: **CABLES** (Copyright). A.P.A. and Sun-Herald News Service.
 11.15: **AUSTRADIO MUSICAL REPRODUCTION.**
 11.53: British Official Wireless Press.
 12.0: "Big Ben," Stock Exchange and Metal Quotations.
 12.5: Austradio Musical Reproduction.
 12.20: Midday weather forecast and weather synopsis.
 12.30: Studio Music.
 12.50: **FROM ROSEHILL:** Description of the races in the running.
 NOTE: Race results from Rosebery will be given as received.
 During intervals between the races a musical programme will be broadcast from the Studio.

FROM THE STUDIO—

- 4.35: Late sporting results. 4.45: CLOSE.
EARLY EVENING SESSION—5.45 to 7.55
 5.45: Children's "Good-night" Stories, told by the "Hello Man," assisted by Aunt Willa and Cousin Gwen.
 6.45: Dinner Hour Music.
 7.15: A.B.C. Sporting Service.
 7.25: Special Country Session. Stock Exchange Resume, Markets, Weather Forecast. Late news service from the "Sun."
 7.58: To-night's programme.

THE EVENING PRESENTATION—8 to 11.30

- We are broadcasting several of the Newcastle Civic Week functions, and to-night our transmission is taken from the Newcastle Hall on the occasion of the Eisteddfod which is being held. Dance music will be broadcast from the Empire Palais Royal, Newcastle, Linn Smith's Band. Through 2BL there is the big Saturday night feature—sporting—and from the Studio a programme on popular lines—Wally Baynes, Phil Mountain, and Basil Rye.
 8.0: **FROM THE NEWCASTLE TOWN HALL:**

NEWCASTLE EISTEDDFOD—

- Piano Trio, own choice—under 16 years—2 finalists.
 Children's Duet, "Second Minuet" (Beasley)—Under 16 years—2 finalists.
 Humorous Recitation, own choice—under 16 years—2 finalists.
 Violin Duet, "Berceuse" (L. Schytte)—under 16 years—2 finalists.
 Recitation with Musical Accompaniment, own choice—under 16 years—2 finalists.
 Children's Solo, "At Dawning" (Eberhart)—over 14 and under 16 years—2 finalists.
 Juvenile Concert Party (6 performers, not more than 20 minutes)—under 16 years.
 Piano Duet, "Anitra's Dance" (Grieg)—over 12 and under 16 years—2 finalists.

9.0: FROM THE STUDIO: THE COUNTRY MAN'S WEATHER SESSION—

- (a) "New South Wales Forecasts."
 (b) "Inter-State Weather Synopsis."
 Yachtsman's and Fisherman's Forecast.

9.2: FROM THE EMPIRE PALAIS ROYALE, NEWCASTLE: DANCE MUSIC.

Linn Smith is preparing something especially attractive for listeners.

10.15: FROM THE STUDIO: Announcements.

Late Official Weather Forecast.
 10.20: From the Empire Palais Royale—Linn Smith's Dance Band.

11.30: CLOSE. "NATIONAL ANTHEM."

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 353 Metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G.P.O. Chimes and Announcements.
 8.16: Music for every mood.
 8.40: Meteorological data for the country.
 8.45: Mails and Shipping Information.
 8.50: Memory Melodies.
 9.0: This Morning's Story.
 9.30: A Musical Interlude.
 9.40: British Official Wireless Press.
 9.45: New Music.
 10.5: News from the "Daily Telegraph Pictorial."

10.10: Austradio Musical Reproduction.

10.40: MR. G. COOPER, Park Superintendent of City Parks, will speak on "GARDENING."

11.0: G.P.O. Chimes. Close down.

MIDDAY AND AFTERNOON SESSIONS—12 Noon to 5.15 p.m.

12.0: G.P.O. Chimes and Announcements. A Pianoforte Recital.

12.30: LUNCH MUSIC.

1.0: Afternoon news from "The Sun."

1.5: Radio Rhythm.

1.20: Austradio Musical Reproduction.

2.0: FROM NEWCASTLE—

The Official Opening of the Town Hall by the State Governor, Sir Dudley de Chair.
 NOTE.—During the afternoon local sporting descriptions will be given and a musical programme from the Studio.

5.0: **FROM THE STUDIO:** Complete Racing and Sporting Resume.

5.15: Close Down.

THE DINNER HOUR—6.15 to 7.55 p.m.

6.15: DINNER QUARTET.

6.45: "THE CAPTAIN" to his Comrades

7.0: The A.B.C. Sporting Service.

7.20: DINNER MUSIC.

7.45: Austradio Musical Reproduction.

7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION—8 to 12 Midnight.

Our sporting programme to-night will be supported by Wally Baynes, comedian; Phil Mountain, popular vocalist; and Basil Rye, baritone; and the Australian Broadcasting Dance Orchestra, conducted by Cec. Morrison.

Through 2FC the Newcastle Civic Week ceremonies are being broadcast, and to-night's function is the Eisteddfod from the Town Hall; later in the evening dance music will be taken from the Empire Palais Royal at Newcastle, where Linn Smith's Band is supplying dance music.

8.0: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA, conducted by Cec. Morrison.

8.12: WALLY BAYNES Comedian.

8.19: PHIL MOUNTAIN Popular Vocalist.

(a) "Little Baby Feet" (M.S.)

(b) "Hard up, but Happy" (Rastus)

(c) "Beautiful Dixieland" (Sutton)

8.26: FOREWORD

8.28: FROM THE SYDNEY STADIUM.

A Description of the Fighting Contest.

8.38: FROM THE STUDIO.

Weather Information for the Man on the Land.

9.40: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.

9.50: BASIL RYE Baritone—

(a) "Measmates" (Loehr).

(b) "Fortune Hunter" (Willeby)

9.50: WALLY BAYNES Comedian.

10.8: PHIL MOUNTAIN Popular Vocalist—

(a) "I Ain't Goin' Back to Nowhere" (Alleyn).

(b) "From Me to Mandv Lee" (Lange)

(c) "I'm Coming Back" (McBeath).

10.13: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.

10.25: Late News from "The Sun."

Late Weather Forecast.

10.30: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.

12.0: NATIONAL ANTHEM. CLOSE.

2GB

Theosophical Broadcasting Station, 29 Bligh St., Sydney (Wavelength, 316 Metres).

- 3.0: Musical session. 5.15: Children's session by Uncle George. 6.50: M.G.M. Radio Movie Club session. 7.0: Request hour. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St., Sydney (Wavelength, 367 Metres).

- 5.30 p.m.: Children's Hour, conducted by Uncle Jack. 6.30: Close down. 7.0: Request numbers. 10.30: Close down.

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 280 Metres).

- EVENING SESSION—6.0:** Birthday calls, request numbers, and kiddies' entertainment, Uncle Bert and Uncle Mac. 7.0: Musical interlude. 7.5: Birthday calls. 7.15: Sporting feature; turf topics; how they ran to-day. 7.50: Request numbers. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney (Wavelength, 293 Metres).

- EARLY MORNING SESSION—As usual**
EVENING SESSION—6.30: Wendy's hour with the children and birthday greetings. 7.15: Music. 7.20: Turf talk by Mr. Hopkins, Turf Expert. 7.45: Instrumental dinner music. 7.55: Programme announcements and news from the "Sun." 8.0: Clock and chimes. 8.1: Overture, "La Tosca." 8.10: Vocal and instrumental items. 10.30: Close down.

2GB

Friday, December 13

Theosophical Broadcasting Station, 29 Bligh St., Sydney (Wavelength, 316 Metres).

- 10.0: Music. 10.10: Happiness talk by A. E. Bennett. 10.20: Music. 10.30: Women's session by Mrs. W. J. Stelzer. 11.30: Talk by Mrs. Jordan. 11.45: Close down. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Address by Miss Mary Rivett. 3.15: Music. 3.30: Close down. 5.15: Children's session by Uncle George. 6.50: M.G.M. Radio Movie Club session. 7.0: Music. 7.45: Feature story. 8.0: Further All-Russian programme, Miss Nora Mack, soprano. 8.7: Symphony Orchestra. 8.15: Mr. William Green, tenor. 8.22: Violin solos. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Selections from Russian opera. 9.0: Madame Betts-Vincent in an illustrated talk on German composers. 9.15: Mr. Clement Hosking, baritone. 9.25: Symphony Orchestra. 9.30: Miss Nora Mack, soprano. 9.40: Symphony Orchestra. 9.50: Mr. William Green, tenor. 10.0: Instrumental music. 10.30: Close down.

TRANSFORMERS AND CHOKES

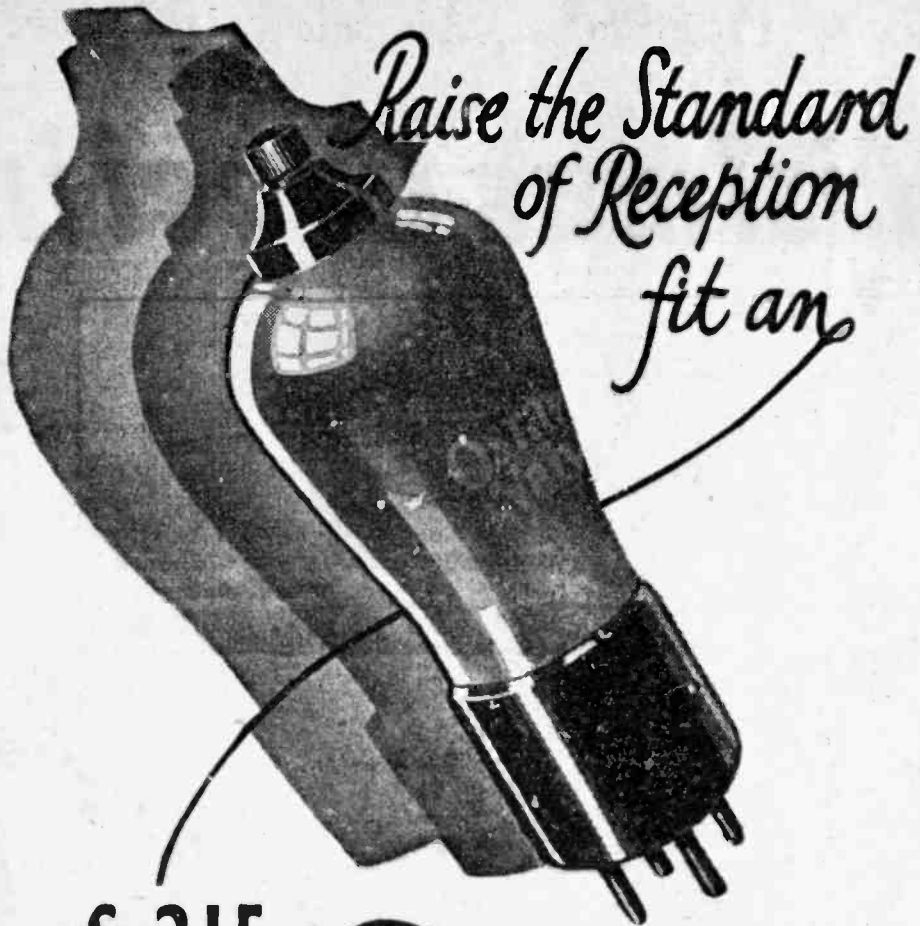
GOOD QUALITY—CHEAP.

A.B.C. Power Transformers for Eliminators, 22/6 each.
 Choke Coils, 70 m/a., 30 Henries, 5/- each.

"Don" Battery Chargers, 6-12-24 Battery size. Send for leaflet.

O'DONNELL, GRIFFIN CO., LTD.

51-53 Druitt Street, Sydney
 M2991.



S. 215 **Osram Valve**

**A Screen Grid Valve
for Long Life and Economy**

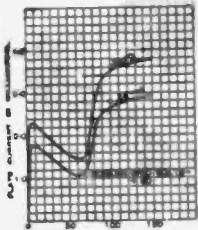


PLATE VOLTS

Filament Volts . . . 2.0 MAX.
Current 0.15 amp.

Plate Volts 100-150 MAX.

Screen Grid Volts 60-90 MAX.

Amplification
Factor 170

Impedance 200,000 ohms.

Normal Slope . . . 0.85 ma/volt.

This is a remarkable valve, and is recommended for the R.F. stages of your receiver. It is economical, has a long life, and will give you an amplification of approximately 40 per stage.

With Osram S 215 Screen Grid R.F. Amplifying Valve we recommend Osram D.E.L. 210 for those 2-volt users who require a sensitive general purpose valve for stronger signals without distortion. For the Audio Stages of the set, use either Osram D.E.P. 215 or D.E.P. 240, in cases where a super power valve is required.

Ask for them by number, and say OSRAM

Your "B" Batteries last longer when used with "Osram Valves."

Ask your dealer for the Osram Valve Guide, free on request.

Advertisement of British General Electric Co., Ltd., Magnet House, 104-114 Clarence Street, Sydney. Branches at Melbourne, Adelaide, Perth, Newcastle, and New Zealand cities. Sole Agents at Brisbane and Hobart.

Christmas Greetings



from



EMMCO

Another year added to achievements of

ELECTRICITY METER MFG. Co. Ltd.,

JOYNTON AVENUE, WATERLOO.

Where Emmco Radio and ElectrICE Refrigerators are made.



1929 has seen many changes and considerable improvements. 1930 will see more progress, particularly in EMMCO Radio Products, which are sold by all leading Radio Dealers through out Australia

1929

EMMCO



Sole Factory Representatives:

MANUFACTURERS PRODUCTS PTY. LTD.,

137 Clarence St., Sydney

Sugden Place, Melbourne

Interstate Programmes, Saturday, December 14

3LO

Australian Broadcasting Co. 120A Russell St. Melbourne (Wavelength, 371 Metres).

EARLY MORNING SESSION

7.0 to 8.15: See Friday

MORNING SESSION

10.30 to 12.30: See Friday

MIDDAY SESSION

1.0 to 1.30: See Friday

AFTERNOON SESSION

1.55: Description of Baiyune Trial Hurdle Race, two miles. Moonee Valley races, by Mel. Morris. 2.5: Musical reproduction. 2.15: Description of cricket match. 2.25: Description of Barkoola Handicap, five furlongs. Moonee Valley races, by Mel. Morris. 2.35: Musical reproduction. 2.45: Description of cricket match. 2.55: Description of Koombatia Maiden Plate, one mile. Moonee Valley races, by Mel. Morris. 3.5: Musical reproduction. 3.15: Description of cricket match. 3.25: Description of Luma Handicap, one mile and a quarter. Moonee Valley races, by Mel. Morris. 3.45: Musical reproduction. 3.55: Description of cricket match. 4.0: Melbourne Observatory time signal. 4.1: Sporting results to hand. 4.5: Description of cricket match. 4.15: Description of Klata Handicap, six furlongs. Moonee Valley races, by Mel. Morris. 4.25: Musical reproduction. 4.35: Description of cricket match. 4.45: Description of Argyle Highweight Handicap, seven furlongs. Moonee Valley races, by Mel. Morris. 4.55: Sporting results to hand. 5.0: Close down. During the afternoon results of the Corangamite races will be broadcast as they come to hand.

THE CHILDREN'S CORNER

5.45: "Billy Buntin", Plain Peter and Rollickin Rita. 6.35: Musical interlude.

EVENING SESSION

8.40: Sporting results. Musical interlude. 9.0: Melbourne Observatory time signal. 9.1: Countryman's session. 9.25: Stories of our mining fields—Wallaroo and Moonta. 9.40: News. 9.45: Wanderings around the world—Mexico. Mr. H. J. Edmond. 9.6: Time signal.

NIGHT SESSION

8.0: National Broadcasting Orchestra overture—"Fossumund" (Schubert). "Liebesfreud" (Krieger). 9.10: Victor Baxter, tenor, and Ernest Wilson bass-baritone—duets "Homing" (Delibes) "Come to the Fair" (Maurice Strakosky). 9.17: Mabel Neilson piano—"Butterflies" (Grieg) "Little Birds" (Grieg) "Wedding Day" (Grieg). 9.27: Nora O'Malley—and a piano. 9.35: Description of the night's events at the Matrons. 9.50: National Broadcasting Orchestra—"Deep Blue Suite" (Grieg). 9.0: One-act drama, "Drums of Doom" (Cast: Judge Delaney to lawyers; A. Brandon-Greener, Billy Buchan, Jimmie and his partner, Stanley Walpole; Doris McBride wife of the condemned man; Kathleen Arnold. The time is nearing midnight, and a heavy thunder-storm is threatening. The action of the drama takes place in a luxurious suite of rooms in an hotel in Boston, United States. The greatest judge the world has ever known once said of a sinner: "He has sinned, which many are forgiven for she loved much." Surely this may apply to Jim McBride, whose story is the theme of this short drama. A bad man? Yes, but one who, through his infinite love, faced the demolition of a great career. 9.15: Edouard Lambert violin—"Legende" (Wanlawski). 9.23: Victor Baxter, tenor, and Ernest Wilson, bass-baritone—"Solemn in Questore" (Verdi) "Fairings" (Maurice Strakosky). 9.30: Continuation of grand choral contest, organised by the Australian Choral Association in conjunction with 3LO. 9.40: National Broadcasting Orchestra—selection from the works of Mozskowsky. 10.8: Nora O'Malley—and a piano. 10.16: Further description of the night's events. 10.30: News session. 10.40: Paul Jeacle and his band—dance music. 11.30: God Save the King.

3AR

Australian Broadcasting Co. 120A Russell St. Melbourne (Wavelength, 484 Metres).

MORNING SESSION

8.15 to 11.0: See Friday.

MIDDAY SESSION

12.0 to 3.0: As usual.

THE RADIO MATINEE

3.1: Paul Jeacle and his band—"Clementine" (Graham), "Broady Baby Dolls" (Meyer), 3.9: Harold Webb, baritone—"The Sergeant-Major on Parade," "Dolorosa" (Phillips), 3.13: Horrie Sheehan trumpet—"Castles in the Air" (Smith), 3.17: Billie King, songs at the piano—"In a Kitchenette," selected. 3.24: Paul Jeacle and his band—"I'm More Than Satisfied" (Walters), selected. 3.30: Ida Wright, soprano—"Before You Came" (Lane Wilson), "The Sweetest Song" (William James), 3.37: Guy Staveland, banjo—"To the Front" (Ellis), 3.40: The Matinee Idols—in suitable songs, for Saturday. 4.0: Paul Jeacle and his band—"Pat's Old Hat" (Guy), "Blues My Naughty Sweetie Gives to Me" (Sevanstone), 4.6: Harold Webb, baritone—"O Flower of All the World" (Woodford Plinden), "The Spirit Flower" (Tipton), 4.13: Bob Libbes, trombone—"Evening Star" (Wagner), 4.17: Eroyne Wright, contralto—"A Bird Bird Singing" (Hagan Wood), "Song, My Mother Taught Me" (Dvorak), 4.24: Paul Jeacle and his band—"Outside" (Fynde), "Dawning" (Silver), 4.32: Billie King, songs at the piano—"Painting the Clouds

with Sunshine" (Dubin-Burke), selected. 4.40: Paul Jeacle, saxophone—Six-antics (Paul Jeacle), 4.44: Courtney Ford, comedian, will entertain. 4.50: Paul Jeacle and his band—"Tim-tcha, in-tcha, on, da, da" (Hart), "Telling the World We're in Love" (Weber) "Laughing Marionette" (Collins), 5.0: Chimes. 5.1: Musical reproduction. 5.30: Weather. 5.45: Close down. G.P.O. chimes.

EVENING SESSION

6.15: Dinner music, supplied by the Studio Light Orchestra. 7.30: What's on the air to-night? 7.32: Sporting results. 7.40: Latest musical releases. 8.0: Close down.

NIGHT SESSION

8.0: Prahran City Band—march, "Old Comrades" (Teicke), "Humoresque" (Dvojak), 8.10: Premier Four Male Quartette—Walking with Susie, "I'm Just a Wagtail Lover" 8.17: J. R. Amor, mandolin—"Gavotte," from "Mignon" (Thomas), "Masurka" (Lebas), 8.23: The Two Daleys in stop press topicalities. 8.33: Prahran City Band—selection, "Classics" (Ewing), 8.45: Mary Hotham, mezzo-soprano—"Over the Meadow" (Molly Carew), "An Epitaph" (Besley), 8.52: Prahran City Band—cornet solo, "Where My Caravan Has Retired" (Lohr), 8.57: Moran Hillford, bass—"The Miper" (Sutton) Moran Hillford and Tom Downie, duet, "Watchman, What of the Night?" 9.4: Syncope piano number by an absent artist. 9.10: Premier Four Male Quartette—"A Hundred Fatoms Deep," "Soldiers' Chorus" from Faust" (Gounod), 9.27: Prahran City Band—selections, "The Mikado" (Sullivan), 9.27: The Melbourne Dickens Dramatic Club—"John Browdie's Supper Party at the Baracen's Head Inn Snow Hill, Islington," Characters; John Crowdie (a young Yorkshire farmer), Will Wilshire, Billy (a bride), Violet Montford; Walter Roy, Billy, Nicholas, bridesmaids; Phyllis Thompson, Mr. Suters, Jess Shields; Wackford Soules, Aubrey Martin, 9.47: J. R. Amor, mandolin—"Yesterday" (Harrison and Whitely), "Ride Hawaii" (Schuster and Casari), 9.55: Mary Hotham, mezzo-soprano—"The Second Minute" (Besley), "Full Moon" (May Brahe), 10.2: Prahran City Band—serenade, "La Paloma" (Yradier); march, "The Vedette" (Alford), 10.12: Weather and news. 10.23: Premier Four Male Quartette—"Mosquitoes, Cornfield Melodies," selected. 10.30: A.B.C. String Quartette—"Andante" (Bittersdorf)—arr. Pochon, "Serenade" (Haydn)—arr. Pochon, "Drink to Me Only" (arr. Pochon), 10.40: The Two Daleys in stop press topicalities. 10.50: Prahran City Band—overture, "The Barber of Seville" Rossini; humoresque, "The Merry Men" (Rimmer), 11.0: The Rex Dance Band. 12.0: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 385 Metres).

EARLY MORNING SESSION

7.30 to 8.30, as usual.

MORNING SESSION

11.0: From the Seventh Day Adventist Church morning service. 12.0: Close down.

AFTERNOON SESSION

3.0 to 4.30, as usual.

EARLY EVENING SESSION

6.0 to 7.30, as usual.

NIGHT SESSION

8.0: The Studio Orchestra, Joyce Buckham, soprano—"Madrigal 2" (Chaminade), Helen McGregor Robertson, alto—"Come by Chance" (Patterson), The Aloha Trio—Hawaiian melodies, Phyllis Verner soprano—"Golden Dancing Days" (Cranginsby Clark), The Studio Orchestra—Dance music. Note: At suitable times the last heat and the final of the main trophy race will be described from Davies Park Speedway. 9.0: Weather forecast Helen McGregor Robertson—"Cursory Remarks." The Aloha Trio—more Hawaiian music, Joyce Buckham, soprano—"Daffodils A-blowing" (German), The Studio Dance Orchestra—ten minutes dance music, Phyllis Verner soprano—"Thoughts Have Wings" (Lohman), The Aloha Trio—Hawaiian melodies, The Studio Orchestra—dance music. 10.0: News; weather. Close.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 469 metres).

AFTERNOON SESSION

12.0: Special late selections for Moonee Valley race-to-day. 12.3: Probable starters and selections for to-day's races at Morphettville. 12.15: News, etc. During the afternoon descriptions of the races at Morphettville will be given, interspersed with Moonee Valley race results and musical numbers from the studio. 5.0: Close.

EVENING SESSION

6.0 to 7.0: As usual. 7.10: Rev. G. E. Hale, B.A. 7.55: Captain Donald Maclean. 7.40: Sporting service, including Moonee Valley and Morphettville race results. Yachting, cricket, tennis, athletics, and other sporting results.

NIGHT SESSION

8.0: Announcements. 8.10: S.A. Railways Band, conducted by Mr. J. Ruppel—Overture, "Morning, Noon, and Night" (Suppe). 8.20: Marcelle Berardi, soprano—"The Swing Song" (Lehmann), "Polonaise," from "Mignon" (Thomas), 8.27: "A Night in the Bush," in which Frank Petrin and the Madrigal Singers will take part. 9.2: Capt. Donald Maclean will continue his series of talks, entitled, "Feats of the Mighty." 9.12: Frank McCabe, baritone—"Prologue" from "Fidelio" "The Great Awakening" (Cramer). 9.19: Guido Giacchino, cellist. 9.26: Marcelle Berardi, soprano—"The Laughing Song" (Auber), "Cavatina" (Bizet), 9.33: S.A. Railways Band—Selection, "The Desert Song" (Hume). 9.43: Frank McCabe, baritone—"The Dawning of the Day," "Serenade" (Schubert), 9.50: Mr. A. McEwen, cornetist—"Roses of Picardy" 9.55: Phyllis Everett, contralto. 10.14: S.A. Railways Band—Fox-trot, "The Wedding of the Painted Doll" (Brown); march, "Dundtrob" (Code). 10.20: Sporting service, including Moonee Valley and Morphettville race results, yachting, cricket, tennis, athletics and other sporting results. 10.30: Recordings. 11.0: Close.

6WF

Australian Broadcasting Company Ltd., Wellington Street, Perth (Wavelength, 485 Metres).

Day sessions as usual (see Friday). Race results will be broadcast during the afternoon as received.

EVENING SESSION

7.0: Trotting results broadcast immediately received. 8.0: Chimes. 8.1: Musical reproduction. 8.12: Description of motor-cycle events broadcast on Speedway meeting, Claremont. 8.2: Music. 8.32: Description of motor-cycle events from Speedway meeting, Claremont. 8.42: Musical reproduction. 8.52: Description of motor-cycle events from Speedway. 9.0: Announcements. 9.5: Trotting results. 9.8: Music. 9.15: Description of motor-cycle events from Speedway. 9.25: Music. 9.35: Motor-cycle events from Speedway. 9.45: Music. 9.55: Description of motor-cycle events from Speedway. 10.0: What's on the air to-morrow. 10.5: An hour's entertainment by celebrated artists reproduced. 11.0: Weather report. 11.0: Close.

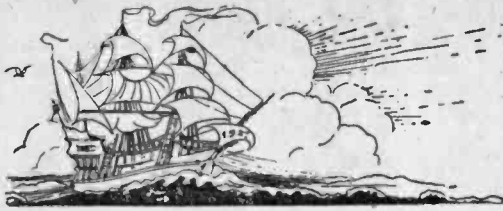
7ZL

Tasmanian Broadcasters Pty., Bursary Bldg., Elizabeth St., Hobart (Wavelength, 516 Metres).

11.30 a.m. Selections. 11.34: Midlands weather forecast. 11.55: Selections. 11.55: Tasmanian stations 9 a.m. weather report. 12.0: Chimes. 12.1: Shipping, mail notices, housewives' guide. 12.8: Selections. 12.30: News service; announcements. 12.40: Selections. 1.5: Railway auction sales. 1.10: Selections. 1.30: Close down. During the afternoon 8.2: Descriptions will be given of the Moonee Valley races held at Moonee Valley racecourse, Moonee Valley, Melbourne. 3.0: Chimes. 3.1: Transmission from the T.C.A. Ground, cricket match, B grade, Sandy Bay v. South, described by Sid Jones. 5.40: All sporting results to hand. 5.5: Close down. 6.10: All sporting results. 6.25: Children's corner, with "Uncle David." 7.10: Recorded music. 7.40: Roy Johnson will speak on "Manual Training." 7.50: James Counsel will speak on "European Affairs." 8.0: Chimes 8.1: Selections. 8.15: A request programme. 10.20: Close down.

FUN will be fast and furious at 3LO on December 18, when the Goanna Gully wedding festivities will be in full swing. All the familiar characters will be there, the ceremony will be performed by the Rev. Hyam Merry, and many friends of the rustic bride and bridegroom will contribute vocal and instrumental items. The production is in the hands of the well-known entertainer, J. Harcourt Bailey, and there will not be a dull moment while this versatile company is before the microphone.

A NEW series of travel talks will be given by Miss Doreen Berry from 3AR, commencing on December 20, when by "A Women's Wanderings through other Countries" listeners will be taken to some of the most interesting places in Europe. Few are able to speak with more authority than Miss Berry, who during the last four years has been twice to Europe, when she visited the leading musical and artistic centres, and spent many hours watching the players at Monte Carlo. A bull fight was included in the trip through Spain, and historical picture galleries and cathedrals claimed attention in Holland and Italy. Miss Berry's description of shopping in Paris and London is most interesting, and her sidelights on "night life" on the Continent are full of surprises.



1929

"Merry Christmas"

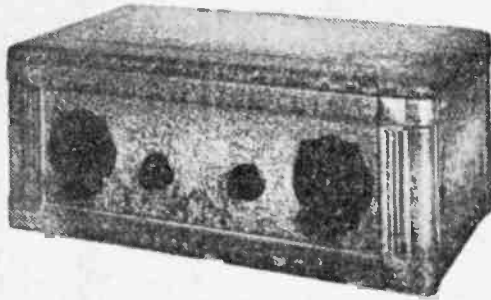
TO ALL RADIOKES USERS

is our wish to those friends who have so generously supported us during the past year. We wish you prosperity, and hope to be of further service to you during the forthcoming year, when we will be offering you further products, which shall uphold the well-known Radiokes standard of excellence.

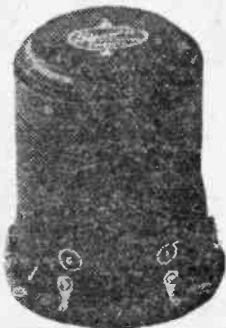
Please take note that the most recent production of W.W. Laboratory, the

PRE-SELECTOR FOUR

uses Radiokes Components.



The Beautiful Radiokes Steel Cabinet is the basis of construction for this excellent receiver. A good set deserves a good housing, and the best cabinet that you can supply is a RADIOKES. Price, with steel chassis, £2/7/6 complete.



Radiokes Shielded Coils have been chosen for use in the Pre-Selector Four. This for obvious reasons.

RADIOKES

THE WORLD'S BEST MIDGET CONDENSERS

are also specified. These are acknowledged as the finest midgets procurable, and are reasonably priced, made in five useful sizes, from 4/3 to 8/6 each.

RADIOKES VITREOUS RESISTORS

are made in light, medium and heavy duty models from 10 to 10,000 ohms. Priced from 2/6 to 8/8 each; and also as 12,500 ohms Voltage divider at 8/6 each.



Radiokes Radio Frequency Chokes are always chosen where the maximum of efficiency is required, and this receiver is no exception to the rule. Price, 8/6 each.

From your Dealer's or direct from

THE METROPOLITAN ELECTRIC CO., LTD.

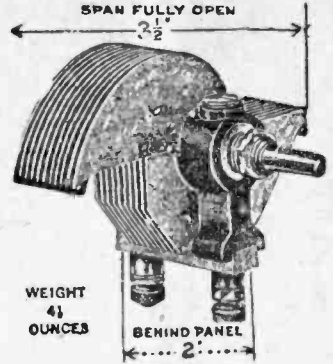
Radiokes House, 126-130 Sussex Street, Sydney

and at MELBOURNE



BRITISH MADE VARIABLE CONDENSER

is the SMALLEST, LIGHTEST, MOST EFFICIENT Obtainable SPAN FULLY OPEN



Construction and Performance SECOND TO NONE.

THE PRICE IS RIGHT.

.0005—9/6; .00035—8/6; .00025—8/-



COMBINATION L.F. UNITS

- "TRUE SCALE" 45/- (Dual Impedance).
- "TWO STAGE" 52/6 (Resistance-Transformer).
- "TRANSFORMER Output Filter CHOKE" .. 45/-

ASK YOUR DEALER FOR CATALOGUE.

DISTRIBUTORS for New South Wales,

O. H. O'BRIEN, 37-39 Pitt Street;

MURDOCH'S, LTD., Park Street;

ELECTRIC UTILITY SUPPLY CO., 617 George Street

Factory Representative
WHITELAW AND WOOD PTY., LTD.,
 CATHCART HOUSE,
 11c Castlereagh St., Sydney
 312 Flinders St., MELBOURNE.

Local Programmes, Sunday, December 15

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 461 Metres).
THE CHURCH HOUR—10.0 a.m. to 12.30.
 10.0: Announcements.
 10.5: Studio music.
 10.30: This morning's news from the "Sunday News," "Sunday Times," and "Truth," British Official Wireless Press.
 11.45: Musical items.
 11.0: FROM THE NEWCASTLE CATHEDRAL: The morning service.
 12.15: FROM THE STUDIO: Studio music.
AFTERNOON CONCERT—3 p.m. to 4.30 p.m.
 3.0: FROM KING EDWARD PARK, NEWCASTLE: A Combined Church Service and Mass Band programme.
 4.30: Close.
EVENING PROGRAMME—6 to 10.30 p.m.
 6.0: FROM THE NEWCASTLE BAPTIST TABERNACLE: The Tabernacle Choir, assisted by leading vocalists, will render

excerpts from Handel's Oratorio, "The Messiah."
 6.40: FROM THE NEWCASTLE CATHEDRAL: Address by the Right Rev. D. Long—Bishop of Newcastle. "Australian Citizenship."
 7.0: FROM THE STUDIO: A celebrity recital, arranged by Madame Evelyn Grieg—Cesar Franck's "QUARTET in D MINOR," played by the London String Quartet.
 7.40: THE STORYTELLER tells a tale.
 8.0: HORACE SHELDON'S CAPITOLIANS, with KNIGHT BARNETT AT THE WURLITZER.
 10.0: MEDITATION MUSIC.
 10.30: CLOSE. NATIONAL ANTHEM.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 353 Metres).
MIDDAY SESSION—10.55 to 3 p.m.
 10.55: Announcements.
 11.0: From Randwick Presbyterian Church—Morning service, conducted by Rev. W. J. Grant.
 12.15: From the studio—musical items.
 12.30: News from the "Sunday News," "Sunday Times," and "Truth."
 12.38: A specially-arranged programme of instrumental music.
 2.15: "Cheer-up" session, conducted by Uncle Frank.
 2.45: Austradio musical reproduction.
 3.0: Close down

LATE AFTERNOON—4.30 to 6 p.m.

4.30: From the State Theatre—Horace Weber at the Grand Organ:
 (a) "Toccata and Fugue in D Minor" (Bach).
 (b) "Fountain Reverie" (Fletcher).
 4.45: From the studio—gems from grand opera.
 4.50: From the State Theatre—Horace Weber at the Grand Organ:
 (a) Overture, "Alla Marcia" (Lee).
 (b) Solveg song, "Peer Gynt Suite" (Grieg).
 (c) "Chanson d'Ete" (Lemare).
 5.10: From the studio—C. N. Baeyerz will continue his series, "From Bacon to Bergson."
 5.30: From the State Theatre—Horace Weber at the Grand Organ:
 (a) Overture, "Euryanthe" (Weber).
 (b) "Orient Prelude" (Sheppard).
 5.42: From the studio—a new song.
 5.47: From the State Theatre—Horace Weber at the Grand Organ:
 (a) "Fifth Organ Symphony" (Widor).
 (b) "Little White Rose" (Cadman).
 (c) "Festal March" (Elvey).

EVENING SESSION—6 to 10 p.m.

6.0: For children in hospital—session conducted by Uncle Steve, assisted by Aunt Goodie and Cousin Marjorie.
 6.50: Newtown Congregational Church—organ recital.
 7.0: Evening service, conducted by Rev. Mearns Massey.
 8.30: Frank Hutchens, pianist—
 (a) "Intermezzo C Major" (Brahms).
 (b) "Finale Waldstein Sonata" (Beethoven).
 8.42: Weather information for the man on the land.
 8.44: Song cycle for four solo voices—"In a Persian Garden." Directed by G. Vern Barnett.
 Artists:
 Gladys Carlisle, soprano
 Amy Ostinga, contralto.
 Peter Sutherland, basso.
 Lance Jeffree, tenor.
 The words selected from the Rublayat of Omar Khayyam (Fitzgerald's translation). The music composed by Liza Lehmann.
 (a) Quartette, "Wake! For the Sun Who Scatter'd into Flight."
 (b) Solo tenor, "Before the Phantom of False Morning Died."
 (c) Recitative (bass), "How the New Year Reviving Old Desires."
 (d) Solo tenor, "Iram Indeed Is Gone with All His Rose."
 (e) Quartette, "Come, Fill the Cup, and in the Fire of Spring."

(f) Solo bass, "Whether at Naishapur or Babylon."
 (g) Contralto (recitative), "Ah, Not a Drop That From Our Cups We Throw."
 (h) Duet (soprano and tenor), "A Book of Verses Underneath the Bough."
 (i) Bass solo, "Myself When Young Did Eagerly Frequent."
 (j) Bass (recitative), "Ah, Make the Most of What We Yet May Spend."
 (k) Contralto solo, "When You and I Behind the Vell Are Past."
 (l) Soprano (recitative), "But If the Soul Can Fling the Dust Aside."
 (m) Soprano solo, "I Sent My Soul Through the Invisible."
 (n) Tenor solo, "Alas! That Spring Should Vanish with the Rose!"
 (o) Contralto solo, "The Worldly Hope Men Set Their Hearts Upon."
 (p) Soprano solo, "Each Morn a Thousand Roses Brings, You Say."
 (q) Quartette, "They Say the Lion and the Lizard Keep."
 (r) Tenor (recitative), "Ah, Fill the Cup! What Boots It to Repeat."
 (s) Tenor solo, "Ah, Moon of My Delight, That Knows No Wane."
 (t) Bass solo, "As Then the Tulip for Her Morning Sup."
 (u) Quartette, "Alas! That Spring Should Vanish With the Rose."
 9.24: Athos Martelli, 'cellist—
 (a) "Sonata" (Veracini).
 (b) "Tempo Aggiustato"
 (c) "Allimana."
 9.31: Peter Sutherland and Amy Ostinga, vocal duets—
 "The Day is Done" (Lohr).
 9.38: Frank Hutchens, pianist—
 (a) "Autumn" (Moszkowski).
 (b) "Nocturne for the Left Hand" (Scriabine).
 (c) "Etude" (Chopin).
 (d) "Ballad in A Flat" (Chopin).
 9.50: Athos Martelli, 'cellist—
 (a) "Largo."
 (b) "Giga."
 10.0: National Anthem. Close.

2GB

Theosophical Broadcasting Station, 29 Bligh St., Sydney (Wavelength, 316 Metres).
 9.0: Address by Miss Mary Rivett. 9.30: Address by Mr. Victor E. Cromer. 10.0: Music from Studio. 10.15: Organ music from St. Alban's Church, Regent Street, Sydney. 10.30: Morning service from St. Alban's Church, Regent Street, Sydney. 12 (noon): Music from Studio. 12.30: Close down. 3.0: Musical session. 5.30: Children's session by Uncle George. 7.0: Lecture from St. Alban's Church. 7.35: Lecture from Adyar House. 8.15: Sacred concert; Mr. Gregory Valentine, violinist. 8.28: Miss Florence Gordon, contralto. 8.35: Mr. Cecil Houghton, tenor. 8.42: Miss Ada Brook, pianiste. 8.50: Miss Elsie Brown, soprano. 8.57: Mr. Gregory Valentine, violinist. 9.5: Miss Florence Gordon, contralto. 9.13: Mr. Cecil Houghton, tenor. 9.20: Miss Ada Brook, pianiste. 9.23: Miss Elsie Brown, soprano. 9.30: Address by Mr. Victor E. Cromer. 9.45: Close down.

2UW

Radio Broadcasting, Ltd., Faling's Building, Ash St., Sydney (Wavelength, 267 Metres).
 10.30 a.m.: Music and request numbers. 1 p.m.: Close. 5.30: Children's Hour, conducted by Uncle Jack. 6.30: Close. 7.0: Musical programme. 10.30: Close.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney (Wavelength, 293 Metres).
MIDDAY SESSION—11.0: Mass from St. Mary's Cathedral. 12.25: Orchestral and vocal music. 1.0: Close down.
EVENING SESSION—5.45: Music from Radio House. 5.50: Instruction by Rev. Father T. Walsh, S.J. 6.10: Music. 6.14: Conclusion of "Question Box" talks by Dr. L. Rumble. 7.0: Evening devotions from St. Mary's Cathedral. 8.10: Musical item. 8.20: Overture, "Barber of Seville." 8.30: Orchestral and vocal selections. 10.15: National Anthem; close down.

METAL CABINETS
 Finished in Attractive Designs.
 Made by
HARRY CRABB, LTD.,
 261 Riley Street, City.
 'Phone FL1887.

"EXCELTRON"

B ELIMINATORS £3 15 0
 A CHARGERS £3 0 0
 A.B.C. POWER PACKS £5 10 0
 Usually sold £6 to £12—sold direct from factory to you, hence these low prices. Fully guaranteed, 12 months. Installed FREE. Easy Terms. Mail Order, add carriage EXCELTRON ELECTRICS, 34 Oxford Street, Sydney.



High Voltage CONDENSERS

are specified in nearly all the Talkies equipment throughout Australia and in England, and used by leading Amateurs and many "A" and "B" Class Broadcasting Stations.

2 mfd.	85/-
5000 V.D.C. Test Working Voltage, 2500.	
2500 V.D.C. Test Working Voltage, 1500.	22/6
1500 V.D.C. Test Working Voltage, 800.	14/6
1 mfd.	47/6
5000 V.D.C. Test Working Voltage, 2500.	
2500 V.D.C. Test Working Voltage, 1500.	17/3
1500 V.D.C. Test Working Voltage, 800.	11/3

ALL RADIO DEALERS

Interstate Programmes, Sun., Dec 15

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 371 Metres).

MORNING SESSION.

10.0: Time signal. 10.1: Musical reproduction. 10.20: Express train information. British official wireless news. Items of interest. 10.30: Bells of St. Paul's Cathedral. 10.45: Musical reproduction. 11.0: Service from the Unitarian Christian Church, Eastern Hill, Melbourne. Preacher: Rev. William Bottemley. Sermon, "The Lottery of Life." Organist, Mr. E. T. Prentice. Soloist, Madame Starr. 12.30: Close down.

AFTERNOON SESSION.

3.0: Pleasant Sunday Afternoon service, from Wesley Church Central Mission. Conducted by Rev. J. H. Cain. Speaker, Mr. Frank Russell. Subject, "Europe Starts Afresh." Soloist, "Miss May Alberta." 4.30: Close down.

THE CHILDREN'S CORNER.

6.0: "Brother Bill" and "Bobby Bluegum."

EVENING SESSION.

7.0: "The Angelus Players (under the direction of Mme. Gregor Bollard)." "Neapolitan Nights." 7.10: "The Beauty Spots of Australasia, the Gordon River—Mr. L. S. Bruce. 7.25: "The Angelus Players"—"Old Folks Medley," "Just Because the Violets," "Mighty Lak a Rose." 7.35: Universal Safety—"The Motor and Safety." Mr. A. G. Harston, president of the Royal Automobile Club of Victoria. 7.50: "The Angelus Players"—"Indian Love Song," "Serenade." "Gipsy Love Song."

NIGHT SESSION.

8.0: Musical Ensemble, presented by Hamilton Webber. Mus.Bac. and his All Australian Orchestra.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 484 Metres).

MORNING SESSION

11.0: Service from Australian Church, Russell Street, Melbourne; sermon by Rev. Selwyn Evans; service conducted by Dr. Strong; anthem, "Be Glad, Oh Ye Righteous"; subject of sermon, "Are We Christians To-day?"

MIDDAY SESSION

12.30: A studio programme. 2.0: Frank Canterman and the Wurlitzer, with assisting artists. 3.0: Close down.

AFTERNOON SESSION

Recordings. 4.30: "Prelude C Sharp Minor" (Rachmaninoff), Cleveland Orchestra. 4.34: "Calm as the Night," Mario Chamlee, tenor. 4.37: "Guitarre" (Moszkowski), Albert Spalding, violin. 4.40: "Nichavo" (Jerome-Zucca), John Charles Thomas. 4.43: "Sonata A Flat Major," Op. 110 (Beethoven), Edward Goll, piano. 5.0: "By the Waters of Minnetonka," Florence Easton, piano. 5.3: "Devil's Trill Sonata" (Tartini), Alexander Sebald, violin. 5.9: "The Rosary" (Neytin), Mario Chamlee, tenor. 5.12: "Traumerel" (Schumann) "Slavonic Dance No. 3" (Dvorak), Cleveland Orchestra. 5.19: "Walkers' Prize Song" from the "Meistersingers" (Wagner), Lauritz Melchior, tenor. 5.23: The week's good news. "Life Saving." Mr. A. P. Newey, secretary of the Life Saving Society. 5.36: "Zigeunerweisen" (Sarasate), Misha Piatro, violin. 5.46: Vocal gems from the "Bohemian Girl" (Balfe), Brunswick Light Opera Company. 5.50: "Flower Song" (Lange), William Wilke, cello. 5.54: "Listen to the Mocking Bird," Marie Tiffany, soprano. 5.58: "Hungarian Rhapsody" (Liszt), Vesella's Italian Band. 6.4: Special request numbers. 6.45: What's on the air to-night? 6.47: St. Paul's Cathedral bells

EVENING SESSION

7.0: Service from St. Paul's Cathedral. Sermon. R. H. B. Williams. "Three Songs of Farewell" (Hubert Parry) will be sung at the close of the service.

NIGHT SESSION

8.30: Transmission from ZBL. The programme will include "In a Persian Garden," with full programme of Persian music and story. 9.58: Weather. 10.0: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 385 Metres).

MORNING SESSION

11.0: From St. John's Cathedral, communion service, Stainer in A and D. 12.15: Close.

AFTERNOON SESSION

3.15: Band concert. 4.30: Close.

EARLY EVENING SESSION

6.0: A session for little listeners.

NIGHT SESSION

7.30: From St. John's Cathedral, complete evening service. Magnificat and Nunc Dimittis (Stanford in G); anthem, "As Pants the Hart" (Spohr) Concert by Brisbane Municipal Concert Band. 9.30: Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square Adelaide (Wavelength, 409 Metres)

MORNING SESSION.

10.45: Carillon of bells from the Adelaide Town Hall. 11.0: Chimes. 11.1: Service from Parkside Baptist Church, Minister, Rev. B. E. O. Tuck; or-

ganist, Gertrude Coudrey. 12.10: From the studio—British official wireless news. 12.15: Close down.

AFTERNOON SESSION.

3.0: A pleasant Sunday afternoon service from Maughan Methodist Church. 4.0: Close down.

EVENING SESSION.

6.0: Children's happy moments. 6.45: Church choir numbers. 7.1: Senior Birthday League greetings. 7.2: Service from Pirie Street Methodist Church, Minister, Rev. J. G. Jenkins; organist, Mr. Harold Parsons.

NIGHT SESSION.

8.20: Announcements. 8.30: From the Regent Theatre—Malcolm Reid and Co.'s special concert. Frank Roberts, Wurlitzer organist—"Serenata" (Toselli). "Somewhere a Voice is Calling."

8.33: The Madrigal Singers. 8.46: Violin solo—"Praeludium," "Allegro" (Kreisler).

8.54: Gordon Hele, baritone—"Roses for the King" (Harry), "Uncle Rom" (Homer).

9.2: W. May, cornetist. 9.10: The Madrigal Singers. 9.17: Frank Roberts, Wurlitzer organist—"Serenade" (Schubert), "Rhapsodie Mignonne" (Koelling).

9.25: Linda Wald, soprano. 9.33: Violin solo—"Valse la pluseque lente" (Debussy).

9.41: The Madrigal Singers. 9.48: W. May, cornetist. 9.55: News. 10.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth (Wavelength, 435 Metres).

MORNING SESSION.—10.40: Sporting resume 10.50: "Sunday News" service. 11.0: Church service. Church of Christ. 12.30: Austradio musical reproduction. 1.0: Close down.

AFTERNOON SESSION.—3.0: Chimes 3.1: Musica reproduction. 4.55: Features of to-night's programme 5.0: Close down.

EVENING SESSION.—6.30: Children's session conducted by Robert Edmondson, assisted by St. George's Cathedral Choir. 7.30: Church service. Salvation Army. 8.45: Special musicale arranged by Bert Howell, broadcast from Ambassador's Theatre, including assisting artists—Ambassadorian Orchestra, Les Waldron at the console of the grand organ. Irene Stancliffe (soprano) Charles Stephen (tenor). 10.30: Close down. God Save the King.

Monday, December 16

2UW

Radio Broadcasting, Ltd., Palling's Building, Ash St. Sydney (Wavelength, 267 Metres).

MIDDAY SESSION.—As usual. EVENING SESSION.—5.30: Children's Hour. 6.30: Close. 7.0: Request numbers. 7.45: Radio talk by Mr. E. Homfray. 8.0: Recital of negro spirituals. 9.0: Request items. 10.30: Close.

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 280 Metres).

MORNING SESSION.—10 to noon. CHILDREN'S SESSION.—6.0.

EVENING SESSION.—7.0: Musical interlude. 7.15: Dance music. 7.30: A talk on dancing, Mr. G. L. Gellatly. 7.45: Militant Women's Group. 8.0: Overture. 8.8: Tenor solos. 8.15: Dance music. 8.30: Request numbers. 8.45: Soprano solos, Miss Wright. 9.0: Novelty interludes. 9.10: Selections of latest Parlophone, Columbia, Regal, Brunswick records. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra Sydney (Wavelength, 293 Metres).

EARLY MORNING SESSION.—As usual

CONTINUING her talk on Famous Women. Miss Agnes St. Clair will give a sketch of the life of the famous operatic star, Jenny Lind, popularly known as "The Swedish Nightingale," who made such a great sensation with her voice both in London and America. She was a native of Stockholm, and as a girl sang in the streets to get enough money to complete her musical education. The story of her subsequent rise to fame will be told by Miss St. Clair from 3AR on December 16.

The ideal

XMAS GIFT

for the

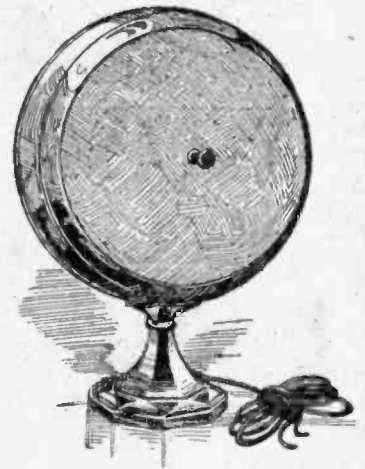
FAMILY

would be

the

"Tefag"

Electro Magnetic Super
Cone Speaker



With a "TEFAG" Electro Magnetic Super Cone Speaker you will enjoy real broadcasting, bringing the artist right into your home, reproducing that rich, mellow tone that everyone will enjoy. Gives perfect reproduction on either All Electric or Battery-operated Sets.

Model A £5/-/-

Model B £5/5/-

Cash or Easy Terms

W. Harry Wiles

ELECTRICAL, RADIO, AND
GRAMOPHONE SUPPLIER.

Pitt and Goulburn Sts, Sydney

Meccano for your boy. Send for the
New 1929-1930 Meccano Catalogue
FREE.

Local Programmes, Monday, December 16

2FC

Australian Broadcasting Company Ltd., Market St., Sydney (Wavelength, 351 Metres).

EARLY SESSION—7.0 to 8.15 a.m.

- 7.0: "Big Ben" and Meteorological Information for the man on the land.
 7.3: This morning's news from the "Daily Guardian."
 7.8: Austradio Musical Reproduction.
 7.45: Mails and shipping.
 7.48: What's on to-day?
 7.50: Children's birthday calls.
 8.0: Music from the Studio.
 8.15: CLOSE.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
 10.32: A.B.C. Racing Observer.
 10.45: HORACE WEBER at the GRAND ORGAN.
 11.0: HOUSEHOLD HELPS: Cooking, by Miss Ruth Furst.
 11.10: CABLES—(Copyright). "Sun"—"Herald" and A.P.A. News Service.
 11.15: MORNING DEVOTION.
 11.30: Austradio Musical Reproduction.
 11.53: British Official Wireless Press.
 12.0: "Big Ben," Stock Exchange and Metal Quotations.
 12.5: V. C. FELL will speak from "The Public Forum."
 12.20: Mid-day weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
 12.30: CLOSE.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch-hour music.
 2.0: Stock Exchange, second call.
 2.2: A glance at the afternoon "News."
 2.7: POPULAR SONGS and DANCE MUSIC.
 2.27: Announcements.
THE RADIO MATINEE—2.30 to 4.30 p.m.
 2.30: A CELEBRITY RECITAL.
 3.0: NATURE'S WONDERS—F. A. McNEIL will speak on "Armed Warriors of the Sea."
 3.15: BERENICE ARTHUR. Pianoforte Solo (a) Rondo "Carriccolo" (Mendelssohn). (b) "Valse" (Carreno).
 3.25: MUSIC GRAVE and GAY.
 3.50: BERENICE ARTHUR. Pianoforte Solos. (a) "Rondo Brilliant" (Weber). (b) "Watteau Pays" (Godowsky).
 4.0: NORA ATYANT will speak on "The Technique of Poetry—the Sonnet."
 4.15: MELODY MEMORIES.
 4.28: Stock Exchange, third call.
 4.30: CLOSE.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Children's session—A Christmas Pastime by Dan Thomas and Mav Crean—"DICK WHITTINGTON."
 6.45: Dinner Hour Music.
 7.20: A.B.C. Sporting Service.
 7.25: Special Country Session. Stock Exchange Resume. Markets. Weather Forecast. Late news from the "News." Truck Bookings.
 7.58: To-night's Programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

- In response to many requests Laurence Godfrey Smith is repeating the Mozart Concerto with the National Broadcasting Orchestra, conducted by Horace Keats. Wilfred Blacket will tell of "Old Time Journals and Journalists," and Goodie Reeve has "Something Different" to offer to Listeners, there are Song Groups, Comedy Numbers. Organ Music, and later Dance Music from the Oriental. Through 2FL the transmission is from the Newcastle Town Hall in connection with Newcastle Civic Week Functions. To-night's Programme is contributed by the Newcastle Steel Works Band and Choral Society.
 8.0: CONSTANCE BURT, Soprano—(a) "Have You Seen But a White Lily Grow" (James). (b) "Faint and Fainter is My Slumber" (Brahms).
 8.7: LAURENCE GODFREY SMITH, with the NATIONAL BROADCASTING ORCHESTRA, conducted by Horace Keats—The Mozart Concerto.
 8.32: GOODIE REEVE in "SOMETHING DIFFERENT."

8.50: CHRISTIAN HELLEMAN at the ORGAN.

9.5: THE COUNTRY MAN'S WEATHER SESSION—

- (a) "New South Wales Forecasts."
 (b) "Inter-State Weather Synopsis."
 9.7: THE NATIONAL BROADCASTING ORCHESTRA—
 "Madame Pompadour" (Fall).
 9.19: WILFRED BLACKET, K.C., will tell of "Old Time Journals and Journalists."
 9.34: CONSTANCE BURT, Soprano—(a) "Christ Went up into the Hills Alone" (Hageman). (b) "Dance to Your Daddy" (Arr. Sharpe), Berkshire Folk Song.
 9.41: THE NATIONAL BROADCASTING ORCHESTRA—
 "The Girl Friend" (Rodgers).
 9.51: MAE GREEN, Popular Entertainer—(a) "You've No Idea" (Dougherty). (b) "Outside."
 10.0: THE NATIONAL BROADCASTING ORCHESTRA—
 "Three Bavarian Dances" (Elgar).
 10.15: Announcements. Late Official Weather Forecast.
 10.20: FROM THE BALLROOM OF THE ORIENTAL: Sydney Simpson's Syncopaters in Dance Music.
 11.30: CLOSE NATIONAL ANTHEM.

2BL

Australian Broadcasting Company Ltd., Market St., Sydney (Wavelength, 353 Metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G. P. O. chimes and announcements.
 8.18: Music for every mood.
 8.40: Meteorological data for the country.
 8.45: Mails and shipping information.
 8.50: Memory melodies.
 9.0: This morning's story.
 9.30: A musical interlude.
 9.40: British official wireless press.
 9.45: New music.
 10.5: News from the "Daily Guardian."
 10.10: Austradio musical reproduction.
 10.40: The Australian Broadcasting Company's Women's Association, conducted by Miss Gwen Varley.
 11.0: G. P. O. chimes Close down.

MIDDAY SESSION—12 noon to 2.30 p.m.

- 12.0: G. P. O. chimes and announcements. Austradio musical reproduction.
 12.30: Lunch music.
 1.0: Afternoon news from the "News"
 1.5: Radio rhythm.
 1.20: Modern music.
 1.25: A pianoforte recital.
 2.5: Austradio musical reproduction.

AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.

- 2.30: Business efficiency talk.
 2.45: New songs.
 3.0: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
 3.12: From the Studio—Dorothy Spark, pianist: (a) "Study Opus 10, No. 3, E. Major" (Chopin). (b) "Impromptu Op. 36, F Sharp Major" (Chopin).
 3.19: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
 3.30: From the studio—Christian Helleman at the organ.
 3.45: Brunton Gibb will give a talk.
 4.0: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
 4.12: From the studio—Dorothy Spark, pianist: (a) "Rhapsody G Minor, Op. 79, No. 2" (Brahms). (b) "Humoresque" (Rachmaninoff).
 4.19: A new song.
 4.22: From the ballroom of the Oriental—Sydney Simpson's Syncopaters in dance music.
 4.32: From the studio—music, grave and gay.
 4.45: The Trade Hour—demonstration music.
 5.45: Weather information. Close down.
THE DINNER HOUR—6.15 to 7.55 p.m.
 6.15: Dinner Quartet.
 6.45: The Boys' Aero Club, conducted by Mr. Norman Lyons.

7.5: The countrymen's market session—wheat, stock, farm produce, fruit and vegetable markets.

7.20: Dinner music.

7.45: Austradio musical reproduction.

7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION—8 to 10.30 p.m.

- To-night is 2BL's turn to broadcast direct from Newcastle Civic Week ceremonies, and our listeners will have an opportunity of hearing a very fine programme from the Newcastle Town Hall, contributed by the Steel Works Band and the Choral Society.
 8.0: FROM THE TOWN HALL, NEWCASTLE—CONCERT BY THE NEWCASTLE CHORAL SOCIETY, ASSISTED BY STEEL WORKS BAND. OPENING CHORUS: NEWCASTLE CHORAL SOCIETY (conductor, Mrs. J. A. Hannell, L.A.B., pianiste, Mrs. F. Westbrook, L.A.B.), "Advance, Australia, Fair." OVERTURE: NEWCASTLE STEEL WORKS BAND (conducted by H. E. Kerry), "Egmont" (Rimmer). CHORUS: NEWCASTLE CHORAL SOCIETY, "Song of the Vikings" (Fanning). SOLO: MRS. A. R. BAGNALL, "Ye Powers That Dwell Below." CONCERTS for 2 Violins, 1st and 2nd Movements—Mrs. Penfold, L.Mus.A. Mr. J. S. Hurn, L.A.B. SOLO: MR. W. SMITH, "She Alone" (Gunst). LADIES' CHORUS: NEWCASTLE CHORAL SOCIETY. (a) "Waltz Song" (Faust). (b) "The Rosary" (Niven). DESCRIPTIVE: NEWCASTLE STEEL WORKS BAND, "In a Persian Market" (Ketyby). SOLO: MRS. A. R. BAGNETT, "The Glory of the Sea" (Sanderson). CHORUS: NEWCASTLE CHORAL SOCIETY, "Weary Wind of the West" (Elgar). CONCERTS for Two Violins (3rd Movement), Mrs. Penfold, L.Mus.A. Mr. J. S. Hurn, L.A.B. SOLO: MR. W. SMITH, "The Windmill" (Nelson). "Selection from 'Faust'" (Gounod). NEWCASTLE STEEL WORKS BAND. CHORUS: NEWCASTLE CHORAL SOCIETY, "The Challenge of Thor." 10.10: FROM THE STUDIO—Austradio Musical Reproduction.
 10.25: Late News from the "Evening News." Late Weather Forecast.
 10.30: "NATIONAL ANTHEM." CLOSE.

2GB

Theosophical Broadcasting Station, 29 Bitch St., Sydney (Wavelength, 318 Metres).

- 10.0: Music. 10.10: Happiness talk by A. E. Bennett. 10.20: Music. 10.30: Women's session by Mrs. W. J. Stelzer. 11.30: Address by Mrs. Jordan. 11.45: Address by Miss Mary Rivett. 12 (noon): Close down. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.15: Close down. 5.15: Children's session by Uncle George. 6.50: M.G.M. Radio Movie Club session. 7.0: Music. 7.30: Service talk by Sutton's Radio Doctor. 7.45: Feature story 8.0: Popular programme: Miss Elsie Condon, contralto. 8.7: Band selections. 8.15: Mr. Cecil Chaseling, baritone. 8.22: Violin solos. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Miss Majorie Cole, soprano. 8.45: Address. 9.0: Weather report. 9.3: Symphony Orchestra. 9.10: Miss Elsie Condon, contralto. 9.20: Band selections. 9.25: Mr. Jack Win and Mr. Heath Burdock, humor. 9.30: Mr. Cecil Chaseling, baritone. 9.40: Symphony Orchestra. 9.50: Miss Marjorie Cole, soprano. 10.0: Instrumental music. 10.30: Close down.

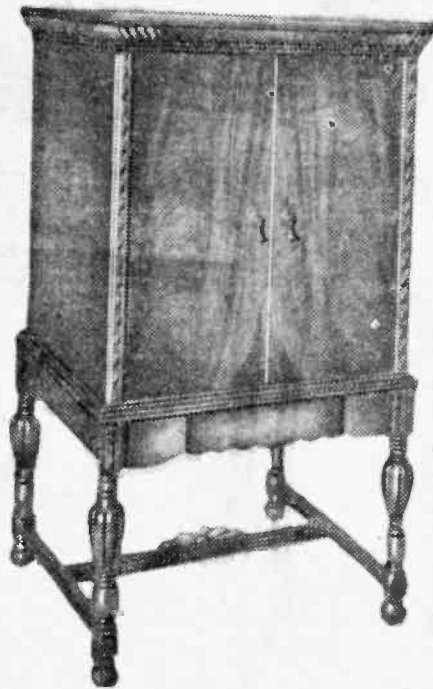
(2UW, 2KY, and 2UE on page 53.)

The Same Record...

—But hear it on this new instrument



YOU'VE heard radio-phonographs — but have you heard the combination of the R.C.A. 8 valve super-heterodyne Model 60, R.C.A. Dynamic Speaker Model 106 and Electric Phonograph — all in one magnificent cabinet of Queen Anne design. You hear your favorite records literally for the first time when you play them on this new instrument. There's new richness, new delicate shadings of tone . . . whether you turn down the volume to whispering softness or amplify it to torrential volume. Then there's the radio . . . waiting for you to open the doors in front of the cabinet and bring in any station in Australia and New Zealand with knife-edge selectivity. Radio or Records! Simply plug in to a power point and click a switch for either. There are no batteries . . . you have no winding to do. Come and hear for yourself. Only in this new combination instrument can you buy such an assembly of quality components. Price £139. Easy terms.



R.C.A. 60

8 Valve Super-Het., with All-Electric Phonograph

AUSTRALIAN

GENERAL  ELECTRIC
Australian General Electric Company, Ltd.

93-95 CLARENCE STREET,
 SYDNEY.

AND AT NEWCASTLE, CANBERRA, LISMORE, AND ALBURY.

Make it a happy Xmas



1930 SALONOLA

(FULLY SHIELDED)

ALL-ELECTRIC 3 VALVE

JUST PLUG IN.

£3/10/- DEPOSIT

8/1 WEEKLY. CASH PRICE 30 GNS.

- 1. EACH SET is adjusted to suit the prevailing conditions of the locality for which it is required.
- 2. NO SERVICE NECESSARY.
- 3. GUARANTEED TWELVE MONTHS.

- 4. NO EXTRAS TO BUY. Amplion Cone Speaker included. Any other make supplied by arrangement.
- 5. EASY TO INSTALL, OPERATE, and care for. Full Instructions that anyone can easily and efficiently carry out accompany each set.

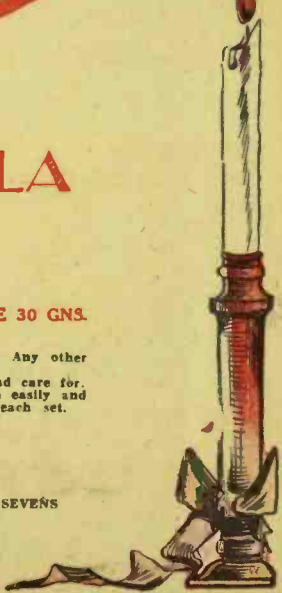
FREE HOME DEMONSTRATION
WITHOUT OBLIGATION.

FREE INSTALLATION WITHIN 20 MILES OF G.P.O., SYDNEY

Write or Call for Prices and Full Particulars of Salonola "1930" THREES, FIVES, and SEVENS

HOME RECREATIONS (Aust.) LTD.

HEAD OFFICE: 388 GEORGE STREET (Opp. Beard Watson's), SYDNEY.
BRISBANE: 297 Queen Street. NEWCASTLE: 88 Hunter St. PARRAMATTA, 232 Church St.



Scientifically Designed, Perfectly Constructed,

Rigorously Tested

"Lewcos"

Radio Products

Strike the true note of quality in Radio reception.



"LEWCOS"
High Frequency Choke

Designed to clear up reception, and to prevent instability of the audio amplifier. There is no howling with the "Lewcos" High Frequency Choke. Particularly recommended for use with screened grid receivers. May be fitted easily to your present broadcast receiver.

Price 12/6



"LEWCOS"
Short Wave Coils

Every detail has been studied to ensure absolute efficiency. To reduce losses to a minimum, the secondary is wound with silk insulated copper strip, giving rigidity and ultra fine tuning. Low loss design is embodied in the ribbed construction of the former. The solid construction of the "Lewcos" Short-Wave Coils makes them essentially robust so that they may be handled without risk of damaging

Price ... 15/- each
Base 3/6 extra

THE "LEWCOS" AUDIO TRANSFORMER



Price
52/6

Size
2 3/4 x 2 3/8 x 3 1/2

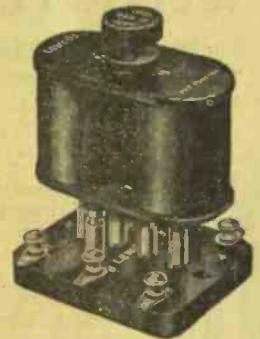
Centre tapped on Secondary to permit of use in Push-Pull Amplifiers.

Designed to operate over the entire range of Audio Frequencies, reproducing, undistorted and flawlessly, the sweetness of treble and the richness of bass—"Lewcos" Audio Transformers approach as closely to perfection as human skill can attain.

Other "Lewcos" Products

- "LEWCOS" Standard Six-pin Coils. Price 17/6, Base 3/6.
- "LEWCOS" Glazite Connecting Wire.
- "LEWCOS" Flexible Glazite Connecting Wire.
- "LEWCOS" Winding Wires, all Standard and B. and S. Gauges.

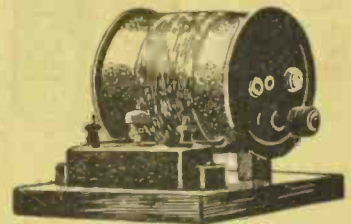
- "LEWCOS" Frame Aerial Wire.
- "LEWCOS" Screened Coil Units. Price, 24 complete.
- "LEWCOS" "STAYPUT" Connecting Wire.
- "LEWCOS" Braided and Rubber Covered Flexibles.



"LEWCOS"
Binocular Coils

Specially designed with fieldless or astatic winding to prevent high-frequency amplification. Constructed for wavelengths from 250 to 500 metres. In two types:—
WT4 250-400
WT5 350-500

Price 17/6 and 25/-



"LEWCOS"
Wave Trap

Cuts out interference in broadcast reception. Easily fitted. Simply placed in circuit between aerial and earth terminals on your receiver.

Price 22/6

THE LIVERPOOL ELECTRIC CABLE CO. LTD.

In conjunction with their associated company

London Electric Wire Co. and Smiths, Ltd.

Lewcos House, 233 Clarence Street, Sydney.

Telephones: M3821, MA1966.

Interstate Programmes, Mon., Dec. 16

XMAS Suggestions

for use in the HOME, CAR, CAMP, GARDEN, etc.

Select a

"BOND"

Electric Torch

Something that will give all the year Service.



BOND Electric Torches are ideal for use in the Home, Motoring, Camping, Night Fishing, Gardening, and dozens of other occasions where a strong emergency light is needed. BOND flashlights have no equal. The spotlight type throw a strong piercing beam of light 300 feet.

Priced from 7/- to 25/-

Recharge your Electric Torch with a BOND Mono Cell.

They have Bond's exclusive Safety Seal features, which protect the power and prevent energy draining and short circuits.



9d Each

BOND B. and O. Batteries cost less per radio hour.

N.S.W. DISTRIBUTORS:

W. Harry Wiles
ELECTRICAL, RADIO, AND MECCANO SUPPLIER,

Pitt and Goulburn Sts.,
Sydney

The Home of Wiles' Wonderful Wireless.

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 371 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: As usual.

MORNING SESSION.

10.30 to 12.30: As usual.

MIDDAY SESSION.

1.0 to 1.30: As usual.
1.30: Transmission from Constitutional Club luncheon.

THE EDUCATIONAL SESSION.

2.0: The Earth We Live On—Mr. W. C. Groves, B.A., Dip.Ed. 2.15: Musical Interlude. 2.20: Science in Everyday Life—Dr. Loftus Hills, D.Sc. 2.35: Musical Interlude. 2.40: Our Australian Writers—Mr. F. Wilmott. 2.55: Musical Interlude. 3.0: Melbourne Observatory time signal.

THE RADIO MATINEE.

3.0: Paul Jeacle and His Band—"I'm Just in the Mood To-night" (Leslie), "The Hollow of a Hill" (Flong). 3.6: Marion Daniels, Soprano—"June Brought the Roses" (Openshaw), "Fairy Light" (Lohr). 3.13: Paul Jeacle—Cecilia solo. 3.17: "The Two Daleys"—"Stop Press Topicalities." 3.27: Paul Jeacle and His Band—"Kalamazoo" (Gumble), "S'posin'" (Dennker). 3.33: Ray Carey, Tenor—"I Kiss Your Little Hand, Madame." 3.40: Guy Stovordale, Banjo—"Louise" "Valse Cladeyes." 3.44: Marlon Daniels, Soprano—"O Heart of Mine" (Galoway), "O Western Wind" (May Brahe). 3.51: Paul Jeacle and His Band—"He Ain't Done Right by Nell" (Mack), "Fashionette" (Glogan). 4.0: "The Two Daleys"—"Until" (Sanderson). 4.14: Ray Carey, Tenor—"When the Night with Stillly Silence" (Robertson), "My Little Banjo" (Dichmont). 4.21: Paul Jeacle and His Band—Popular dance numbers. 4.30: Close down.

THE CHILDREN'S HOUR.

5.45: "Humpty and Dumpty" Birthday greetings by "Billy Bunny." 6.35: Musical interlude.

EVENING SESSION.

6.40: Public School. 6.55: Sport—Mr. E. C. H. Taylor. 7.0: Melbourne Observatory time signal. 7.1: Countryman's session. 7.25: The Latest in Patents—Picture Telegraphy. C. P. Healy. 7.40: News. 7.45: The World's Kaleidoscope—Prof. K. H. Baly, M.A., B.O.L. 8.0: Melbourne Observatory time signal.

NIGHT SESSION.

OLD-TIME DANCE NIGHT.

Dancing from 8 till 11 p.m.

Old-time Musical Items and Choruses.

Mrs. Campbell at the piano.

Master of Ceremonies: Mr. R. H. Spaven.

Bendall and Almont's Orchestra.

- 8.0: 1. Waltz, "The Swallows."
2. Scottische, "Soldiers of the Queen."
3. Quadrilles, "Birthday Party."
4. Barn Dance, "When You and I Were Young, Maggie."
5. Waltz Chain (Jolly Miller), "Popular Tunes."
6. Lancers, "Sunshine Girl."
7. Valetta, "Barcelona Beauties."
8. Polka "B.L.N.G.O."
9. Alberts, "The Chocolate Soldier."
10. Waltz, "The Blue Danube."
11. Varsovianna, "Babes in the Wood."
12. Royal Irish, "Just Irish."

Note: At 10.30: Meteorological information, British official wireless news, and items of interest, will be given.

11.0: Paul Jeacle and His Band—Popular numbers.

11.30: God Save the King.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 484 Metres).

MORNING SESSION.

8.15 to 11.0: As usual.

MIDDAY SESSION.

12.0 to 2.0: As usual.

AFTERNOON SESSION.

Recordings. 2.1: Orchestral: The H. and P. Gypsies Orchestra. 2.3: Contralto: Marie Morrisey. 2.6: Piano. Mischa Levitski. 2.10: Quartette, Fireside Male Quartette. 2.13: Orchestral: The H. and P. Gypsies Orchestra. 2.16: Comedienne, Marlon Harvis. 2.19: Band: Vesella's Italian Band. 2.22: Soubrette, Vaughan de Leath. 2.30: Hawaiian music, Randolph's Royal Hawaiians. 2.38: Quartette, Fireside Male Quartette. 2.31: Piano: Marguerite Volavy. 2.35: Contralto: Marie Morrisey. 2.38: Duo: Frank and James McDruvy. 2.44: Vesella's Italian Band. 2.47: Soubrette, Vaughan de Leath. 2.50: Hawaiian music, Randolph's Royal Hawaiians. 2.53: Bartone, Nick Lucas. 2.56: Orchestral, Minneapolis Symphony Orchestra. 3.0: Beguette numbers. 3.20: Art in Modern Life, Miss Stephanie Taylor. 3.35: Musical Interlude. 4.0: Your garden: Mulching versus watering. Mr. H. Brunn. 3.55: Musical Interlude. 4.0: Wanderings through Southern India, Miss Stella Parker. 4.15: Musical reproduction. 5.1: Musical reproduction. 5.30: Weather. 5.45: Close down.

EVENING SESSION.

6.15 to 8.0: As usual.

NIGHT SESSION.

8.1: A Debate: "Are Modern Household Appliances detrimental to Women's Health?" Mr. Clarence Weber will take the affirmative and Dr. Loftus D.Sc. the negative.

BRASS BAND AND VARIETY.

8.15: Coburg City Band—March, "Busterpe" (Euterpe) (Clark); descriptive, "The Husking Bee." (Eu-

8.25: Lena Worland, contralto—"My Prayer" (Souire), "Vale" (Kennedy Russell).
8.32: Albert Durand, banjo—"Barcarolle," selected.
8.38: The Aristo Quartette—Half an hour of melody.
9.8: Coburg City Band—Waltz, "Waves of the D'nube," "Scenes of Beauty."
9.18: Sketch from Dickens—Scene from "The Old Curiosity Shop." Characters: Little Nell, the Grandfather.
9.28: Coburg City Band—Cornet solo, "The Professional" (Bulch).
9.33: "The Tatlers" present a revue, "Clean Cut Cameos."
9.48: Coburg City Band—"Simple Aveu" (Thome), "Machine Gun Guards."
9.58: Lena Worland, contralto—"My Ain Folk" (Lemon), "Early Morning" (Peel).
10.5: Weather, news.
10.15: Albert Durand, banjo—"Londonderry Air"; humorous song, "Nice Girls."
10.22: Coburg City Band—Overture, "Crown Diamonds" (Auber).
10.30: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 385 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION

STUDIO PROGRAMME.

8.0: The Rhythm Rascals, entertainers.
8.10: The Anglo Male Quartette—Roy, I Wanta Yer Now" (Col), "Shenandoah" (Bartholomew).
8.18: Phyllis Verner, soprano—"The Little Blue Bay" (Del Riego).
8.20: Monument and Harrow, another argument.
8.22: The Rhythm Rascals, more syncopation.
8.38: The Anglo Male Quartette—"Hard Times Come Again No More" (Foster).
8.45: "Tecoma" will deliver the tenth and last talk in connection with 4GG's "Home Garden Scheme"—"Making Cut Flowers Last."
9.0: Metropolitan weather forecast.
9.1: The Rhythm Rascals, entertainers.
9.10: Phyllis Verner, soprano—"Cupid" (Sanderson).
9.14: The Anglo Male Quartette—"Da Coppah Moon" (Shelley), "The City Choir" (Parks).
9.20: A short recital of popular electric records.
9.40: The Rhythm Rascals, dance music.
10.0: News; weather. Close.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 469 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION.

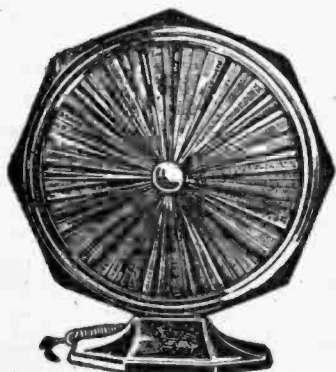
8.0: The most popular roll of the week. Programme review and announcements.
8.10: Walter Barratt and his Malsion Masters of Melody—"Misery Farm" (Wallis), "Honey" (Simon), "Happy Humming Bird" (De Sylva).
8.20: Marcelle Berardi, soprano (winner of popular vote, 5CL Radio Vocal Championship)—"Song of the Shepherd, Lehi," from the opera, "Snow Maiden" (Korsakoff).
8.24: Walter Barratt and his Malsion Masters of Melody—"Slieeny Valley" (Hanley), "Round and Round" (Le Clair), "An Old Italian Love Song."
8.34: Frank McCabe, baritone (winner of popular vote, 5CL Radio Vocal Championship)—"Sylvia" (Speaks).
8.38: Walter Barratt and his Malsion Masters of Melody—"Good Little, Bad Little You," "I'll Always be in Love With You," "A Little Bird Told Me So" (Gilbert).
8.48: Marcelle Berardi, soprano (winner of popular vote, 5CL Radio Vocal Championship)—"The Lass With the Delicate Air."
8.52: Walter Barratt and his Malsion Masters of Melody—"Just a Night for Meditation," "The Break-away" (Conrad).
9.0: G.P.O. chimes.
9.1: Meteorological information, including semaphore tides.
9.2: Overseas grain reports.
9.3: Announcements.
9.5: Captain Donald Maclean will continue his talks entitled "Peats of the Mighty."
9.15: Frank McCabe, baritone (winner of popular vote, 5CY Radio Vocal Championship)—"Song Remembered" (Conrad).
9.19: Walter Barratt and his Malsion Masters of Melody—"Building a Nest for Mary" (Rose), "Dream Train," "Love Sings a Song in My Heart."
9.28: Marcelle Berardi, soprano (winner of popular vote, 5CL Radio Vocal Championship)—"Do Not Go, My Love" (Hageman).
9.33: Walter Barratt and his Malsion Masters of Melody—"Promise Me" (Van Ooth), "Ohilly Pom Pom Pee" (Bryan), "I'm Just a Vagabond Lover."
9.43: Frank McCabe, baritone (winner of popular vote, 5CL Radio Vocal Championship)—"Down Our Way" (Tom King).
9.47: Walter Barratt and his Malsion Masters of Melody—"You're Just a Little Bit of Everything I Love," "The Wedding of the Painted Doll."
9.57: Marcelle Berardi, soprano (winner of popular vote, 5CL Radio Vocal Championship)—"Time, You Old Gypsy Man" (Bess).
10.1: Walter Barratt and his Malsion Masters of Melody—"I Kiss Your Hand, Madam" (Erwin), "Yo te amo" (Whitting), "A Precious Little Thing Called Love."
10.11: Frank McCabe, baritone (winner of popular vote, 5CL Radio Vocal Championship)—"Shipmates o' Mine."
10.15: News.
10.30: Walter Barratt and his Malsion Masters of Melody.
11.0: Close.



Radio's Three Outstanding Values!

“A CHAIN is no stronger than its weakest link.” By the same token, a receiver is no better than its components. Every part of the set must be of the very highest quality to ensure perfect reception. Be sure, then, that you choose the products of reputable manufacturers. T.E.C. Batteries, Sonochorde Cone Speakers, and Belling Lee Terminals each represent in their respective classes the very highest quality product obtainable.

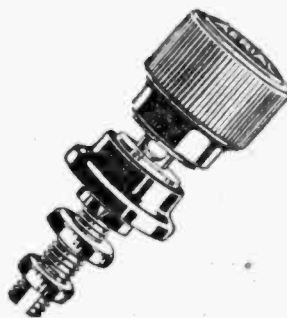
Above is illustrated the T.E.C. Ordinary Capacity Battery, priced at 12/6. It is capable of giving ample power for all ordinary requirements and can be relied on at all times. There is also a No. 1 and No. 3 Heavy Duty T.E.C., selling at 23/6, and a No. 4 Extra Heavy Duty, at 32/6. All offer amazing value!



SONOCHORDE SPEAKERS.

Sonochorde new and improved Cone Speakers are equipped with an adjustable unit incorporating eighteen patented scientific features, recognised as the most highly-developed tone mechanism in radio.

SENIOR MODEL £6
 JUNIOR MODEL £4



BELLING LEE TERMINALS.

Belling Lee Terminals, as well as improving the appearance of any set, permit simplicity, safety, and ease of connection. The names on the top are in neat white permanent lettering, in pleasant contrast to cruder methods of designation. Discriminating buyers always ask for Belling Lee Terminals. "The finest terminal made."

W. G. WATSON & CO. LTD.,

279 CLARENCE STREET SYDNEY.

31 Hunter Street, Newcastle. 200 Queen Street, Melbourne. 74 Pirie Street, Adelaide. 931a Hay Street, Perth.
 73 Murray Street, Hobart. Queensland Representatives: INTERCOLONIAL BORING CO., Ann Street, Brisbane.

Local Programmes, Tuesday, December 17

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and Meteorological Information for the man on the land.
 7.3: This morning's news, from the "Daily Guardian."
 7.8: Austradio Musical Reproduction.
 7.45: Mails and Shipping.
 7.48: What's on To-day?
 7.50: Children's Birthday Calls.
 8.0: Music from the Studio.
 8.15: CLOSE.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
 10.32: A.B.C. Racing Observer.
 10.45: HORACE WEBER at the GRAND ORGAN.
 11.0: HOUSEHOLD HELPS: Hints to Housewives, by Miss Ruth Furst.
 11.10: CABLES (copyright)—"Sun"—"Herald" and A.P.A. News Service.
 11.15: MORNING DEVOTION.
 11.30: Austradio Musical Reproduction.
 11.53: British Official Wireless Press.
 12.0: "Big Ben." Stock Exchange and Metal Quotations.
 12.5: E. M. BURROWES will speak on "Wandering in New Guinea."
 12.20: Midday Weather Forecast and Weather Synopsis. Special Produce Market Session for the man on the land, supplied by the State Marketing Board.
 12.30: CLOSE.

THE LUNCH FOUR—1.0 to 2.30 p.m.

- 1.0: Lunch Hour Music.
 2.0: Stock Exchange, second call.
 2.2: A glance at the afternoon "News."
 2.7: Studio Music.
 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: THE HAPPY TRIO—
 (a) "Pagan Love Song" (Brown).
 (b) "Dancing Moonbeams" (Clark).
 (c) "When My Dreams Come True" (Berlin).
 2.42: New Songs.
 2.52: A. PODINOVSKY, Violinist—
 "Legende" (Wienlawski)
 3.0: F. H. RAWARD will speak on "Antwerp—the Great Port of Belgium."
 3.15: THE HAPPY TRIO—
 (a) Selection, "Gondollers" (Gilbert and Sullivan).
 (b) "Jericho" (Mvers).
 3.27: POPULAR DANCE MUSIC.
 3.27: THE HAPPY TRIO—
 (a) "An Old Italian Love Song" (Harrison)
 (b) Waltz "Revenge" (Young).
 3.45: CHRISTIAN HELLEMANN at the ORGAN.
 4.0: THE STORYTELLER—
 A Window in Suburbia.
 The Burler.
 4.15: A. PODINOVSKY, Violinist—
 (a) "Variationen" (Tartini-Kreisler).
 (b) "Hebrew Melode" (Podinovsky).
 4.27: THE HAPPY TRIO—
 "Mean to Me" (Turk and Ahlert).
 4.28: Stock Exchange, third call.
 4.30: CLOSE.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Children's "Good-night" Stories, told by Aunt Willa, assisted by Cousins Gwen and Clarice.
 6.45: Dinner Hour Music.
 7.0: A.B.C. Sparkling Service.
 7.25: Special Country Session. Stock Exchange Resume. Markets. Weather Forecast. Late news service from the "News." Trick Bookings.
 7.58: To-night's Programme.

THE EVENING PRESENTATION—8.0 to 11.30 p.m.

We have another Old Time Dance Night to-night, the old favorites are still foremost in popularity with quite a number of our listeners, but before we start our Dance Music we will give you a refresher in the form of a description of the Water Polo Contest. Through 2BL the Classic Programme from the Conservatorium arranged by the Royal Apollo Club will attract many listeners.

- 8.0: FROM THE DOMAIN BATHS—Description of the Water Polo Contests.
 8.25: FROM THE STUDIO—THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 8.37: BOB STROTHER, The White Coon—
 (a) "I Used to Sigh for the Silvery Moon" (Darfewski).
 (b) "It's Awaiting for Yer, Josie" (Pether).
 8.44: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 8.56: HARRY CROOT, Baritone—
 (a) "White Wings" (Winter).
 (b) "Romany Glass" (Adams).
 9.3: THE COUNTRY MAN'S WEATHER SESSION—
 (a) New South Wales Forecasts.
 (b) Interstate Weather Synopses.
 9.5: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 9.17: CHARLES LAWRENCE, Entertainer—
 (a) "At a Minute to Seven Last Night" (Kaye).
 (b) "I Got Married to a Widow" (Scott).
 9.25: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 9.27: WALLACE NELSON—
 "In Reminiscences."
 9.50: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 10.2: BOB STROTHER—
 Impression of Eugene Stratton—
 "The Horse Thief."
 "I May be Crazy, but I Love You" (Stuart).
 10.9: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 10.16: Announcements. Late Official Weather Forecast.
 10.20: HARRY CROOT, Baritone—
 (a) "Genevieve" (Old Melody).
 (b) "My Life for Thee" (Adams).
 10.27: THE AUSTRALIAN BROADCASTING DANCE ORCHESTRA.
 11.30: CLOSE. NATIONAL ANTHEM.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 353 Metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G.P.O. Chimes and Announcements.
 8.16: Music for every Mood.
 8.40: Meteorological data for the country.
 8.45: Mails and Shipping Information.
 8.50: Memory Melodies.
 9.0: This Morning's Story.
 9.30: A Musical Interlude.
 9.40: British Official Wireless Press.
 9.45: New Music.
 10.2: News from the "Labor Daily."
 10.5: News from the "Daily Guardian."
 10.10: Austradio Musical Reproduction.
 10.40: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION: Conducted by Miss Gwen Varley.
 11.0: G.P.O. Chimes. Close down.

MIDDAY SESSION—12 Noon to 2.30 p.m.

- 12.0: G.P.O. Chimes and Announcements. Austradio Musical Reproduction.
 12.30: LUNCH MUSIC.
 1.0: Afternoon news from the "News."
 1.5: Music—Grave and Gay.
 1.20: Memory Melodies.
 1.25: Austradio Musical Reproduction.
 2.5: Pianoforte Recital.

AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.

- 2.30: Half-an-Hour with Silent Friends.
 3.0: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 3.12: FROM THE STUDIO. LARRY MADDEN, Popular Songs at the Piano—
 (a) Piano Novelty, "Hallstones" (Deane).
 (b) "If I had you" (Shapiro and Campbell).
 3.19: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 3.30: FROM THE STUDIO: Songs of yesterday and to-day.
 3.37: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 3.45: FROM THE STUDIO: C. PRICE CONIGRAVE will give a talk.
 4.0: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 4.12: FROM THE STUDIO—LARRY MAIDEN, Popular Songs at the Piano—
 (a) "I Can't get on without you" (Maiden).

- (b) "It doesn't matter" (Larry Maiden).
 4.19: RADIO RHYTHM.
 4.30: A Pianoforte Recital.
 4.45: The Trade Hour — Demonstration Music.
 5.45: Weather Information—Close Down.
THE DINNER HOUR—6.15 to 7.55 p.m.
 6.15: DINNER QUARTET.
 6.45: THE GIRL GUIDES' CLUB, conducted by Miss Elsie Smith, Training, etc.
 7.5: The Country Men's Market Session—Wool, Wheat, Stock, Farm Produce, Vegetable, and Pig Markets.
 7.20: DINNER MUSIC.
 7.45: Austradio Musical Reproduction.
 7.55: What's on the air to-night?

TO-NIGHT'S PRESENTATION—8 to 10.30.

- 2BL's Classic Programme on Tuesday night is proving tremendous to music lovers, and the Concert from the Conservatorium by the Royal Sydney Apollo Club to-night will provide excellent radio diversion. At 10 o'clock, from the Studio, V. C. Bell, will speak on "The Colosseum."
 8.0: FROM THE CONSERVATORIUM OF MUSIC. CONCERT PROGRAMME BY THE ROYAL SYDNEY APOLLO CLUB. CHORUS: "Fair Semele's High-born Son" (Antigone), (Mendelssohn).
 APOLLO CLUB.
 PART SONGS—(a) "The Admiral's Broom" (Bevan).
 (b) "Vesper Hymn," by request (Beethoven).
 CANTERBURY BOYS' HIGH SCHOOL CHOIR.
 ARIA: "Le'Enfant Prodigue" (Debussy).
 MISS GWLADYS EVANS.
 PART SONGS: (a) "Summer Nights" (Abt) (b) "Huntsman's Chorus," Der Freischutz (Weber).
 APOLLO CLUB.
 RECITAL: Scene from "A Christmas Carol" (Charles Dickens).
 HARRY THOMAS.
 PART SONGS: (a) "Stradella" (Pinsuti).
 (b) "Corin for Cleora Dying" (Wallace).
 CANTERBURY BOYS' HIGH SCHOOL CHOIR and APOLLO CLUB.
 9.0: FROM THE STUDIO. Weather Information for the Man on the Land. Announcements.
 9.7: FROM THE CONSERVATORIUM OF MUSIC. CONCERT BY THE ROYAL SYDNEY APOLLO CLUB. PART SONGS: "Benediction of the Alps" (Baldamus).
 MR. K. A. BIRKMYRE (R.S.A.C.), and APOLLO CLUB.
 SOPRANO SONGS: (a) "Heart Cry" (Giannini).
 (b) "Tell me, O blue, blue sky" (Giannini).
 (c) "Spring dropped a song into my heart" (Fenner).
 MISS GWLADYS EVANS.
 PART SONGS: (a) "The Trout" (Schubert).
 (b) "Serenade" (Schubert).
 CANTERBURY BOYS' HIGH SCHOOL CHOIR.
 RECITATIONS: (a) "The Congo" (Anon.)
 (c) "A Sad Story of a Motor Fan" (Anon.)
 HARRY THOMAS.
 PART SONGS: (a) "Her Last Words at Parting" (Arnold Mote).
 (b) "Nazareth" (Gounod).
 (Arr. by Max Vogrich).
 APOLLO CLUB.
 10.0: FROM THE STUDIO: V. C. BELL will speak on "THE COLOSSEUM."
 10.15: Austradio Musical Reproduction.
 10.25: Late news from the "News." Late Weather Forecast.
 10.30: NATIONAL ANTHEM. CLOSE.

2UW

Radio Broadcasting, Ltd., Palling's Building, 456 St. Sydney (Wavelength, 297 Metres).

- MIDDAY SESSION—As usual. EVENING SESSION—5.30:** Children's Hour. 6.30: Close. 7.0: Request numbers. 8.0: Recital by Maria Olchewska. 9.0: Comments on foreign affairs by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

(2GB, 2KY, and 2UE on page 64)

For any type of Valve

there's a
CLYDE
RADIO BATTERY



Clyde 6 Volt Assembly



Clyde 4 Volt Assembly



Heavy Duty Clyde 2 Volt Cell

NO matter what type of valves you are using—six volt, four volt or two volt—there's a Clyde Radio Battery for your purpose.

Six volt and four volt assemblies built into non-leakable, hard rubber containers and equipped with handy carrying handles. Two volt heavy duty cells supplied with connecting straps and wing nut terminals.

CLYDE BATTERIES WERE CARRIED BY THE "SOUTHERN CROSS."

Clyde Batteries for Radio, Cars and Home-Lighting are made by The Clyde Engineering Co. Ltd., Granville, N.S.W., largest manufacturers of storage batteries in Australia. Obtainable at all Radio Dealers and Gages.

CLYDE

FOR CARS - RADIO - HOME LIGHTING

**Clyde Batteries May be seen on
Stand 9 at the
Radio Exhibition**

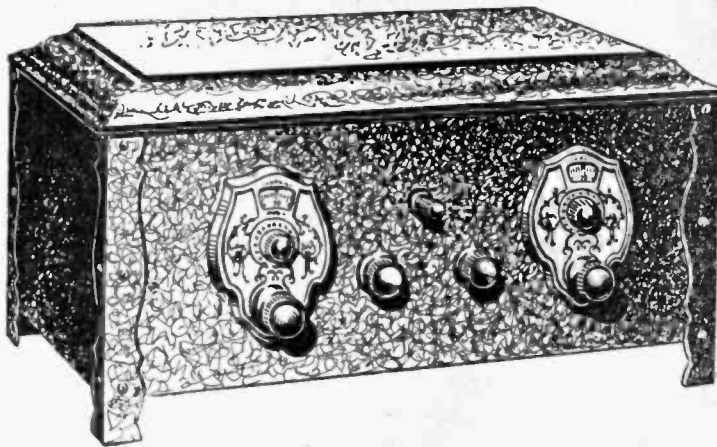
SHORT
WAVE
COILS
NOW
AVAILABLE.
13/6
PAIR.

THE WONDERFUL
NEW

COSSOR Melody Maker

COSSOR
PENTODE
VALVES
NOW
ARRIVED
FOR
COSSOR
MELODY
MAKER,
25/-
Each

The Best Christmas Gift for the Family
Real Enjoyment for the Whole Year



Price includes 3 Cossor Valves (including one Screened Grid Type), Cabinet, and all necessary parts. Batteries and Speaker only extra.

—and it's 100 p.c. British

HERE'S the most remarkable Radio Set ever produced—the Cossor Melody Maker. It has 1000 miles range, it has "knife-edge" selectivity. It will cut out local stations like magic, and bring you the programme you want to hear. Never before has such a powerful and efficient Receiver been obtainable at anything like its modest price. The Cossor Melody Maker is so simple that you can build it yourself. No wireless knowledge is necessary—no sawing—no drilling—no soldering—it's as simple as Meccano. Get to know all about this amazing new Receiver—mail the coupon.

World's Lowest Priced Screen-Grid
Receiver of Advanced Design

NAMES OF DISTRIBUTORS:

- | | |
|--|---|
| Harringtons, Ltd., George Street. | W. G. Watson, Ltd., Clarence Street. |
| Manufacturers Products, Clarence Street. | Martin De Launey, Ltd., Clarence Street |
| Bloch and Gerber, York Street. | Humphreys, Ltd., York Street. |
| Fox and MacGilllicuddy, York Street. | |

Agents for Australia and New Zealand

Lyll Willis and Co., Ltd., Billiter House, London (Eng.).

SYDNEY REPRESENTATIVES:

JONES and JOSEPH, LTD., 235 CLARENCE ST., SYDNEY

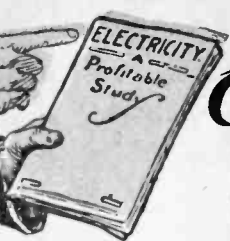
Please send me free of charge one of your Cossor Melody Maker which tells me how the New Cossor Melody Maker is built in 90 minutes.
NAME
ADDRESS



Get this

FREE BOOK

It tells you how you can learn PRACTICAL ELECTRICITY in your spare time AT HOME. Practical study by our "LEARN-BY-DOING" method is not a drudgery!



Electrical Outfits FREE! TO ALL STUDENTS

10-day even the ordinary "screwdriver" type of Electrician is making money. But it is the trained man—the man who knows the "whys and wherefores" of electricity—the Electrical Expert—who is picked out to supervise the ordinary electricians on the big jobs—the jobs that pay. Let us send you Free our book, "ELECTRICITY A PROFITABLE STUDY," showing the big opportunities Electricity offers, and how you, too, can become an expert and earn big money.

AGE OR LACK OF EXPERIENCE NO DRAWBACK

You Learn by Doing

We give each student a splendid outfit for the whole of the practical work. Lessons. Blue Prints, etc., are also provided. You do PRACTICAL WORK AT HOME. You will have the privilege of Free Consultation service with our Chief Engineer—a highly qualified man who has had a wide range of practical experience, and has successfully trained thousands of students.

Easy Monthly Payments

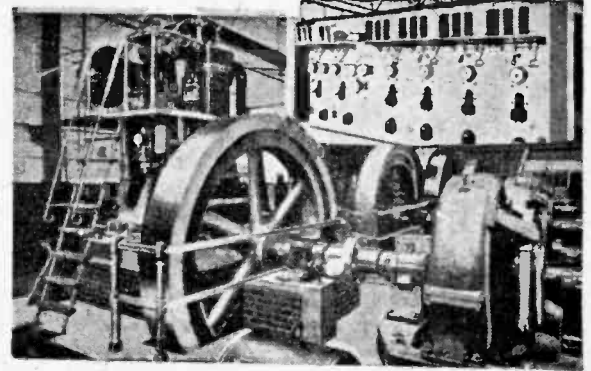
You may pay for the Course in small monthly instalments—so small that you won't feel them. The cost is very low, and includes everything, even the WORKING OUTFIT.

Thousands of Satisfied Students

Here are extracts from a few letters of appreciation.
"I have benefited by the course. Since taking it I have been given the looking after of the Electric Light installation here."
"The course has helped me wonderfully with Electrical troubles in Motor engines."
"Your course has been a great boon to me."
"I am more than satisfied with the free equipment."
"I have found the course a great investment—it has paid for itself already."
"It was a lucky day for me when I answered your advertisement."
"You can learn even if you, like myself, have not had previous experience."
"It is the most profitable money I ever invested."

YOU CAN

EARN MORE MONEY



SPECIAL 30 DAY OFFER !

Besides furnishing the student with his instruction papers, blue prints, and FREE WORKING EQUIPMENT for this "LEARN-BY-DOING" Course, we are making an ADDITIONAL SPECIAL OFFER for ONE MONTH only. You owe it to yourself to get full particulars.

Send the Coupon NOW,

and let our free book give you the facts. This may prove to be the turning point in your life.

Remember that as a student of the A.T.S. you work under the guidance of a man who knows his job—who knows exactly what you need to be successful. **AND HE GIVES IT TO YOU.**

POST THIS COUPON TO-DAY

AUSTRALIAN TECHNICAL SCHOOLS, Roma House, 537 George Street, SYDNEY.

Please send me (without obligation on my part) your FREE Booklet in full details of your "Learn-by-Doing" Course of Training, and Special 30-day offer.

NAME

ADDRESS

Occupation

Age

W.N. - 13/11/29.

Salary Raising Courses

Other worth-while courses are:—Motor Car Engineering, Shire Engineering, Overseer of Works, Architecture and Building Construction, Draftsmanship, Engine Driving, etc. Mention the subject, and write to our Chief Engineer for free booklet and full particulars.



Interstate Programmes, Tuesday, December 17

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 371 Metres).

EARLY MORNING SESSION

7.0 to 8.15: As usual.

MORNING SESSION.

10.30 to 12.30: As usual.

MIDDAY SESSION.

1.0 to 1.30: As usual.

1.25: Description of "Trial Hurdle Race, two miles and 65 yards, at the Charity Race Meeting, at Caulfield, by Mel. Morris. 1.35: Musical interlude.

THE EDUCATIONAL SESSION.

2.01 Stories from the Operas—Miss Lucy Ahon, B.A. 2.15: Musical interlude. 2.25: Description of "Infants' Plats, five furlongs, Charity Race Meeting, at Caulfield, by Mel. Morris. 2.35: Romance of the Slave and Gold Coasts—Mr. A. A. Downs. 2.50: Musical interlude.

THE RADIO MATINEE.

3.0: Description of Doctors' Plate, six furlongs, Charity Race Meeting, at Caulfield, by Mel. Morris. 3.10: Royal Brass Band—March, "Argandian." Waltz, "Fagan Love Song." 3.18: Rita Hilton, Entertainer—"A Woman Who Knows," Selected. 3.25: Royal Brass Band—"Cielito Solo," (Albino MacGourneen). 3.30: Enoch Wilson, Bass-baritone—"Well-to-do" ("Easthope Melina"), "The Spirit Flower" (Tipton). 3.37: Description of Alton Handicap, nine furlongs, Charity Race Meeting, at Caulfield, by Mel. Morris. 3.45: Royal Brass Band—Song and Chorus, "Sleep Baby, Sleep." Rita Hilton, Entertainer—"Don't be Like That," Selected. 3.52: Comedy Sketch, "Love in an Office," produced by Dulcie Hall. Characters: Henry Collins, a Business Man, Campbell Compton; Billy Dixon, His Chief of Staff, Claude Carter; Henry Henderson, His Stenographer, Dulcie Hall. 4.13: Description of Trial Handicap, seven furlongs, Charity Race Meeting, at Caulfield, by Mel. Morris. 4.20: Royal Brass Band—Waltz Long, "Always the Same Sweet Pal," March, "Fernando." 4.28: Ernest Wilson, Bass-baritone—"Lie There, My Love" (MacCunn), "Vagabond's Song" (Kundell). 4.35: Royal Brass Band—March, "The Winning Fight," Old Scotch Song, "Within a Mile of Edinboro' Town." 4.45: Description of Butler Welter, one mile, Charity Race Meeting, at Caulfield, by Mel. Morris. 4.55: Close down.

THE CHILDREN'S CORNER.

5.45: "Bobby Bluegum" and "Clever Clarice." 8.35: Musical interlude. 6.40: Girl Guide doings, by a representative of the Girl Guides' Association. 6.55: Musical interlude.

EVENING SESSION.

7.0: Melbourne Observatory time signal. 7.1: Countryman's Session. 7.25: For the man on the land, Mr. R. Crowe. 7.40: News. 7.45: Microbes, food and bac—Microbes and Disease, Prof. H. A. Woodruff. 8.0: Melbourne Observatory time signal.

NIGHT SESSION.

8.0: National Broadcasting Orchestra—Overture, "The Flying Dutchman" (Wagner). 8.10: "Eusebe," an incident in the early life of Richard Wagner. The scene is laid in Franz Liszt's home at Weimar, Germany, and on the 19th of May, 1849. The famous pianist, realising the genius of the youthful Richard Wagner, who, up to the present, has been almost unable to gain a hearing with his compositions, has taken him under his guidance and we find them at work completing the orchestration of Wagner's latest opera, "Tannhauser." Liszt is seated at the piano. (Specially written for radio by Gordon MacCallum.)

A COMEDY INTERLUDE.

8.40: Nora O'Malley and John Harcourt in a cameo sketch.

CELLO RECITAL.

8.50: Louis Huttenbach, cello—"Adagio" (Haydn), "Gavotte" (Bach), "The Rosary" (Nevin), "Maturka" (Klugent).

POPULAR BALLADS.

9.5: Dawn Harding, mezzo-soprano—"First Love" (Haynes), "Second Minute" (Bessey), with an orchestral accompaniment.

9.12: National Broadcasting Orchestra—"Suite," "La Eorce" (Delibes). 9.22: Vernon Sellers, baritone—"The Wheel Tapper's Song" (Walseley Charles), "King for a Day" (Florio).

GRAND RADIO CHORAL CONTEST.

9.30: Organized by the Australian Choral Association in conjunction with 3LO.

MORE COMEDY AND POPULAR MUSIC.

10.0: Nora O'Malley—and a Piano. 10.7: National Broadcasting Orchestra—Selection from "The Pirates of Penzance" (Sullivan). 10.17: Dawn Harding, mezzo-soprano—"Early in the Morning" (Phillips), "Old Mrs. Jarvis" (Woodgate). 10.24: A.B.C. String Quartette—Last Movement Quartette, No. 3 (Beethoven). 10.34: News Session. 10.45: Paul Jeacile and his Band—Song and Syncopeatic.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 361 Metres).

MORNING SESSION.

8.15 to 11.0: As usual.

MIDDAY SESSION.

12.0 to 2.0: As usual.

AFTERNOON SESSION.

Recordings. 2.1: Band, Massed Military Bands. 2.3: Entertainer, George Sorlie. 2.5: Piano novelty, Rulo de Costa. 2.9: Quartette, Bohnen, Betsendorff, Oehmann, and Schutendorff. 2.12: Band, Massed Military Bands. 2.15: Entertainers, North and South. 2.18: Orchestral, Fred Hall and his Sugar Babies Orchestra. 2.21: Organ, Leslie Harvey. 2.34:

Soprano, Anna Kato. 2.27: Piano, Harry Shipman. 2.35: Entertainer, George Sorlie. 2.36: Bands, Massed Military Bands. 2.39: Quartette, Bohnen, Betsendorff, Oehmann, and Schutendorff. 2.42: Orchestral, Fred Hall and his Sugar Babies Orchestra. 2.45: Entertainers, North and South. 2.48: Organ, Leslie Harvey. 2.51: Soprano, Anna Kato. 2.54: Novelty piano, Rulo de Costa. 2.57: Chorus, Tom Currie and Company. 3.0: Request numbers. 3.20: The Baby; Sunlight and Eye-strain, Sister Anne Pruff. 3.35: Musical interlude. 3.40: Useful crafts at home, Work with Wax, Miss E. Funshon. 3.55: Musical interlude. 4.0: The latest fashions, Madame La Mode. 4.15: Musical reproduction. 5.0: G.P.O. chimes. 5.1: Musical reproduction. 5.30: Weather. 5.45: Close down.

EVENING SESSION.

6.15 to 8.0: As usual. 8.0: Transmission from the Melbourne Town Hall—Musical numbers from Wesley College Speech Night. 8.30: From the Studio—Paul Jeacile and his Band, "Broadway Baby Dolls" (Clarke), "In a Kitchenette" (Duben). 8.35: Madoline Knight, contralto—"I Love Your Eyes of Grey" (Haydn-Wood), "When You're Away" (Sanderson). 8.42: Bert Ray, comedian, will entertain. 8.47: Paul Jeacile and his Band—"Mothers' Boy" (Green), "Blues My Naughtie Sweetie Gives To Me" (Swanstone). 8.52: Tricks and Tricksters—Dr. Loftus Ellis, D.Sc. 9.7: Iza Crossley, soubrette—"A Smile for Every Day," "That Wasn't Being Untrue." 9.14: Bruce Wite, piano—Novelty number. 9.17: Horace White, tenor—"On the Road to Mandalay" (Spears), "Mucushla" (McMurragh). 9.24: Paul Jeacile and his Band—"An Elephant Can't Say Can't" (Abbott), "Pretty Face" (Davies). 9.30: Madoline Knight, contralto—"The First of June" (Olliver), "Betty's Garden" (Sanderson). 9.37: A mystery story—"The Thing at Nolan's, and the Other Lodgers," J. Hoyle's Room. 9.50: Paul Jeacile and his Band—"Love Thrills" (Bryan), "Montmartre Rose" (Lyman). 9.58: Bert Ray, comedian, will entertain. 10.0: Bob Adams, trumpet—"At Sunset" (Code). 10.3: Weather and news. 10.13: Paul Jeacile and his Band—"Trail of Dreams" (Swan). 10.18: Iza Crossley, soubrette—"Shout Hallelujah Cause I'm Home." 10.22: Paul Jeacile and his Band—Request numbers. 10.30: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 385 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION.

8.0: Double Male Quartette (conductor, Tom Muller)—chorus, "Happy Are We To-night." 8.4: George Williamson, tenor—"Just Before the Battle Mother" (Root), accompanied by the Double Male Quartette. 8.10: R. Tall, pianist—"March Hongroise" (Kowalski). 8.14: Frances Lane, contralto—"Annie Laurie" (Lady Scott). 8.19: G. Rise, tenor, and J. P. Cornwell, bass-vocal duet, "When Song is Sweet" (Bans Souci). 8.24: Double Male Quartette—choruses, "Doodah Day," "Polly-Wolly-Doodle," "Little Brown Jug" (request). 8.35: J. P. Cornwell, bass—"A Hundred Pathways Deep" (Shattuck). 8.40: Double Male Quartette—choruses, "Hear Dem Bells" (request), "Tenting on the Old Camp Ground" (request). 8.48: Frances Lane, contralto—"Galler Herrlin" (Moore). 8.52: Ernest Harper, baritone—"Sweet Marie" (Moore). 8.55: Double Male Quartette—"Silver Threads Among the Gold" (request), "Two Little Girls in Blue." 9.0: Metropolitan weather forecast. 9.1: Duo Art selection, "Home Minstrels." 9.6: J. P. Cornwell, bass—"In Cellar Cool" (German). Frances Lane, contralto, and Fred Crane, baritone—vocal "I Was Dreaming" (Juncher). 9.14: Double Male Quartette—"Where is My Boy To-night." 9.19: Duo Art selection—another collection of home minstrels. 9.24: Double Male Quartette—"O Dear, What Can the Matter Be?" "The Vacant Chair" (request). "Good-night, Ladies." 9.35: A short recital of electric records. 10.0: News; weather. Close.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 409 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION.

8.0: Programme review. 8.10: A Radio Revue (exclusive to 5CL by arrangement with Ozona Theatres), entitled "Round the World with Jack Fewster and his Band." 9.1: Meteorological information, including Semaphore tides. 9.2: Overseas wain report. 9.3: Announcements. 9.5: Radio Revue continued—"Round the World with Jack Fewster and his Band." 10.15: News. 10.30: Recordings. 11.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth (Wavelength, 435 Metres).

Day sessions as usual.

EVENING SESSION.—8.0: Chimes. 8.1: Ambassador's Unit Orchestra. 8.7: Les. Waldron at the console of the Wuritzer organ. 8.12: Charles Pighills, baritone. 8.15: Anita Fitzgerald, "With Australia's Great Poets." 8.34: Lulu Potter, soprano. 8.41: Charles Pighills, baritone. 8.48: Lulu Potter, soprano. 8.55: Announcements. 9.0: 6WF interview Elizabeth Curwen, celebrated English vocalist. 9.10: Stage presentation from Ambassador's Theatre. 9.30: Joan Coatham, humorous sketch. 9.35: Strange tales of ghosts and haunted places by Basil Kirke. 9.50: Joan Coatham, humorous sketch. 9.57: Australian reproduced works of Grieg, Schubert, Mozart, Kreisler, and Peter Dawson. 10.59: Weather report. 11.0: Close down. God Save the King.

(Local Programmes continued Tuesday, December 17.)

2GB

Theosophical Broadcasting Station, 29 Bligh St., Sydney (Wavelength, 316 Metres).

10.0: Music. 10.10: Happiness talk by A. E. Bennett. 10.20: Music. 10.30: Women's session by Mrs. W. J. Stelzer. 11.30: Music. 11.45: Close down. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.30: Close down. 5.15: Children's session by Uncle George. 6.50: M.G.M. Radio Movie Club session. 7.0: Music. 7.45: Feature story. 8.0: Miss Mary Neal, contralto. 8.7: Symphony Orchestra. 8.15: Mr. John McCaffrey, baritone. 8.22: Cello solos. 8.30: Mr. Jack Win and Mr. Heath Burdock, humor. 8.35: Miss Gladys Verona, soprano. 8.42: Symphony Orchestra. 8.50: Miss Mary Neal, contralto. 9.0: Weather report. 9.3: Address. 9.15: Cello solos. 9.25: Mr. John McCaffrey, baritone. 9.35: Mr. Jack Win and Mr. Heath Burdock, humor. 9.40: Symphony Orchestra. 9.50: Miss Gladys Verona, soprano. 10.0: Instrumental music. 10.30: Close down.

2KY

Trade and Labor Council, Goulburn St., Sydney (Wavelength, 296 Metres).

MORNING SESSION.—10 to noon. CHILDREN'S SESSION.—6.0: Birthday calls, request numbers, and kiddies' entertainment. Uncle Bert and Uncle Mac.

EVENING SESSION.—7.0: Musical interlude. 7.15: Sporting feature; turf topics; how they should run to-morrow. 7.45: Request numbers. 8.0: Orchestral selections. 8.10: Women's Information Service, Mrs. Gray. 8.35: Baritone solos, Mr. Higgins. 8.33: Pianoforte solos, Mr. Hancock. 8.40: Music and request numbers from the studio; sporting feature, from the ringside of McHugh's Leichhardt Stadium; results of early events, and full description of 15-round event. 8.50: Dance music from the studio. 10.0: Closing announcements.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney (Wavelength, 293 Metres).

FOR DAY SESSIONS, see Friday. EVENING SESSION.—6.30: Wendy's hour with the children and birthday greetings. 7.15: Instrumental dinner music. 7.55: Programme announcements and news from the "Sun." 8.0: Clock and chimes. 8.1: Overture, "Morning, Noon, and Night." 8.11: Vocal and instrumental concert. 10.15: National Anthem; close.

A 3-VALVE ALL ELECTRIC RADIAR SET FOR £20

And a Loud Speaker FREE

This set has 4 Valves in all, and will only be sold during November and December at this price.

Note the address: THE RADIAR WIRELESS CO.,

114 CASTLEREAGH STREET

(Near Market Street) Ryde 978.

Phone, M2037. Ryde 978.

TELEFUNKEN

"The oldest experience—the latest design"

Telefunken offers, especially built for Australia, the Transcontinental All Electric

- TELEFUNKEN 9W, Shielded Neutrodyne, All Electric
- TELEFUNKEN 40W, Screen Grid Electric, 1930 Model
- ARCOLETTE 3W, Popular Electric 3 (4 valves)

We are in a position to satisfy every demand from the local receiver to the distance getter.

TELEFUNKEN 9W

Consisting of 5 Valves and one Rectifying Valve, 1 Dial Control, Sensitive, Selective, Simple to operate.

PRICE £72/10/-
with Valves, free installation

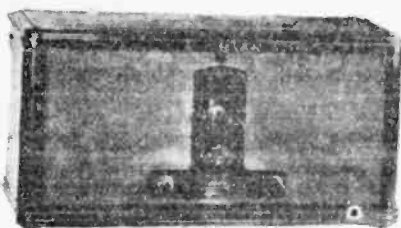
TELEFUNKEN Arcolette 3W

The most popular 3 valve All Electric Set in Australia. Safety fuse built in. Ask the man who owns one. Compact, Distinctive in Design. Selective, good volume.

PRICE £28/10/-
with 4 valves

TELEFUNKEN 40W

consisting of latest metallised Screen Grid 4 Valve Set.
Superior quality, Tone Range 7½ Octaves, Auto-



matic Switch, Interstate stations with indoor aerial, highly finished Bakelite cabinet, extraordinarily simple to operate.

TELEFUNKEN 40W, PRICE, £50
1930 Model with 5 Valves.

All receivers are adapted for gramophone reproduction. Telefunken meets the popular demand for speakers of quality with the

Arcophone 5 Price £10/-/- Arcophone 3 Price £7/15/-
Arcophone 4 Price £3/5/-

The Arcophone Speaker range challenges all makes of Dynamic Type Speakers. TELEFUNKEN reputation has been built up through special attention to the service after sales.

FREE HOME DEMONSTRATION

See and hear TELEFUNKEN. Ask your local dealer or

SCOTT AND CO. (A'SIA.) PTY., LTD.,

1st FLOOR, 187 CLARENCE STREET

'Phone: M4065

Local Programmes, Wednesday, December 18

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 Metres).

EARLY SESSION—7.0 to 8.15 a.m.

- 7.0: "Big Ben" and Meteorological Information for the man on the land.
- 7.3: This morning's news, from the "Daily Guardian."
- 7.8: Austradio Musical Reproduction.
- 7.45: Mails and Shipping.
- 7.48: What's on To-day?
- 7.50: Children's Birthday Calls.
- 8.0: Music from the Studio.
- 8.15: CLOSE.

MORNING SESSION—10.30 a.m. to 12.30 p.m.

- 10.30: Announcements.
- 10.32: General Sporting Talk, by Oscar Lind.
- 10.45: HORACE WEBER at the GRAND ORGAN.
- 11.0: HOUSEHOLD HELPS: Cooking, by Miss Ruth Furst.
- 11.10: CABLES (copyright)—"Sun"—"Herald" and A.P.A. News Service.
- 11.15: MORNING DEVOTION.
- 11.30: Austradio Musical Reproduction.
- 11.53: British Official Wireless Press.
- 12.0: "Big Ben" Stock Exchange and Metal Quotations.
- 12.5: A. A. BOWLES—"Roads v Railways—Railway and Road Transport—Operating Conditions."
- 12.20: Midday Weather Forecast and Weather Synopsis. Special Produce Market Session for the man on the land, supplied by the State Marketing Board.
- 12.30: CLOSE.

NOTE: Race Results from Kensington will be given as received.

NOTE: Results of the Cricket Match, Victoria v Queensland, played at Melbourne will be given as received.

THE LUNCH HOUR—1.0 to 2.30 p.m.

- 1.0: Lunch Hour Music.
 - 2.0: Stock Exchange, second call.
 - 2.2: A Glance at the afternoon "News."
 - 2.7: Studio Music.
 - 2.27: Announcements.
- ### THE RADIO MATINEE—2.30 to 4.30 p.m.
- 2.30: NEW DANCE NUMBERS.
 - 2.42: POPULAR SONGS OF THE DAY.
 - 2.52: PIANOFORTE SELECTIONS.
 - 3.0: JEAN ARMSTRONG will speak on "Ghamhi and India's Outlook."
 - 3.15: RADIO RHYTHM.
 - 3.30: PIANOFORTE RECITAL.
 - 2.45: MUSIC GRAVE AND GAY.
 - 4.0: CLAUDE E. BYRNE—"Impromptu Costumes and Make-up for Fancy Dress Balls during the Holidays."
 - 4.15: MODERN DANCE MUSIC.
 - 4.28: Stock Exchange (third call).
 - 4.30: STUDIO ITEMS.
 - 4.45: CLOSE.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 6.45: Children's "Good-night" Stories, told by the "Hello Man" assisted by Uncle Ted and Sandy.
- 6.45: Dinner Hour Music.
- 7.20: A.B.C. Sporting Service.
- 7.25: Special Country Session. Stock Exchange Resume. Markets. Weather Forecast. Late news service from the "News." Truck Bookings.
- 7.58: To-night's Programme.

THE EVENING PRESENTATION—8.0 to 11.30 p.m.

- 2FC offers a Radio Miscellaneous To-night. There is Lynwood Roberts' play "A Man in the Street," pianoforte Recital by Alexander Sverjensky Bert and Evelyn Dudley in Comedy and Humor Song Groups, Violin Solos, and a touch of humor by John Stuart. Through 2BL from the new Town Hall at Newcastle a Programme by the Arcadia Operatic Society and the Newcastle Revue Revellers will be broadcast. This is one of the many concerts which have been held at Newcastle this week in connection with their Civic Week.
- 8.0: ALEXANDER SVRJEJNSKY Pianist—(a) "Etude in C Sharp Minor" (Chopin) (b) "Mazurka in G Minor" (Chopin) (c) "Mazurka in G Sharp Minor" (Chopin) (d) "Prelude in A Major" (Chopin)
 - 8.12: BERT and EVELYN DUDLEY, Entertainers—

- (a) "You Can Tell Her Anything Under the Sun" (Meskill).
- (b) "Never Be Slaves" (Dudley).
- (c) "Happy Go Lucky" (Gaskell).
- 8.22: LYNWOOD ROBERTS COMPANY presents "The Man in the Street." The Story of the Play concerns an old Tramp playing the clarinet in the street. He is brought into a house and turns out to be the father of the lady of the house.
- 8.52: DULCIE BLAIR, Violinist—(a) "Episode Romantique" (Walenn) (b) "Song of the Desert" (Walenn).
- 8.59: THE COUNTRY MAN'S WEATHER SESSION—(a) New South Wales Forecasts (b) Interstate Weather Synopsis
- 9.1: NORMAN HESTELOW, Basso—(a) "The Blacksmith" (Slater) (b) "Friend" (Novello-Davie)
- 9.6: ALEXANDER SVRJEJNSKY, Pianoforte Solos—(a) "Nocturne in C Sharp Minor" (Chopin) (b) "Prelude in D Flat Major" (Chopin) (c) "Prelude in A Flat Major" (Chopin)
- 9.20: JOHN STUART, in a Comedy Sketch entitled "A Peaceful Evening" Characters—The Wife Margot Morton The Husband John Stuart Scene—A Cosy Sitting-room.
- 9.30: DULCIE BLAIR, Violinist—"Melodrame," from "Piccolino" (Gultraud) "Canzonetta" (d'Ambrosio).
- 9.37: BERT and EVELYN DUDLEY, Entertainers—(a) "How It Was Raining" (De Costa) (b) "Women" (Dudley) (c) "Then I'll Be Happy" (Silver)
- 9.47: NORMAN HESTELOW, Basso—(a) "The Gay Cavalier" (Breville-Smith) (b) "The Miner" (Sutton).
- 9.54: JOHN STUART, Comedian—(a) "That's Why I Love Her" (Western) (b) "Marriage" (Mss.).
- 10.0: FROM THE BALLROOM OF THE ORIENTAL—Sydney Simpson's Syncopaters, in Dance Music.
- 10.15: FROM THE STUDIO—Announcements. Late Official Weather Forecast
- 10.20: FROM THE BALLROOM OF THE ORIENTAL—Sydney Simpson's Syncopaters, in Dance Music.
- 11.30: CLOSE NATIONAL ANTHEM

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 388 Metres)

- ### OPENING SESSION—8.15 to 11 a.m.
- 8.15: G.P.O. Chimes and Announcements.
 - 8.16: Music for every Mood.
 - 8.40: Meteorological data for the country.
 - 8.45: Mails and Shipping Information.
 - 8.50: Memory Melodies.
 - 9.0: This Morning's Story.
 - 9.30: A Musical Interlude.
 - 9.40: British Official Wireless Press.
 - 9.45: New Music.
 - 10.5: News from the "Daily Guardian."
 - 10.10: Austradio Musical Reproduction.
 - 10.40: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION Conducted by Miss Gwen Varley
 - 11.0: G.P.O. Chimes. Close down.
- ### MIDDAY SESSION—12 Noon to 2.30 p.m.
- 12.0: G.P.O. Chimes and Announcements. A Pianoforte Recital.
 - 12.30: LUNCH MUSIC: 1.0: Afternoon news from the "News." 1.5: A Pianoforte Recital. 1.25: Modern Dance Music. 1.55: New Songs. 2.12: Modern Melodies.
- ### AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.
- 2.30: Half-an-hour with Silent Friends.
 - 3.0: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 - 3.12: VICTOR HAGAN, Baritone—(a) "Mean to Me" (Ahlerst) (b) "Pagan Love Song" (Brown).
 - 3.19: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 - 3.30: FROM THE STUDIO: CHRISTIAN HELLEMANN at the Organ.
 - 3.45: GOODIE REEVE: "Aids to Personality."

- 4.0: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 - 4.12: FROM THE STUDIO: VICTOR HAGAN, Baritone—(a) "When my dreams come true" (Berlin) (b) "That's what puts the 'Sweet' in Home, Sweet Home" (Gordon and Newman).
 - 4.19: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 - 4.30: A Pianoforte Recital.
 - 4.45: The Trade Hour — Demonstration Music.
 - 5.45: Weather Information. Close down.
- ### THE DINNER HOUR—6.15 to 7.55 p.m.
- 6.15: DINNER QUARTET.
 - 6.45: THE BOYS' RADIO CLUB, conducted by Mr. Norman Lyons.
 - 7.5: The Country Man's Market Session—Wool, Wheat, Stock, Farm Produce, Fruit, and Vegetable Markets.
 - 7.20: DINNER MUSIC.
 - 7.45: Austradio Musical Reproduction.
 - 7.55: REV. GEORGE COWIE will speak on C.O.J.O.

TO-NIGHT'S PRESENTATION—8 to 10.30.

Our programme to-night is taken from Newcastle, and is contributed by the Arcadia Operatic Society and the Newcastle Revue Revellers. This is in connection with Newcastle Civic Week.

2FC's offering will make a wide appeal—there is Lynwood Roberts' play "The Man in the Street," Recital by Alexander Sverjensky, comedy numbers, violin solos, song groups, and dance music from the Oriental

8.0: FROM THE NEWCASTLE TOWN HALL.

OVERTURE: REVUE REVELLERS. CHORUS NUMBERS: "Tune in on Happiness."

SKETCH: "Raffle." HUMOROUS RECITATION: JACK BARRETT.

VAL DOULTRE—Song, selected. CHORUS NUMBER: "Get Out and Get Under the Moon."

MELODY AMBLER—Selected number. SOLO AND BALLET: Miss Billie Williams and Ballet.

VIOLINIST: Miss R. Ross. SONGS: Mrs. Morris.

"Vilia," from "The Merry Widow." MISS ELLA WATKINS—"Honey."

SKETCH: "One Word." SONG SKETCH: Mr. L. and N. Berrick.

REVUE REVELLERS: Full Company. "If Your Face Wants to Laugh, Well let It."

9.0: FROM THE STUDIO: Weather Information for the Man on the Land. Announcements.

9.7: FROM THE NEWCASTLE TOWN HALL.

MISS DORIS LAND—"Good Rag Doll." RECITATION—Miss J. Wakefield.

SKETCH. MISS BETTY FERRIS and Full Company "Bluebird Sing me a Song."

MISS MEPLE AMBLER, Contralto. STEEL GUITAR SELECTION—MR. ASHMAN.

DANCE NUMBER: Miss Billie Williams and Pupils.

TRIO: Messrs. C. McKendry, C. Cook, W. Doultre.

FULL COMPANY—"Me and the Man in the Moon."

SKETCH: "Kiss in the Dark." FULL COMPANY—"Fascinating Vamp."

FULL COMPANY: REVUE REVELLERS. "Wedding of the Painted Doll."

10.0: FROM THE STUDIO—Austradio Musical Reproduction.

10.25: Late news from the "Evening News." Late Weather Forecast.

10.30: NATIONAL ANTHEM CLOSE.

2UW

Radio Broadcasting, Ltd., Pallin's Building, Ash St., Sydney (Wavelength, 367 Metres).

MIDDAY SESSION.—As usual. EVENING SESSION.—5.30: Children's Hour. 6.30. Close. 7.0: Request numbers. 8.0: Light

Orchestral Orchestra. 9.0: Comments on foreign affairs by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

(2GB, 2KY, and 2UE, on page 70.)

QUALITY E.T.C. SERVICE

— ⊙ —
The future set
NOW
Made in Sydney
for Sydney



— ⊙ —
Price of Set £22/10/-
Speaker £2/10/-

Easy Terms
Arranged

— ⊙ —

THE WONDER SET

100 Per Cent. All-Electric

Buy a radio set for Xmas that is ultra-modern in value, tone, volume, appearance, simplicity, and, above all, selectivity—the only 3-valve set suitable for Eastern Suburbs. The following are a few of the features incorporated in this set:—

1. No Aerial.
2. No interference.
3. Static reducer.
4. No hum.
5. Continuous selectivity control.
6. Completely shielded.
7. Four Philips valves.
8. Key lock switch.
9. Single dial control.
10. Gramophone pick-up jacks.

FREE
Every purchaser before
Xmas will receive a twelve
months wireless licence
costing
24/- FREE

E.T.C. stands for quality. It will pay you to hear this set before purchasing. Call at our modern showrooms and inspect, or ring M3065 for a home demonstration, you are under no obligation.

We have some beautiful gramophone-radio combination cabinets—price £32/10/-.

We are authorised distributors for Crosleys, Stromberg-Carlsons, and Telefunken radio, also the famous Magnavox X-core Dynamic Speakers.

We have other all-electric sets at a price suitable for every pocket, ranging from £18/10/- up.

Electric Trading Co.,

310, 3rd Floor, Wembley House, Railway Square, 841 George St., Sydney



GREETINGS!

Distributors for CLIMAX BATTERIES

Wholesale Distributors
for the following well-
known Radio lines:—

PHILIPS PRODUCTS
CLIMAX BATTERIES
EVER-READY
BATTERIES
COLUMBIA
BATTERIES

RADIOTRON VALVES
MULLARD VALVES
COSSER VALVES
RAYTHEON VALVES
AMPLION SPEAKERS
AIRZONE PRODUCTS

RADIOKES
PRODUCTS
WETLESS PRODUCTS
FERRANTI
PRODUCTS

POLLOCK PRODUCTS
T.C.C. CONDENSERS
GRODAN PRODUCTS
ADVANCE
PRODUCTS

PILOT PRODUCTS
FORMO PRODUCTS
MAGNAVOX
PRODUCTS
JACKSON
CONDENSERS

EMMCO PRODUCTS
ESSING PRODUCTS
JANSEN DYNAMIC
SPEAKERS

ALL OTHER
STANDARD RADIO
LINES.
WINDING WIRES
FLEXES

☞ *At this season of the year all the world goes a "hand shaking."*

☞ *As it will be impossible to see individually our numerous Friends whom we have served to the best of our ability—and hope to continue doing so through the New Year—we ask one and all to accept this token, conveying our best wishes for a Right Merry Christmas and a Prosperous New Year.*

☞ **—AND HERE'S OUR HAND.**

Distributors for
Magnavox Speakers
and Units, with the
Realism that
cannot be copied!

For
Quick Service,
Ring
B2409,
B2410.

FOX & Mac Gillycuddy
LIMITED

WHOLESALE RADIO DEALERS, MERINO HOUSE, 57 YORK STREET, SYDNEY, N.S.W.

The Gift of Lasting Enjoyment!

Here is a Christmas gift suggestion that will still be giving pleasure when most others are forgotten.

**BUY NOW
ON
EASY TERMS**



**The
Colville
Moore**

**A.C. THREE
RECEIVER**

A triumph in Tone and Mechanical Perfection.

**COLVILLE-MOORE
TABLE MODEL,
A.C.3
£34.**

Complete Set, Table, and
Magnetic Speaker.

100% ALL ELECTRIC

Right off Your Power or Electric Light Socket

PLUG IN — TUNE IN

No Aerial or other loose wires. Solves your entertainment problem.

SOME POINTS OF COLVILLE MOORE SUPERIORITY.

Ducoed Maple Cabinet, of unique and pleasing design. Power equipment and valves totally Philips. Super selectivity obtained with special wave trap. Tonal reproduction unequalled by any other receiver. Twelve months' guarantee and service. Imposing and binding warranty issued with every receiver.

Demonstrations in your home without obligation

Colville Moore Wireless Supplies Ltd.

Phones: B2261, B4594.

4 AND 10 ROWE STREET, SYDNEY



**LET US SHOW YOU ALL
OUR LATEST MODELS
AT No. 4 ROWE ST.**

AC THREE, Table Model, complete with speaker. CASH PRICE, £29. Deposit £6, Monthly £2/2/9.
AC THREE, Console Model, complete with speaker. CASH PRICE, £34. Deposit £7, Monthly £2/10/1.
AC SIX, Console Model, complete with speaker. CASH PRICE, £56. Deposit £12, Monthly £4/1/5.

Interstate Programmes, Wednesday, December 18

3LO

Australian Broadcasting Co., 129A Russell St., Melbourne (Wavelength, 371 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: As usual.

MORNING SESSION.

10.30 to 12.30: As usual.

MIDDAY SESSION.

1.0 to 1.30: As usual. 1.30: Transmission from Rotary Club luncheon—His Excellency, the Governor, Lord Somers, will speak on "Fathers and Sons' Day."

AFTERNOON SESSION.

2.0: Description of Sheffield Shield cricket match, Queensland v. Victoria, at Melbourne Cricket Ground. 4.0: Jostie Kean, entertainer—Songs and Sketches at the piano. 4.7: Claude Jeacle, baritone—"Eileen Alannah," with harp accompaniment. 4.11: Norman Leslie, comedian, will entertain. 4.18: Bob Libbis, trombone—"Evening Star" (Wagner). 4.22: Paul Jeacle and his band—"Pretty Face" (Davis), Selected. 4.30: Close down. During the afternoon results of the Lancelfield races will be broadcast as they come to hand.

THE CHILDREN'S CORNER.

6.45: "Miss Kookaburra."

EVENING SESSION.

6.30: French—"Parlez Vous Français?" Madame Soward. 6.45: Musical interlude. 6.48: Cultivating Good Health—Small Jaws and Crowded Teeth, Mr. C. F. Kean (under the auspices of the Dental Board of Victoria). 7.0: Time signal. 7.1: Countryman's session. 7.25: Modern Steels—Case-hardening, Prof. J. Neill Greenwood, D.Sc. 7.40: News. 7.45: Our Radio Service to Listeners, Mr. H. K. Love. 8.0: Time signal.

NIGHT SESSION.

8.0: Victorian Railways Military Band (conductor, A. Belcher)—"Our Miss Gibbs."
8.10: A Goanna Gully Wedding. A Burlesque Sketch specially written and produced for radio by J. Harcourt Bailey. We are now crossing over to Goanna Gully to the homestead of Dad Scarifier—"Barren Acres"—where the wedding is in progress between Ruby Scarifier and Joe Quigley. The guests invited include Mr. and Mrs. Merino, Mr. and Mrs. Lucern, Archibald Stonemason, Mr. E. Spotswell, Miss N. E. Goode, Miss Gertrude, Giggie, and the bride and groom's families. The ceremony will be performed by the Rev. Hiam Merry, and the speeches and musical items will be broadcast from the wedding breakfast.
8.40: Victorian Railways Military Band—Overture, "Zampa."
8.50: Madoline Knight, contralto—"The Old Refrain" (Kreisler), "Serenata" (Toselli).
8.57: Pietro Scaroli, violin—"Andante" from Concerto (Mendelssohn), "Rondo" (Mozart-Kreisler).
9.10: J. Alexander Browne, baritone—"Life and Death" (Coleridge-Taylor), "Tides" (Martin Shaw).
9.17: Pierrot and Pierrette—Pierrot with the piano and Pierrette with her saxophone.
9.27: Victorian Railways Military Band—"Dance of the Hours" (Ponchielli).
10.5: Victorian Railways Military Band—"Plantation Songs."
10.13: "Way Down Upon the Swanee River." Depicting in dramatic form the origin of the melody.
10.23: News session.
10.33: Paul Jeacle and his band—Dance music.
11.30: God Save the King.

3AR

Australian Broadcasting Co., 129A Russell St., Melbourne (Wavelength, 484 Metres).

MORNING SESSION

8.15 to 11.0: As usual.

MIDDAY SESSION

12.0 to 1.15: As usual.

AFTERNOON SESSION

2.30: The pre-school child—creating a love for music, Miss M. Lush. 2.45: Home throughout the world, Dr. Loftus Hills, D.Sc. 3.0: Paul Jeacle and his band—"I'm More Than Satisfied" (Waller), "Jericho" (Meyers). 3.8: George Mauger, baritone—"In Love" (Lohr), "The Old Superb" (Stanford). 3.13: Bruce White, piano—selected. 3.17: Jostie Kean—songs at the piano. 3.34: Paul Jeacle and his band—"Sentimental Fool" (Rose), "Pagan Love Song" (Brown). 3.33: Norman Leslie, comedian, will entertain. 3.40: Horrie Sheehan, trumpet—"Castles in the Air" (Smith). 3.44: George Mauger, baritone—"Marishko" (Korbay), "The Smuggler's Song" (Mullinar). 3.51: Paul Jeacle and his band—"Do Something" (Green), "Lonesome Little Doll" (Cowan). (During the afternoon results of the Lancelfield races will be given as they come to hand.) 4.0: How things dress in other countries—China and the East—Mr. J. G. Esmond. 4.15: Description of

Sheffield Shield cricket match, Victoria v. Queensland, at the Melbourne Cricket Ground. 5.30: Weather data. 5.40: From the M.C.O., description of cricket match resumed, 6.0: Close down.

EVENING SESSION

6.15 to 8.0: As usual.

NIGHT SESSION

8.1: Why we behave as human beings. Are we really free? Prof. J. A. Gunn, M.A., B.Sc., Ph.D.
8.15: National Broadcasting Orchestra—Fragments of Melodies Old and New. Novelty number: "A Musical Switch" (Aiford).
8.24: Dorothy White, comedienne—"There's Life in the Old Girl." Selected.
8.30: Taama Tiernan, cello—"Melodie" (Gluck).
8.34: National Broadcasting Orchestra—Selections: "The Red Mill."
8.40: Transmission from the Melbourne Town Hall: Musical numbers from Scotch College Speech Night.
9.10: From the Studio—National Broadcasting Orchestra, Overture, "William Tell."
9.19: Victor Harding, baritone—"The Yeoman's Wedding Song" (Poniatowski), "Four by the Clock" (Mallinson).
9.26: Pierrot and Pierrette—Pierrot with his Piano, and Pierrette with her Saxophone.
9.36: Dorothy White, comedienne—"I Was a Good Little Baby." Selected.
9.43: Famous Orations—Liberty, the Bond of the British Empire (Edmund Burke), John Hopkins.
9.53: Victor Harding, baritone—"You Along o' Me" (Sanderson), "The Bellman" (Forsyth).
10.0: Weather information and "Herald" news. Cable news service (copyright Australian Press Association "Sun"—"Herald" News Service, Ltd.).
10.10: Pierrot and Pierrette—Pierrot with his Piano and Pierrette with her Saxophone.
10.20: National Broadcasting Orchestra—"Russian Dance" (Frini), Selected.
10.30: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 385 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION

8.0: The Studio Dance Orchestra—dance music.
8.10: Shirley Radford, soubrette—popular numbers.
8.25: The Studio Dance Orchestra—dance music.
8.35: Monument and Harrow, the argumentative pair.
8.45: The Studio Orchestra—dance music.
9.0: Metropolitan weather forecast; movements of lighthouse steamers.
9.5: Grace and Nat Gould—piano and banjo.
9.15: The Studio Dance Orchestra—dance music.
9.25: Harry Borradaile, entertainer.
9.35: The Studio Dance Orchestra—dance music.
9.45: Monument and Harrow—another argument.
10.0: News supplied by the metropolitan dailies: weather information.
10.15: The Studio Dance Orchestra.
11.0: Close down.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 460 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION.

8.0: Programme review.
8.10: Mrs. A. C. Williams, mandolin band—"Iris," "Japan's Primful March," "Rose of My Heart."
8.20: Community Singing by the Apollo Radio Choir.
8.27: Don and Rex will entertain you.
8.37: Vocal Number.
8.44: Mrs. A. C. Williams' Mandolin Band—"Love's Old Sweet Song," "When a Lady Leads the Band."
8.50: News and "My Window."
8.54: Don Wildsmith, baritone.
9.1: Meteorological information, including Semaphore tides.
9.2: Overseas grain report.
9.3: Announcements.
9.5: Captain Donald Maclean will continue his series of talks, entitled "Feats of the Mighty."
9.15: Mrs. A. C. Williams' Mandolin Band—"Cupid's Dance," "Me and the Man in the Moon," "Chiming Bells of Long Ago."
9.25: Community Singing by the Apollo Radio Choir.
9.32: Don and Rex will entertain you again.
9.42: Vocal number.
9.49: Mrs. A. C. Williams, mandolinist—"I Trovatore," "Cadi."
9.54: Vocal number—selected.
10.0: G.P.O. chimes.
10.1: A one-act play, "Wife Drives a Motor Car" in which Frank Perrin and Laurie McLeod will take part.
10.15: News.
10.30: Recordings.
11.0: Close down.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth (Wavelength, 435 Metres).

Day sessions as usual.

EVENING SESSION.—8.0: Chimes. 8.1: Perth City Band 8.11: Reuben Betts, crooning baritone. 8.14: Perth City Band. 8.47: David Lyle, tenor. 8.51: Perth City Band. 9.0: Announcements. 9.6: Perth City Band. 9.15: A.B.C. Revue Company, produced and presented by Harry Graham; artists—Harry Graham (entertainer), Dorothy Manning (soprano), David Lyle, tenor, Reuben Betts (crooning baritone), Beryl Scott (pianist), 10.15: Recital of celebrity artists (reproduced). 10.59: Weather report. 11.0: Close down. God Save the King.

Local Programmes Continued.

Wednesday, December 18

2GB

Theosophical Broadcasting Station, 29 Bligh St., Sydney (Wavelength, 318 Metres).

10.0: Music. 10.10: Happiness talk by A. E. Bennett. 10.20: Music. 10.30: Women's session by Mrs. W. J. Stelzer. 11.30: Address by Mrs. Jordan. 11.45: Close down. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.30: Close down. 5.15: Children's session by Uncle George. 6.50: M.G.M. Radio Movie Club session. 7.0: Music. 7.45: Feature story. 8.0: Further Eastern programme; Miss Edna Lister, contralto. 8.7: Symphony Orchestra. 8.15: Mr. Barend Harris, basso (Hebrew songs). 8.22: Violin solos. 8.30: Miss Barbara Russell, soprano. 8.37: Symphony Orchestra. 8.45: Mrs. Rukmini Arundale, Hindu songs. 8.55: Pianoforte solos. 9.0: Weather report. 9.3: Miss Edna Lister, contralto. 9.13: Symphony Orchestra. 9.23: Mr. Barend Harris basso (Hebrew songs). 9.33: Violin solos. 9.40: Mr. Jack Win and Mr. Heath Burdock, humor. 9.45: Miss Barbara Russell, soprano. 9.55: Symphony Orchestra. 10.0: Instrumental music. 10.30: Close down.

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney (Wavelength, 298 Metres).

For EARLY MORNING SESSION AND MIDDAY SESSION, see Friday.

EVENING SESSION.—6.30: Wendy's hour with the children and birthday greetings. 7.15: Turf talk by Mr. Hopkins, Turf Expert. 7.40: Instrumental music. 7.55: Announcements and news from the "Sun." 8.0: Clock and chimes. 8.1: Overture, "Light Cavalry." 8.10: Vocal and orchestral music. 10.15: National Anthem; close down.

2KY

Trades and Labor Council, Goulburn St., Sydney (Wavelength, 280 Metres).

MORNING SESSION.—10 to noon.

CHILDREN'S SESSION.—6.0: Birthday calls, request numbers, and kiddies' entertainment.

EVENING SESSION.—7.0: Musical interlude. 7.15: Sporting feature; complete review of to-day's racing, Mr. Geo. A. Davis. 7.40: Health feature, Northev du Maurier. 8.0: Hawaiian steel guitar selections. 8.15: Al Rosenberg, novelty pianist. 8.30: Banjo solos, Master Harry Weir. 8.38: Al Rosenberg at the piano. 9.10: Sporting feature from Sydney Stadium; full description of main 15-round event. 9.50: Music from the studio. 10.0: Closing announcements.

Thursday, December 19

2UE

Broadcasting Station 2UE, Everett Street, Maroubra, Sydney (Wavelength, 298 Metres).

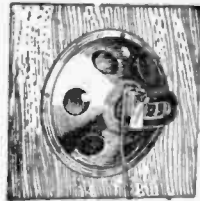
For DAY SESSIONS, see Friday. **EVENING SESSION.**—6.30: Wendy's hour with the children and birthday greetings. 7.15: Vocal and instrumental items. 7.55: Announcements and news from the "Sun." 8.0: Clock and chimes. 8.1: Overture, "Semiramide." 8.10: Vocal and orchestral music. 10.15: National Anthem; close down.

THE BLUE SPOT

World Famous Radio Products



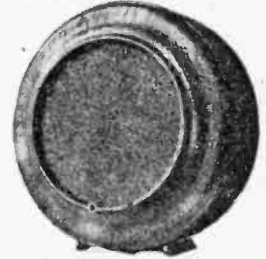
BLUE SPOT 59 P CONE SPEAKER.
Fitted with four Pole Electro-Magnetic Power Unit. Model 66 P with adjusting screw.
Attractive design in Bakelite, highly polished, length 17in., height 12in.
PRICE £6/8/



"BLUE SPOT" METAL CONE SPEAKER CHASSIS.
Supplied with made-up Cone fixed in position. Baffle Board 18in. is recommended. Price, without Baffle Board, 11in. With Unit 66K £3.
Suitable for ordinary Loud Speaker, or to build into Console Model.



"CHANCERY" GOTHIC, incorporating "Blue Spot" Unit. Highly finished Mahogany. 12in. diameter. £3/7/6.

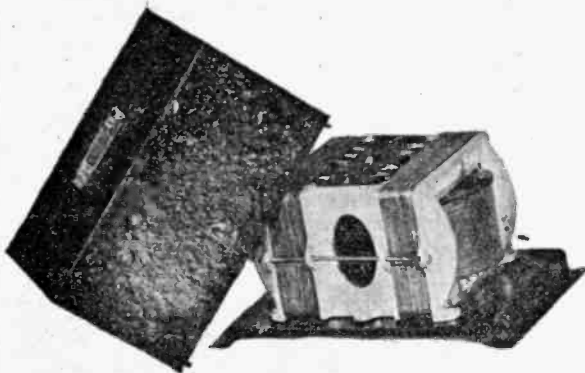


"CHANCERY" COURT, incorporating Blue Spot Unit. In metal, 12½ inches diameter. Finished in Rich Ripple Toned Gold. £3/7/6.

BLOCH & GERBER, LTD. FOX & MACGILLICUDDY, LTD.

Sole Agent
H. HECHT & CO., Broughton House, 181 Clarence Street, Sydney.

Distributors for "CHANEX" CONDENSERS, used and recommended by Technical Editor in Constructional Article, Pre-Selector Four described in this issue.
"CHANEX" Variable Resistors up to 500,000 ohms.



As Specified in the

PRE-SELECTOR FOUR CIRCUIT SOUTHERN RADIO POWER-PACKS

LAYER WOUND, LAYER INSULATED AND AIR-COOLED

The advanced method of construction, and use of aluminium castings, obviates wax and bitumastic filling compounds, which eventually cause trouble.

POWER-PACKS, POWER TRANSFORMERS AND LOW FREQUENCY CHOKES MADE TO ANY SIZE AND SPECIFICATIONS.

BUILT TO A HIGH QUALITY STANDARD, NOT DOWN TO A LOW PRICE.

Obtainable at all leading Radio houses throughout the Commonwealth

The Southern Radio Engineering Co. Ltd.

Manufacturers of High Grade Radio Apparatus

FL 2407

363a OXFORD STREET, PADDINGTON, SYDNEY

FL 2407

Local Programmes, Thursday, December 19

2FC

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 451 Metres).

EARLY SESSION—7 to 8.15 a.m.

- 7.0: "Big Ben" and meteorological information for the man on the land.
 7.3: This morning's news from the "Daily Guardian."
 7.6: Austradio Musical Reproduction.
 7.45: Mails and shipping.
 7.48: What's on to-day?
 7.50: Children's Birthday Calls.
 8.0: Music from the Studio.
MORNING SESSION—10.30 a.m. to 12.30 p.m.
 10.30: Announcements.
 10.32: A.B.C. Racing Observer.
 10.45: HORACE WEBER at the GRAND ORGAN.
 11.0: HOUSEHOLD HELPS: Domestic Notes, by Miss Ruth Furst.
 11.10: CABLES (Copyright), "Sun"—"Herald" and A.P.A. News Service.
 11.15: MORNING DEVOTION.
 11.30: Austradio Musical Reproduction.
 11.53: British Official Wireless Press.
 12.0: "Big Ben." Stock Exchange and Metal Quotations.

- 12.5: TOM GURR—"Travelogue."
 12.20: Midday weather forecast and weather synopsis. Special produce market session for the man on the land, supplied by the State Marketing Board.
 12.30: CLOSE.

NOTE:—Results of the cricket match, Victoria v. Queensland, played at Brisbane, will be given as received.

THE LUNCH HOUR—1 to 2.30 p.m.

- 1.0: Lunch Hour Music.
 2.0: Stock Exchange, second call.
 2.2: A glance at the afternoon "News."
 2.7: Studio Music.
 2.27: Announcements.

THE RADIO MATINEE—2.30 to 4.30 p.m.

- 2.30: THE POPULAR TRIO.
 2.42: GILDA PATTINI, Soprano—
 (a) "My Task."
 (b) "I Hear a Thrush at Eve."
 2.49: POPULAR TRIO.
 3.0: C. N. Baeyertz, "Spoken English."
 3.15: THE POPULAR TRIO.
 3.30: GILDA PATTINI, Soprano—
 (a) "Rose Over the Way."
 (b) "Japanese Love Song."
 3.37: THE POPULAR TRIO.
 3.45: CHRISTIAN HELLEMANN at the ORGAN.
 4.0: Mrs. E. HUME—"Pen Pictures of Life."
 4.15: Studio Music.
 4.28: Stock Exchange, third call.
 4.30: CLOSE.

EARLY EVENING SESSION—5.45 to 7.55 p.m.

- 5.45: Children's "Good-night" Stories, told by Aunt Goodie.
 The Drummoyne Practice School Fife and Drum Band—
 (a) March, "Full of Go" (Round).
 (b) Waltz, "The Little Warbler" (Round).
 6.45: Dinner Hour Music.
 7.20: A.B.C. Sporting Service.
 7.25: Special Country Session. Stock Exchange Resume. Markets. Weather Forecast. Late news service from the "News." Truck Bookings.
 7.58: To-night's Programme.

THE EVENING PRESENTATION—8 to 11.30 p.m.

- To-night Our Concert Programme is taken from the Eighth Annual Community Evening of the Australian Gas Light Company's Staff. Through 2BL there will be a Symphony Orchestral Concert from the Newcastle Town Hall.
 8.0: FROM FARMER'S RESTAURANT—The Eighth Annual Community Evening of the Australian Gas Light Company's Staff THE AUSTRALIAN GAS LIGHT COMPANY'S ORCHESTRA.
 8.6: COMMUNITY SINGING—The Company with the Staff Orchestra.
 8.14: CLEMENT Q. WILLIAMS, Baritone.
 8.20: VINCENT ASPEY, Violinist.
 8.28: CONSTANCE BURT, Soprano.
 8.38: CHARLES LAWRENCE, Entertainer.
 8.46: AL HAMMETT, Saxophone Solos.
 8.54: RAYMOND BEATTY, Basso.
 9.0: CONSTANCE BURT and CLEMENT Q. WILLIAMS, Duet.

9.5: FROM THE STUDIO: THE COUNTRY MAN'S WEATHER SESSION—

- (a) "New South Wales Forecasts."
 (b) "Interstate Weather Synopsis."
 9.7: FROM FARMER'S RESTAURANT: Interval during which the Orchestra will play.
 9.20: Second Half of Community Evening. THE AUSTRALIAN GAS-LIGHT COMPANY'S STAFF ORCHESTRA.
 9.26: COMMUNITY SINGING—The Company with the Staff Orchestra.
 9.34: RAYMOND BEATTY, Basso.
 9.42: CONSTANCE BURT, Soprano.
 9.50: AL HAMMETT, Saxophone Solos.
 9.55: RAYMOND BEATTY and CLEMENT Q. WILLIAMS, Duet.
 10.2: CHARLES LAWRENCE, Entertainer.
 10.8: VINCENT ASPEY, Violinist.
 10.16: CLEMENT Q. WILLIAMS, Baritone.
 10.24: CHARLES LAWRENCE, Entertainer.
 10.30: FROM THE HOTEL AUSTRALIA: Cec. Morrison's Dance Band.
 11.30: CLOSE. NATIONAL ANTHEM.

2BL

Australian Broadcasting Company, Ltd., Market St., Sydney (Wavelength, 353 Metres).

OPENING SESSION—8.15 to 11 a.m.

- 8.15: G.P.O. Chimes and Announcements.
 8.16: Music for every Mood.
 8.40: Meteorological data for the country.
 8.45: Mails and Shipping Information.
 8.50: Memory Melodies.
 9.0: This Morning's Story.
 9.30: A Musical Interlude.
 9.40: British Official Wireless Press.
 9.45: New Music.
 10.2: News from the "Labor Daily."
 10.5: News from the "Daily Guardian."
 10.10: Austradio Musical Reproduction.
 10.40: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley.
 11.0: G.P.O. Chimes. Close Down.
MIDDAY SESSION—12 Noon to 2.30 p.m.
 12.0: G.P.O. Chimes and Announcements. A Pianoforte Recital.
 12.30: LUNCH MUSIC.
 1.0: Afternoon news from the "News."
 1.5: Modern music.
 1.20: Austradio Musical Reproduction.
 1.50: A Pianoforte Recital.
 2.20: New Dance Numbers.

AFTERNOON ENTERTAINMENT—2.30 to 5.45 p.m.

- 2.30: Half-an-hour with Silent Friends.
 3.0: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 3.12: FROM THE STUDIO. FRED. FORD, Comedian—
 (a) "Don't Apologise" (Hansen).
 (b) "Patter."
 (c) "Silly Remark to Make" (Everley).
 3.19: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 3.30: FROM THE STUDIO—Song of long ago.
 3.37: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 3.45: ROSE ANTILL DE WARREN—"Stories of Famous Women—Madam Curan and Lady Hamilton."
 4.0: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 4.12: FRED. FORD, Comedian—
 (a) "Parted My Hair in the Middle" (Mills).
 (b) Patter.
 (c) "Tennessee" (Burlesque) (Thornton).
 4.19: New Ballads.
 4.30: ROMANO'S DANCE ORCHESTRA, under the direction of Bennie Abrahams.
 4.45: FROM THE STUDIO. The Trade Hour—Demonstration Music.
 5.45: Weather Information. Close Down.
THE DINNER HOUR—6.15 to 7.55 p.m.
 6.15: DINNER QUARTET.
 6.45: THE GIRLS' RADIO CLUB, conducted by Miss Gwen Varley.
 7.5: The Country Man's Market Session—Wool, Wheat, Stock, Farm Produce, Fruit, and Vegetable Markets.
 7.20: DINNER MUSIC.
 7.45: THE DRUMMOYNE FIFE AND DRUM PRACTICE SCHOOL BAND.
 7.58: What's on the air to-night?

TO-NIGHT'S PRESENTATION—8 to 10.30 p.m.

We are at Newcastle again to-night, and are broadcasting the Symphony Orchestral Concert from the Newcastle Town Hall. Through 2FC Service the concert programme from the Annual Meeting of the Staff of the Australian Gas Light Company promises a pleasing contrast.

8.0: FROM THE NEWCASTLE TOWN HALL—

SYMPHONY ORCHESTRAL PROGRAMME

- (Hon. Conductor, J. Stanley Hurn, L.A.B.)
 ORCHESTRA—
 "March Hongroise" (Berlioz).
 "Oberon" (Weber).
 VOCAL—
 "Recit et air de Lia," from: "L'Enfant Prodigue" (Debussy).
 MADAME RACHEL LE PATOUREL, L.R.A.M.
 ORCHESTRA—
 "Prelude" from "Lohengrin," 1st Act (Wagner).
 "Lyon du Ball" (Gillet).
 "Farewell" Symphony (Haydn).

9.0: FROM THE STUDIO—

Weather Information for the man on the land.

9.7: FROM THE NEWCASTLE TOWN HALL—

CONTINUATION OF SYMPHONY ORCHESTRAL PROGRAMME.

- ORCHESTRA—
 "Angel's Farewell and Prelude," from "Dream of Gerontius" (Elgar).
 Vocalist: MISS ENID HALE.

ORCHESTRA—

"Maritana" (Wallace).
 VOCAL—
 (a) "Fondest Hearts May Softly Swell" (Faust).
 (b) "Serenade" (Schubert).

MR. IRWIN C. PAGE (with Orchestral Accompaniment).

ORCHESTRA—
 (a) "Petit Air de Ballet" (J. Stanley Hurn).
 (b) "Nanette" (Ewing).

ORCHESTRA—

"William Tell" (Rossini).

10.0: FROM THE STUDIO—

Austradio Musical Reproduction.

10.25: Late News from the "Evening News." Late Weather Forecast.

10.30: NATIONAL ANTHEM. CLOSE

2GB

Sydney (Wavelength, 316 Metres).
 Theosophical Broadcasting Station, 29 Bligh St.,

- 10.0: Music. 10.10: Happiness talk by A. E. Bennett. 10.20: Music. 10.30: Women's session by Mrs. W. J. Stelzer. 11.30: Music. 11.45: Close down. 1.30: Speeches from the Legacy Club. 2.0: Music. 2.5: Women's radio service by Mrs. Dorothy Jordan. 2.50: Movie Know All. 3.0: Music. 3.30: Close down. 5.15: Children's session by Uncle George. 6.50: M.G.M. Radio Movie Club session. 7.0: Music. 7.45: Feature story. 8.0: Miss Heather Kinnaird, contralto. 8.7: Band selections. 8.15: Mr. William Green, tenor. 8.22: Symphony Orchestra. 8.30: Mr. Jack Win and Miss Nora Windie in a humorous sketch. 8.40: Miss Gwen Selva, soprano. 8.50: Band selections. 9.0: Weather report. 9.3: Address. 9.15: Miss Heather Kinnaird, contralto. 9.25: Violin solos. 9.30: Mr. William Green, tenor. 9.40: Mr. Jack Win and Miss Nora Windie in a humorous sketch. 9.50: Miss Gwen Selva, soprano. 10.0: Instrumental music. 10.30: Close down.

2UW

Radio Broadcasting, Ltd., Paling's Building, Ash St., Sydney (Wavelength, 267 Metres).

- MIDDAY SESSION.**—As usual. **EVENING SESSION.**—5.30: Children's Hour. 6.30: Close. 7.0: Request numbers. 7.45: Garden talk by Mr. S. H. Hunt. 8.0: Scotch night. 9.0: Comments on foreign affairs by Mr. J. M. Prentice. 9.10: Music and request numbers. 10.30: Close.

(2UE on page 70, 2KY as usual.)

ABOUT THAT CHRISTMAS PRESENT— SOMETHING YOU HAVEN'T THOUGHT OF

Buy him Phones.
Lightweight, 7/6.
Elwood, 2000 ohms., 10/6.

You'll Earn Someone's
Approval
With Any of These
Suggestions

The Pride of Achievement.
Community Three Kit, £3/16/-.
He can build it himself.
An unequalled 3-valve set.

Wallace B Eliminator Kit. For 3 valves, 59/6.
For 4 and 5 valves, 67/6.
Wallace B and C Kit, for sets up to 5 valves,
£3/15/-.

Special 280 B and C Eliminator (over 200 volts),
for any set, £6/17/6.
Add 5/- to make complete ABC Pack of any of
these Eliminators.
Plain Diagrams Supplied.

Why not make yourself one for Xmas?

Other Seasonable Suggestions

Test Meters, 0-6, 0-120
volts,
12/6.

Hydrometers, 3/6.
Guaranteed accurate.

One-valve Kit, £3.
Complete.

Quaker Condensers.
.0005 mfd., 7/6.
.00035 mfd., 7/3.
Single Hole Mounting.

SAME DAY SERVICE
for
Country Clients.

If it's Radio—We have it
THE WIRELESS SHOP

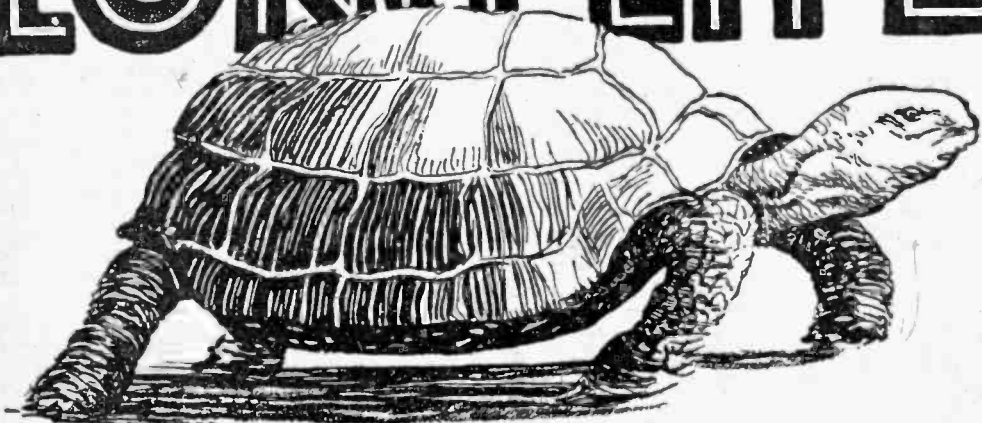
Miss F. V. Wallace, 6 Royal Arcade, Sydney
THE OLDEST RADIO FIRM IN TOWN

Money Back
Guarantee.

Two Doors from George Street, opp. Q.V. Markets.

ESTABLISHED 8 YEARS. 'PHONE, MA5043.

For LONG LIFE



Possessing remarkable ability to outlast their competitors—
Siemens Radio Batteries are undoubtedly the batteries for you
to buy.
They embody every latest improvement in battery construction
and ensure clear, "noiseless" reception at all times.
PRICES: Super Radio No. 1035X, 50 volts. List Price, 37/6 each.
Super Radio No. 1040X, 45 volts. List Price .. 25/- each.
Grid Bias C Battery, No. 1073X, 4½ volts 2/9 each.

Use

SIEMENS

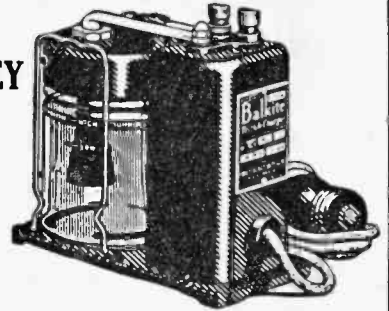
RADIO BATTERIES

SIEMENS (Australia) PTY., LTD.
SYDNEY: 257 Clarence Street. BRISBANE: 132-134 Charlotte Street.
MELBOURNE: 20 Queen Street. NEWCASTLE: 45 Watt Street.
ADELAIDE: 27 Pulteney Street.

SENSATIONAL

For
ONE MONTH
 ONLY!

BUY NOW!
SAVE GOOD MONEY



SAVE 25/-

BALKITE TRICKLE CHARGERS

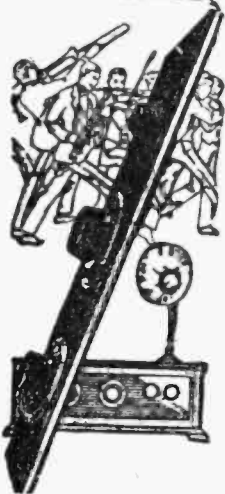
Over 750,000 in use. Charging rate about $\frac{1}{2}$ ampere. As a trickle charger automatically keeps your "A" battery fully charged.

Old Price £3/10/- NOW £2'5'.

DILECTO BAKELITE

The ORIGINAL Genuine
 Bakelite Panel Material

LOOK HERB
 for the RED STRIPE



**PANELS
 ANY SIZE
 CUT TO
 ORDER.
 EDGES
 SMOOTH
 AND
 SQUARE.**

TRICKLE CHARGING

BEGAN WITH

BALKITE

To-day there are over 750,000 Balkite Trickle Chargers in use. Just as it was first in making trickle charging possible, Balkite has always been first in popularity and number in use. Balkite is the standard trickle charger, tried and proved by us in the hands of its thousands of owners.

Like all Balkite Radio Power Units, this charger is a permanent piece of equipment. It has no tubes and nothing to replace or renew. It is noiseless in operation, and can usually be used during reception. It is very compact and small, and its current consumption is very low.

The Balkite Trickle Charger can be used as a trickle charger with any 6-volt radio "A" battery. Thus used it keeps your battery always at full power, and in effect converts it into a light socket "A" power supply. With 4-volt batteries it can be used as an intermittent charger of the usual type; or as a trickle charger if a resistance is added. Charging rate is approximately $\frac{1}{2}$ ampere.

Add a Balkite Trickle Charger to your "A" battery. Know the convenience of permanent silent "A" power from the light socket always.

Wholesale Only

OBTAINABLE FROM ALL DEALERS

O. H. O'BRIEN (Sydney)

37-39 PITT ST., SYDNEY. 654-664 BOURKE ST., MELBOURNE.

REDUCTIONS

For
**ONE MONTH
ONLY!**

THE WORLD FAMOUS BALKITE "B" ELIMINATOR

Noiseless, Tubeless, Permanent
Light Socket "B" Power Supply



SAVE 60/-

The noiseless, tubeless, permanent
light socket "B" power supply.
Model BW, for sets with 5 valves
(201A type) or less.
£8/19/6.
NOW

£5/19/-

MODEL B135, for sets with 8
valves and up to 135
volts, £13/10.

NOW **£7/19/6**

THE
WORLD'S GREATEST
CRYSTAL



Complete **1 1/3** With Silver
Cat's Whisker

*Concert Tested and
Guaranteed*

Wholesale Only

DETERIORATION LOSSES ARE
ELIMINATED IN THE



LONG LIFE BATTERY

THE "PERTRIX"

Patent Dry Battery is made according to a new process,
and does not employ sal-ammoniac as an electrolyte. It
does not deteriorate in stock. It gives 60 per cent. more
capacity for a given size of cell. It is silent to the end
of the discharge.

4 1/2 Volt, 1/-; 9 Volt, 4/-; 45 Volt, 12/-;
60 Volt, 16/-.
45v. Heavy Duty, 24/-.

O. H. O'BRIEN (Sydney)

W. E. PETERMAN, 160 EDWARD ST., BRISBANE

Radio Cabinets



MODEL 2A. FULL POLISH. £6/10/.

Install Your Set Into a Beautiful Art Radio Cabinets
Inspect Our Large Variety of Combined Radio-Phonograph Cabinets

We Manufacture Baffles for Dynamic Speakers
PRICES FROM 6/6 TO 45/-
Combine Beauty & Efficiency in Radio Construction



Beautiful Gold Lacquered Aluminium Coil and Valve Shields, Mounted on a Gold Lacquered Aluminium Sub-panel, the effect is most artistic.

Two-tone Gold Lacquered Embossed Aluminium Panels, 18 x 9, 6/6 each
Exclusive new designs in Gold Lacquered Metal Cabinets. Dealers supplied.

Phonograph Motor, Tone Arms and Speakers.

We invite you to inspect or send for Illustrated Price List.
Open Friday Nights.

Prima Donna Radio & Cabinet Co.,
264 OXFORD STREET,
WOOLLAHRA.

Opp. Denison Street, near Bondi Junction. Phone FW2328.

Interstate Programmes, Thurs., Dec. 19

3LO

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 371 Metres).

EARLY MORNING SESSION.

7.0 to 8.15: As usual.
MORNING SESSION.
10.30 to 11.30: As usual. 11.33: Description of Sheffield Shield cricket match, Queensland v. Victoria, at M.C.C. 12.15: News. 12.30: Close down.

MIDDAY SESSION.

1.0 to 1.30: As usual.
AFTERNOON SESSION.
2.0: Description of Sheffield Shield cricket match—Queensland v. Victoria, at Melbourne Cricket Ground. 4.0: Regent Brass Band—Indian Love Song, "Pale Moon"; Selected: fox-trot, "Marvellous." 4.10: Newstead Rush, baritone—"Tally Ho" (Lemli), "Travelers' Joy" (Brahel). 4.17: Irene Galloway, violin—"Meditation," from "Thais" (Massenet). "Czardas" (Monti). 4.24: Regent Brass Band—"Popular Choruses No. 2." 4.30: Acceptances and barrier positions for the Mentone races on Saturday. 4.35: Close down.

THE CHILDREN'S CORNER.

5.45: "Bobbie Bluegum" and "Clever Clarice." 6.35: Musical interlude.

EVENING SESSION.

6.40: Let's talk about our animals—More Dog Stories Mr. J. L. Moore. 6.55: Musical interlude. 7.0 Time signal. 7.1: Countryman's session. 7.25: For the man on the land—Preparation for Fruit Export, Mr. J. M. Ward, Superintendent of Horticulture. 7.40: News. 7.45: The latest books, Captain C. H. Peters. 8.0: Time signal.

NIGHT SESSION.

8.0: Grand Radio Choral Contest, organised by Australian Choral Union, in conjunction with 3LO 8.30: You will hear the outstanding personality of question of the week.

OUR DANCE NIGHT.

8.45: Paul Jeacle and his Band—Dance music 8.55: Josie Kean—Songs at the Piano. 8.58: Paul Jeacle and his Band—Dance music. 9.8: Norman Leslie, comedian, will entertain. 9.10: Paul Jeacle and his Band—Dance music. 9.20: Jean Brunton, contralto—"As I Went a' Roaming" (Brahel). 9.23: Paul Jeacle and his Band—Dance music. 9.33: Josie Kean and Norman Leslie—a few minutes' fun. 9.36: Paul Jeacle and his Band—Dance music. 9.45: Jean Brunton, contralto—"Mister Bear" (Norah Blamey). 9.50: Paul Jeacle and his Band—Dance music. 10.0: Norman Leslie, comedian—"Food for Laughter." 10.3: Paul Jeacle and his Band—Dance music 10.13: Josie Kean—at the Piano. 10.16: Paul Jeacle and his Band—Dance music. 10.28: Norman Leslie, comedian—"Smile a While." 10.30: News session. 10.40: Paul Jeacle and his Band—Dance music. 10.50: Jean Brunton, contralto—"You'd Better Ask Me" (Lehr). 10.53: Paul Jeacle and his Band—Dance music. 11.30: God Save the King.

3AR

Australian Broadcasting Co., 120A Russell St., Melbourne (Wavelength, 381 Metres).

MORNING SESSION

8.10 to 11.0: As usual.

MIDDAY SESSION

12.0 to 2.0: As usual.

AFTERNOON SESSION

2.1: Plapper daughters—Miss Hattie Knight. 2.15: Musical interlude. 2.20: Food and cookery—the thermometer in electric cooking—Miss B. Osborne. 2.35: Musical interlude. 2.40: Your health and appearance—exercise as an aid to beauty—Miss Evelyn N. Ellis. 2.45: Musical interlude. 3.0: Regent Brass Band—march, "The Guard's Patrol," overture, "Gabriana." 3.10: Freda Treweek, mezzo-soprano—"Country Folk" (Brahel), "Oh to the Greenwood" (Brahel). 3.17: Irene Galloway, violin—"Ave Maria" (Schubert Wilhelm). "Moto Berpetuo" (Brahel). 3.24: Comedy sketch, "The Polite Tramp." Characters: Mr. Good, L. A. Thomas; Mrs. Good, Iza Crossley; the tramp, Harry Thomas. 3.30: Regent Brass Band—selection, "Gems of Harmony." 3.44: Freda Treweek, mezzo-soprano, and Newstead Rush, baritone—"Passing By" (Purcell), "Awake" (Pelissier). 3.51: Regent Brass Band—two cornet solos, "Elegie" (Massenet), "The Rosary." 3.55: Iza Crossley, entertainer—"Sing a Little Song." "In the Days When Good Victoria was Queen." 4.0: Musical reproduction. 4.15: Description of Sheffield Shield cricket match, Victoria v. Queensland, at the Melbourne Cricket Ground. 5.30: Weather data. 5.40: From the M.C.C., description of cricket match resumed. 6.0: Close down.

EVENING SESSION

6.15 to 8.0: As usual.

NIGHT SESSION

8.1: A special studio reproduction of "Concerto in D," Op. 77 (Brahms), for violin and orchestra, Fritz Kreisler and Berlin State Opera Orchestra, conducted by Dr. Leo Blech.

8.41: Round and about by the Odd Men Out, who to-night will talk about "Our Friend, Father Christmas."
8.56: A studio reproduction of "Ballad in A Flat," Op. 42 (Chopin), "Etude in E Minor," Op. 25, No. 5 (Chopin), played by V. de Pechmann, piano. 9.5: Transmission from Cairns Memorial Church, East Melbourne. Programme by the choir. Hymn, "Hark the Herald Angels Sing" (Mendelssohn). Anthem, "Adeste Fideles" (Novello). chorus, "For in Adam All Die"; chorus, "Even So in Christ Shall All be Made Alive" ("The Messiah" Handel). Anthem, "O Sing to God" (Gounod), soloists, Miss Louise Thornton and Mrs. Abery. Conductor, Mr. R. J. Oehr. Organist, Miss E. P. Thurman.
9.35: A studio reproduction of "Symphony in D Minor" (Caesar Franck). "Lento," "Allegro," "Allegretto," "Allegro."
10.20: Weather; news.
10.30: God Save the King.

4QG

Queensland Government Radio Service, Brisbane (Wavelength, 385 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION

8.0: Group 1.—Grand Opera. 4QG Symphony Orchestra (conductor, Mr. Erich Johnson). "Merry Wives of Windsor" (Nielsen). J. P. Cornwell bass—"Even Bravest Heart" (from "Faust," Gounod). 4QG Symphony Orchestra—selection from "Aida" (Verdi). Hilda Cooper, contralto—"When All Was Young" (Faust, Gounod). Group 2.—Miscellaneous. 4QG Symphony Orchestra—"Salut d'Amour" (Elgar), "Water Mill" (Eilenberch). C. T. Birbeck, tenor—"Golden Moon" (Rofle). 4QG Symphony Orchestra—"Second Arabesque" (Debussy), "March" (Teke). May Jordan, soprano—"Lo, Here the Gentle Land" (Bishop). 4QG Symphony Orchestra—waltz, "Roses from the South" (Strauss). 9.0: Metropolitan weather forecast. Group 3.—Classical. J. P. Cornwell, bass—"The Song of the Volga Boatman." 4QG Symphony Orchestra (conductor, Erich Johnson)—Nutcracker Suite (Tschai-kovsky). "Miniature Overture," "Arab Dance," "Dance of the Sugar Plum Fairy," "Russian Dance" (Trepak). Hilda Cooper, contralto—"Who is Sylvia" 4QG Symphony Orchestra—"Nutcracker Suite" (Tschai-kovsky). "Faust," "China's Dance." "Dance of the Flutes," "Waltz of the Flowers." Group 4.—Light Opera. C. T. Birbeck, tenor—"When Other Lips" (Balfe). 4QG Symphony Orchestra—selections from "Princess Ida" (Gilbert and Sullivan). May Jordan, soprano—"The Wren" (Benedict). 4QG Symphony Orchestra—Overture from "Maritana" (Wallace). 10.0: News and weather. Close.

5CL

Central Broadcasters, Ltd., 114 Hindmarsh Square, Adelaide (Wavelength, 400 Metres).

Day sessions as usual (see Friday).

NIGHT SESSION.

8.0: Programme reviews and announcements. 8.10: From the Malvern Methodist Church, Handel's "Messiah," by the Malvern Choir, under the direction of Fred Pilgrim, organist. Organ overture, by Fred Pilgrim. Lindsay Jessop, tenor: "Comfort Ye," "Every Valley." "Every Valley." "Every Valley." Ray Wood, bass: "Thus Saith the Lord," "But Who May Abide." Hilda Gill, contralto: "Behold, a Virgin," "O, Thou That Tellest," "For Unto Us, a Child is Born." Organ Solo, by Fred Pilgrim. "Pastoral Symphony." Phyllis Webb soprano: "There Were Shepherds," "And the Angel Said." Chorus: "Glory to God." Phyllis Webb, soprano: "Rejoice, Gentley." Hilda Gill, contralto: "Then Shall the Eyes of the Blind," "He Shall Feed His Flock." Phyllis Webb, soprano: "Come Unto Him." Chorus: "His Yoke is Easy." 9.0: Meteorological information, including Semaphore tides. 9.2: Overseas grath report. 9.3: Announcements. 9.5: Captain Donald Maclean. 9.15: From Malvern Methodist Church, continuation of "Messiah." Chorus: "Behold the Lamb of God." Hilda Gill, contralto: "He Was Despised." Linday Jessop, tenor: "Thy Rebuke, Behold and See," "But Thou Didst Not Leave." Chorus: "Lift Up Your Heads." Harold Tideman, bass: "Why Do We Dwell in Darkness." Lewis Dawe, tenor: "He That Dwelleth," "Thou Shalt Break Them." Chorus: "Halleluiah." Phyllis Webb, soprano: "I Know That My Redeemer." Chorus: "Worthy is the Lamb." 10.15: News. 10.30: Recordings. 11.0: Close.

6WF

Australian Broadcasting Company, Ltd., Wellington Street, Perth (Wavelength, 435 Metres).

Day sessions as usual.

EVENING SESSION.—8.0: Town Hall chimes. 8.1: Special open-air concert broadcast from Government Gardens. 10.0: What's on the air to-morrow. 10.5: Australian reproduced recital of famous orchestras and celebrity artists. 10.55: Weather report. 11.0: Close down. God Save the King.

Acclaimed World's Finest and Most Beautiful Speakers

DIAMOND BATTERIES

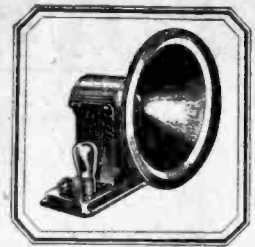


8 WEEKS FRESHER!

45^v Super Capacity

-at all Dealers 20/-

The New
Jensen
AUDITORIUM SPEAKER



GREATER VOLUME AND WITH REPRODUCTION AS TRUE AS THE ORIGINAL

Write for Illustrated Folder

Hear the JENSEN AUDITORIUM-ELECTRO DYNAMIC SPEAKERS demonstrated in our Showroom. As proof of their popularity, already three shipments sold in record time.

ONLY A FEW LEFT FOR IMMEDIATE SALE!

For Quality and Brilliance of Reproduction, Jensen Performance has never been approached, and with the added ability to reproduce these qualities with enormous volume, this New Jensen Speaker proves itself the master stroke of a creative genius.

"The Real Speaker for Power Amplifiers."

ALSO THORDASON Push-Pull AMPLIFIERS and Parts in Stock.

Factory Representatives and Distributors:

REG. ROSE & CO.

Contractors to the Commonwealth and State Governments.

'Phone: B3872—Kembra Building, MARGARET ST., SYDNEY

AGENTS for
DIAMOND Dry
Cells, Batteries



STERLING RADIO COMPANY

181 CLARENCE STREET, SYDNEY

PRESENT 1930 MODEL

4-Valve Screened Grid Receiver

(5 Valves, including the Rectifying Valve)

This Set demonstrates the latest development in Radio Set Design and Manufacture.

The employment of Philips Screened Grid Valves enables us to produce a Set infinitely superior in SELECTIVITY, RANGE, VOLUME, and TONAL QUALITY anything offered in this price class.

The handsome design and workmanship of the Cabinet gives such pleasing appearance as to be a valued piece of furniture in any well-furnished Home.

Our Guarantee issued with every set.

TABLE MODEL, complete with Speaker, £29/15/-

CONSOLE MODEL, complete with Speaker as illustrated, £35/15/-

SUBURBAN AND COUNTRY AGENTS WANTED.

NOTE: These prices INCLUDE the famous BLUE SPOT Speaker. Nothing extra to buy.

HUBBY AND WIFE

TALK IT OVER

WIFE: Jim, it's marvellous! Honestly—I never knew we could obtain such wonderful entertainment and news, just by pressing a switch. **Why! it has our old model beaten to a frazzle.**

HUBBY: How? Why? What do you mean, dear?

WIFE: Well, I'll tell you—Firstly, there are **no messy batteries to ruin my best carpet and d'oyleys** and no more battery carting (they're heavy). Then there are **none of those costly "B" Batteries to buy every few months**—which means I'd be able to buy that extra new dress and that new hat for Christmas.

HUBBY: It sounds all right.

WIFE: Yes, but wait until I've finished Jim, the marvellous part is to come. **This wonderful new All Electric Wireless Set will work without aerial of any kind.**

HUBBY: You don't say so?

WIFE: Yes, it will, dear. I've heard it, and what do you think? **It absolutely cuts out that dreadful interference which spoils the programmes on ordinary sets.**

HUBBY: You mean you never hear two stations at the same time?

WIFE: Exactly, Jim, and **you should hear its beautiful, clear, hum free tone.**

HUBBY: It sounds like the set we want, eh?

WIFE: Yes, and it only **costs about 3d per week to operate.**

HUBBY: Who designed and sell this wonderful wireless entertainer?

WIFE: Economic Radio Stores, and all you have to do is just plug it into the electric light or power socket and tune in the programmes

HUBBY: Well! **It must be something out of the box,** because they put the famous Renown 3 on the market. **How much is it?**

WIFE: It's only **£21 complete** with the new Amplion Speaker. This set carries their genuine guarantee of absolute satisfaction—you to be the judge. It's their New "Silver Bell" All Electric (with 4 valves in all).

HUBBY: Come, my dear: we must go and inspect it. I think it's just what we want for Christmas.

Economic Radio Stores
25 ROYAL ARCADE, SYDNEY

And at
126A PITT STREET;
UNION STREET,
NEWCASTLE;
PARRAMATTA.

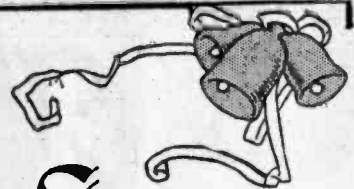
*Please mail more details re your
adv. 13/12/29.*

NAME

ADDRESS

Wire to Use When Winding a Transformer

Radio Information Service



Y.F.D. (Sydney).—"I am winding a transformer to supply a.c. valves with filament current. What gauge wire would be best for the secondary? I shall be drawing about 3 of an ampere. Please give any additional advice regarding this secondary wire you may think of importance. It is likely that I shall add a number of valves to this set at a later date, using screen grid valves, etc.

Answer: Warning is necessary against the use of too small a size of wire in the secondary winding of a transformer which is to supply filament current to a.c. valves. The safe current carrying capacity of the wire to be used in coils subject to continuous service is one ampere for 1500 circular mils. This is about the size of No. 18 wire, which consequently should not be expected to carry more than one ampere. This wire will suit your first requirement. It will be evident that a very large gauge wire will be necessary in a transformer secondary supplying several of these valves in parallel. A five-valve set using four valves drawing 1.75 amps each at 2.5 volts, and one valve drawing 1.5 amperes at 2.5 volts, would have a total draw of 8.5 amperes, requiring No. 9 wire. The wire should be well insulated.

J.F. (Enmore).—Please write on one side of the paper only.

(1) "I see by your paper that some crystal users are asking for a page or two on crystal sets. Well, Mr. Editor, I have been using a crystal set for eighteen months, but it is not much good, and I for one would be most thankful if you would give us some late circuits."

Answer: Many good crystal circuits have been published in queries columns, and the "Kug" crystal receiver published some six months ago met with approval of many readers. Why didn't you try those?

(2) "I notice the shops in town and the suburbs have crystal circuits, but they will not sell them. That is unfair to our children, who like to dabble in wireless, and as they have only a few shillings it does not give them a chance to learn. The price of valve sets are out of their reach."

Answer: Messrs. Colville Moore and Swains, Ltd. sell circuits without having to buy the parts. The Gaborindum Co. have a good circuit which they will probably be pleased to supply on application. Messrs. Elyia Tinsley are the agents for this concern. The price of a small efficient one-valve set need not be much higher than the price of a good crystal set and results would be far better.

(3) You might try a .0001 fixed condenser in series with the aerial. Unless you go in for something a little more elaborate, however, it is doubtful whether you will get the results required. Did you see the crystal circuit published in queries columns recently, forwarded to us by Mr. Cook? The question of a crystal user's page is being considered, but there is little in the way of advancement as regards crystal circuits, as this type of receiver is now obsolete.

A.R. (Marrickville West).—May be a faulty grid leak or bad connection. The long aerial would broaden tuning. A choke is not necessary, but may be found an improvement.

W.S. (Brisbane).—Why not use the proper coil formers? As has been stressed many times, such drastic alterations in a receiver can only result in inefficiency. The coil formers recommended were three-inch diameter. Using those of 2½-inch diameter, the number of turns would be serial coil 20 turns, R.F. secondary, 80 turns, R.F. plate coil, 30 turns, Detector secondary, 60 turns, Reaction, 30 turns. The .00025 mfd. condenser can be used as suggested. The voltage on the r.f. valve will depend on the valve being used. Generally this is about 45 volts. Look on the sheet accompanying the valve. The coils will make no difference to the plate voltage of the r.f. valve.

K.R.H. (Double Bay).—Remove about ten turns from the reaction coil, and, if necessary, increase plate voltage slightly.

K.J.W. (Marrickville).—Reduce length of aerial to about 60 feet overall.

D.W. (Dulwich Hill).—Reverse the connections to the primary of the first transformer, i.e., connect P to B plus and B plus to P.

V.O. (Narrabri).—Suggest you try out several of the well-known speakers and judge for yourself. We cannot make a definite recommendation of any one type.

W.C.C. (Bargo).—"In a back issue of 'Wireless Weekly' I read an article under the heading 'Coils and Colls.' It said to make your own solution, using about six square inches of sheet celluloid, and dissolve this in about an ounce each of acetone and amyl acetate. How do you dissolve the celluloid?"

Answer: Merely place the celluloid, cut into small strips, in the solution. It will dissolve of its own accord by the action of the chemical. The celluloid will dissolve in either of these chemicals.

(2) "Would Duo do for the coils of the Country man's one?"

Answer: Yes, quite O.K. Do not use any coil dope unless the windings are loose or unless it is desired to stiffen the winding.

(3) "How will I make a tapping at the 25th turn?"

Answer: When you come to the 25th turn twist a loop about an inch long, and solder a length of wire to this.

YU (Manly).—"Many thanks for your answer to my query re transformers or Renewal Trees. Will you please answer the following:—(1) Using Philips 3-1 transformers in both stages you say to place the r.f. choke in series with the plate of the first transformer. Would that mean between plate of detector valve and plate of first transformer?"

Answer: Yes. The wiring then becomes plate of detector valve to one side of the r.f. choke and to the reaction condenser. From the other side of the choke to the plate terminal of the first audio transformer.

(2) "Is it an advantage to use r.f. choke with any make of transformer, or is it possible to do without this?"

Answer: The use of the choke does not depend on the make of transformer used. See answer to next question.

(3) "Does r.f. choke add to volume or make reception clear?"

Answer: Once the signal impulses have been rectified by the detector valve they are at audio frequency. Before they have been rectified they are at radio frequency. There is radio frequency in the output of the detector, however, and the radio frequency choke stops the r.f. from being amplified with the audio frequency signal. In some cases the choke is necessary to make the reaction coil operate properly.

H.B. (Granville).—Back of panel diagrams in explanation are not of much use unless properly drawn. You referred to your drawings as "rather rough"—a poor description. Use a .00025 mfd. condenser for reaction control. Connect the fixed plates to the plate of the detector valve, and the rotor plates to the remaining end of the reaction coil, i.e., to the end which before connected to the plate of the detector valve. Instructions on building and adding audio stages have appeared many times, not only in articles, but in queries. Look up back numbers for instructions and circuits. See remarks to YU (Manly) for information required re choke.

C.H. (Hexley).—"I would be very pleased if you could give me a little advice concerning the operation of a.c. valves. My present set is a Reinartz three-valve d.c. operated, but I have heard a number of radio men condemn the a.c. valve, because they say they have nowhere near the life of the d.c. operated valve, and are a source of trouble, as they are often blowing out. A friend of mine, P.S. Grosley, and since it was installed he has had eight valves blow at different times. I understand that the voltage in this district (St. George) often goes up as high as 275 volts. With a transformer designed to take up to 245 volts, what would be the best method of guarding against the rise in voltage? I would be very glad if you would tell me whether the a.c. valves are quite O.K. as I can't make up my mind whether to use them, or keep on to the old d.c. valves."

Answer: The question of regulating a fluctuating supply in mains voltage has involved the attention of manufacturers and experimenters for some time. There are several semi-remedies, though there is as yet no really efficient remedy. However, your friend could call in a service man and request him to install a variable resistor in series with one of the primary leads to the input of the power transformer, and a plate voltmeter in the radio receiver. When the plate meter showed that the plate voltage was higher than normal, he could reduce the input by adjusting the resistance. The value of the resistance will be mainly dependent on the current taken by the set, and on the maximum voltage, i.e., 275 volts. As regards the use of a.c. valves, it is seldom the variation in voltage is so great as that experienced by your friend, and you should not let this affect you. A good plan would be to seek information from local listeners who have electric receivers. If you would like us to insert a paragraph for you, please advise.

"DEMAY" (No Address).—Write to Messrs. Angwin and Robertson, Castlereagh Street, Sydney, who will be pleased to send you a list of books covering the subject.

A.C.W. (Campsie).—A circuit of a four-valve portable receiver was published in a recent issue. Your one licence will cover both receivers.

L. L. McC. (Glebe Point).—The receiver mentioned will be quite suitable for your requirements.

F.V. (Molong).—Try reducing voltage on detector valve.

C.B. (Surry Hills).—Set is probably not neutralised. Instructions neutralising will be found in various issues of query columns.

B.A.S. (Angaston).—The parts may have been necessary. It is hard for us to say without knowing exactly what was wrong with the set. If you took the set to one who is actually only "a bit of a radio mechanic" (as referred to in your letter), you have only yourself to blame. Try the old valves in the set. The ringing noise is due to microphonic valves. Use shock absorber sockets, turn speaker away from receiver (do not place speaker on top of cabinet) and, if necessary, place receiver cabinet on rubber sponge feet.

W.J.S. (Queensland).—It would be a better proposition to purchase a new accumulator. Reg'd, we have no copies left of the issue required. See below.

GENERAL.—Can any reader please supply Mr. W. J. Skinner, Murphy's Creek, Queensland, with a copy of "Wireless Weekly" dated May 31, 1929, containing the supplement of broadcasting stations, etc.?

H.K. (Cessnock).—"The radio-frequency tuning and detector tuning on my 'All Empire' short-wave receiver will not synchronise. By the time the r.f. dial has moved from 100 to 80 degrees the detector dial has gone full scale, 100 to 0 degrees. I have checked the circuit several times, and found nothing wrong. I would be pleased if you could tell me which circuit is at fault. Apart from this trouble the set is giving very good results."

Answer: The coils are not properly matched. It will be necessary to add a few turns to the r.f. coils and match them to the detector coils. To the forty-metre coil mentioned at the end of your letter add about two turns. Other coils in proportion. You will have to experiment to find the exact number of turns required. Are you sure that the two condensers are of the same capacity?

E.L. (Nurrigawa).—"I am thinking of constructing an 'Improved Countryman's One Valve' from the circuit in 'Wireless Weekly,' August 23, 1929. Will you kindly tell me if the reaction coil can be wound on the same former, and also what distance should be left between the secondary and reaction coils. Is three-inch diameter former correct?"

Answer: Leave a space of ¾-inch between the two coils. Can be wound on the same former. Three-inch diameter former correct.

MR. LINDSTROMS (Mooseman).—In reference to your recent query, Mr. Hugh W. M. Quoid, "Anfield," Rosemore Av., Punchbowl, writes: "I can let this inquirer have a copy of 'Modern Wireless' containing the S.T. 75 or S.T. 100." Thanks, Mr. Quoid.

QUERY COUPON

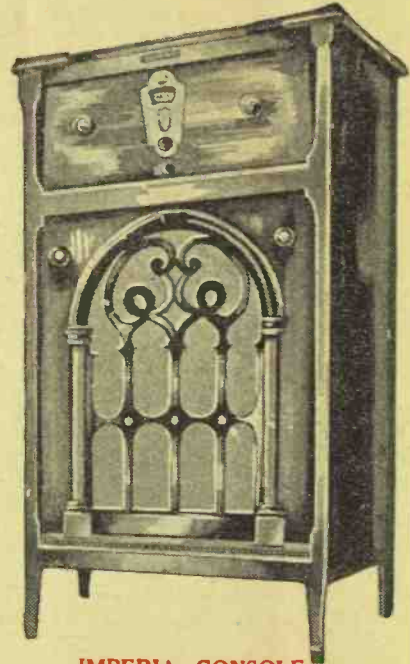
If you are in difficulties about reception or set-construction, let us know and we will endeavor to see you right. Make your questions brief to the point, and, where possible, show lay-out and wiring design. Under no circumstances will answers to queries be made by letter or by telephone. All answers will appear in the columns of this department in the order in which they are received.

Write to the Radio Information Service, c/o W. R. BBS, W.E.E.I.Y., 105 Macquarie St., P.O. Sydney, N.S.W. Please enclose a stamped address and a business-like return.

Harringtons

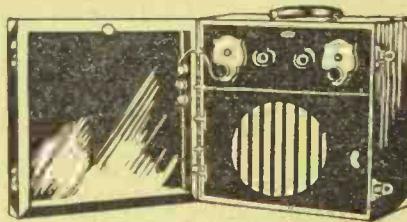
IMPERIA → RADIO ← GILFILLAN
 R.C.A. → ← CROSELY

There are more Harringtons Radio Sets in Australian Homes than those of any other make. A result naturally achieved because Harringtons Radio offers the fullest enjoyment for all with sets that are guaranteed, known all over the world, and priced as low as precision and quality permit. Every possible radio requirement is offered in Harringtons range, which includes such receivers as Imperia, Gilfillan, R.C.A. and Crosley. See and hear these magnificent sets at our cosy new audition rooms.



IMPERIA CONSOLE.

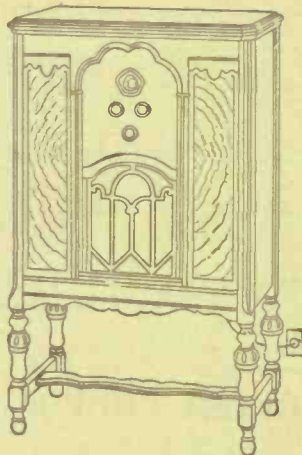
Australia's fastest-selling set—the greatest value for money to-day. Employs three valves and rectifying valve. The Imperia is a handsome, clear-voiced, tone-perfect set that is really dependable. Price Complete, installed, and working in your own home **£32'10'**



IMPERIA PORTABLE.

The Imperia Portable is a high-class Radio Set. It will bring in all the programmes on the air with rare clarity and volume. It is entirely suitable as a permanent set for the house, and, of course, will be "the life of the party" on outdoor occasions. A boon to invalids and bedridden.

Price, **£22'10'=-**
 Complete



GILFILLAN 100.

Gilfillans are recognised as one of the greatest receivers in the world. Immensely powerful, the Gilfillan brings in every station clearly and certainly. All Electric—7 valves—inbuilt dynamic speaker—Gilfillan possesses the richest tone in radio. Price, **£75'=-**
 Complete

Harringtons LTD.

Radio, Photo, and Cine Merchants,
 386 George Street, Sydney.
 Phone MA6001.

BRANCHES ALL STATES AND NEW ZEALAND.

Three New Radiotrons



Radiotrons have an enviable reputation in Australia for long life and consistent performance.

This reputation has been built up over a long period of years, and the addition of three new types complete a range of Broadcast Receiving Valves which will meet all requirements

RCA. 221

For battery operated sets
General Purpose.

Fil. Volts 5.5 to 6

FIL. CURRENT .06 AMPS.

Plate Volts 45 to 150

UY. 224

A.C. SCREEN GRID
General Purpose.

Heater Volts 2.5

Heater Cur., 1.75 amps

Plate Volts 180

UX. 245

FOR A.C. OR D.C. SETS
Power Amplifier.

Fil. Volts 2.5

Fil. Current 1.5 amps

Plate Volts 180-250

Obtainable from all Radio Dealers

Amalgamated Wireless
(Australasia) Ltd.

"Wireless House,"

47 York Street, Sydney

Queensland Distributors:

J. B. CHANDLER & CO.,

45 Adelaide Street, Brisbane.

Genuine



Radiotron