

All Broadcasting Programmes Accurately in Advance

Wireless Weekly

3^p-

VOL. 19, No. 1

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FRIDAY, JANUARY 1, 1932

The central graphic features the letters 'AWA' in a large, bold, stylized font with red and white vertical stripes. To the right, a list of services is presented on blue diagonal banners. The background is a dark blue sky with white stars and a silhouette of a radio tower on a hill. Two white lightning bolts strike the 'A's of the 'AWA' logo.

AWA

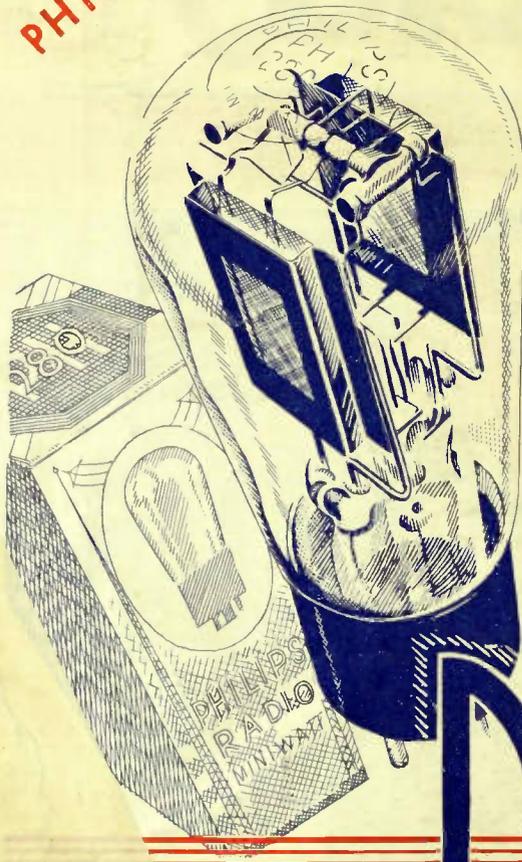
- BEAM WIRELESS
- WIRELESS TELEPHONY
- BROADCASTING
- COASTAL RADIO
- MARINE WIRELESS
- PACIFIC ISLANDS RADIO
- RADIOLA MANUFACTURE
- WIRELESS RESEARCH

AUSTRALIA'S NATIONAL WIRELESS ORGANISATION...
Employing 1,000 Australians

SPECIAL BEGINNERS' NUMBER

FIRST PRINCIPLES OF RADIO SIMPLY EXPLAINED

PHILIPS SET THE 1932 STANDARD



The PH mark is the indication of modernity in 2.5 volt Radio Valves. To the user it represents the latest scientific development of Philips—the standard by which radio valves must be judged. To the set constructor, the PH series offer a new field of radio enjoyment, incorporating as they do, the knowledge and achievement of the World's authorities on radio.

These modern tubes are designed to give sturdy and dependable service and to give to all American Sets the added punch and quality peculiar to the Philips 1932 standard.

Use	PH1227	PH1245	PH1224	PH1235	PH1217
Gen. Pur.	2.5	2.5	2.5	2.5	2.5
Power Amp.	1.75	1.5	1.75	1.75	1.5
Def. Amp.	180	250	180	180	250
V. Mu.	—	—	75	75	250
Pen-thodo	—	—	4	9	32
File Voltage	2.5	2.5	2.5	2.5	2.5
File Current	1.75	1.5	1.75	1.75	1.5
Plate Voltage	180	250	180	180	250
Screen Voltage	—	—	75	75	250
Plate Current (M.A.)	8.8	32	4	9	32
Screen Current (M.A.)	—	—	(A)	(A)	7.5
Grid Bias (Volts)	12	50	1.5	1.5	16.5
Impedance (Ohms)	9,000	1,750	400,000	200,000	38,000
Mutual Conductance	1	2	1	1.1	2.5
Amplification Factor	9	3.5	400	—	—
PRICE	17/6	19/-	22/6	25/-	22/6

(A) Not over 1/3 plate current.

PH280

File Volts 5
 File Current 2
 A.C. Voltage per plate 350
 D.C. Output Current 125 M.A.

PRICE 15/.

PHILIPS

PH

2.5 VOLT VALVES

(Agent of Philips Lamps (Australia) Ltd. (Radio Dept.) Head Office and Showrooms, Corner Clarence and Margaret Sts., Sydney, N.S.W.) (R.40)

*This is the Pentode Valve
perfected by Dr. Myers*



Here's the man who did it. Dr. Ralph E. Myers

Set Manufacturers who have tested the National Union Pentode agree it earns place with other National Union tubes as a Standard Tube for Standard Sets.

THE Pentode Tube is not new. It has been used for years in both England and on the continent of Europe. Feverish research in Pentodes has recently been the

work of American laboratories. The National Union Laboratory, under the direction of Dr. Ralph E. Myers, completed its work on our Pentode March 15, 1930.

We made no wild unsupported claims for it then. There has been no ballyhoo since, despite the fact that our laboratory tests indicated that it was superior not only to American style Pentodes but also European creations . . . We have preferred to let our Pentode prove itself in performance.

Since that time various set manufacturers have been using the National Union Pentode in developing and testing their own new circuits. One set manufacturer is being shipped one thousand National Union Pentodes a day.

Our Great Advantage

Thanks to a remarkable new insulating spray the National Union Pentode guarantees prolonged life. There is no cracking, no sealing. The high emission reserve so necessary in this type of tube is constant and maintained many hours longer in our tube than is true of ordinary Pentodes.

TECHNICAL RATING AND CHARACTERISTICS:

Filament voltage	2.5 Volts
Filament current	1.5 Amps.
Plate voltage, recommended	250 Volts
Screen voltage, recommended and maximum	250 Volts
Grid voltage	-16.5 Volts
Plate current	32 Milliamps.
Screen current	2.8 Milliamps.
Plate resistance	38000 Ohms
Stat. conduct.	2500 microhms
Load resistance, approximate	7000 Ohms
Power output	2.5 Watts
Length	5-5/8 in.
Diameter	2-3/16 in.

NATIONAL UNION
NY-247

THE STANDARD TUBE FOR STANDARD SETS

NATIONAL UNION RADIO VALVES

Send for Free Catalogue N.U. 48

INTERNATIONAL RADIO COMPANY LTD.

229 CASTLEREAGH ST., SYDNEY

.....Of course you know--you always did know!

PRICE'S is the only QUALITY house in Town!

Junk trade-ins do not disgrace our shelves
—we stock **ONLY** up-to-date guaranteed
goods—**SERVICE** with **SATISFACTION** has
kept us on the **RADIO MAP** for **TEN YEARS**
and will do so for the next **TEN YEARS!!!**

1922---?

(2 B.C.)

(TWO YEARS BEFORE ("A") BROADCASTING)

43 Plate Variable Condensers, £2/10/-; Radiotron 201a Valves,
£2 10/-; Common Crystals, 5/-; Catswhiskers, 6d; 3in. Plain
Bakelite Dials, 5/-; Three-coil holders, 37/6; Amplion Horn
Speakers, £10/10/-; Jefferson "41" Audio Transformers, 45/-, etc.

An extract from our advertisement in "Wireless Weekly"
TEN YEARS AGO

THERE'S ONLY ONE

PRICE'S RADIO SERVICE

5, 6, 7 ANGEL PLACE, SYDNEY

(The Neon Sign opp. Penfolds, Pitt St., will point the way
to **QUALITY**.)

(OUR CLIENTS DO NOT NEED THE GREETING "HAPPY NEW YEAR")

THE ★ 2BL MONDAY ★

S C H E M E of T H I N G S

An
Article

By MAJOR E. H. BOOTH, M.C., B.Sc.



MAJOR E. H. Booth is lecturer and demonstrator in physics in the University of Sydney. During the war he served with the artillery and gained the M.C. He is particularly interested in sound ranging (i.e., the transmission of sound), and also in geo-physical prospecting, which is a method of endeavoring to ascertain what is underneath the surface of the earth by means of instruments. Major Booth has been president of the University Union on three occasions, and has just published a book in conjunction with Miss Nicholls.

MAN is of a speculative nature—"why" is the most used word from childhood to old age; and, if, as one grows older, one appreciates more and more the fact that there can be no answer in absolute terms to any question, that does not prevent the question from being formed.

Out of "why" has science grown; at first with no separation between living and dead matter and religion, then with sharp divisions between all three sections, and now once again with an overlapping of the borders, so that the priest of the future may well be a speculative scientist. I do not intend to refer to life, or to religion; but to restrict these four short talks to an examination of so-called lifeless matter, taking the four "elements" of the ancients as examples, and viewing them from the point of view of a geophysicist.

Earth, Water, Fire, and Air; subdivide these into as many million sub-heads as we will, the four are still of primary importance to humanity.

Let us first, in a brief quarter of an hour, dispose of the Earth. A ball of matter some 8000 miles through, on an average five and a half times as dense as water; but the general muck and scum which has floated to the surface is only on an average two and a half times as dense as water. This surface scum, the "surface crust," is the only material with which we are actually familiar by direct observation; and we have burrowed but a little way into it. Rocks, either solid or decomposed; decomposed material possibly re-consolidated, or still loose so that we may plant our dahlias and roses and wheat in it; remnants of decomposed animal and vegetable matter; such is the crust. What was its origin? We believe that some two thousand million years ago—yesterday in the time of the universe—one of the accidents happening infrequently in our worlds of stars occurred to that particular star, our sun; another star came sufficiently

close to it to cause big tidal disturbances on its surface, so that there were drawn off into space that collection of travellers' samples, our planets and planetoids.

These collections of gaseous worlds whirled out into their orbits, and rotated round their axes, being pulled out towards the retreating intruder, but, as it sailed away without regard to the damage it had caused, settling down finally into the paths in which we now find them moving.

As solar samples, then, we probably contain 92 simple materials which today we are pleased to term elements, and which we brought from the sun; we have "discovered" 89 of these, probably 90. Radiating out some of our heat energy, the surface cooled, drops forming and falling in under gravitational attraction, the densest going to the centre; the nucleus at first being liquid, the rest of the planet still being in the form of a gas. After passing through the liquid stage, cooling of the surface caused transitory crust, which broke and reformed, until finally the whole planet passed gradually into the solid state.

We believe the sun itself to have lived for millions of millions of years; it had its little accident only two thousand million years ago, when already well advanced in life. Right throughout our whole galaxy of stars such an accident—only happens probably once in every 5000 million years (so far apart are the stars), so that the chances of our sun being involved out of the millions that might have been picked was extraordinarily small.

Of recent years it has been accepted that our earth is a solid; but to-day quite reputable geophysicists are prepared to accept the probability of its being liquid, this central core having a radius of about 2000 miles; but the density of this liquid core would be twelve times that of water—it is probably intensely hot liquid iron. It is probable that our earth became solid very shortly

(15,000 years) after its withdrawal from the sun.

The study of the nature of the world and of phenomena associated with its structure by precise physical measurement forms the province of geophysics; the reading public have been made familiar recently with one applied section of this science, that of "geophysical prospecting," by means of which subsurface structure and deposits are indicated from surface measurements.

The crust of the earth is probably in three layers, the upper layer being about seven miles, and the intermediate layer 14 miles thick.

As we dig down we can imagine ourselves going through a thin layer of sedimentary matter, then the skin seven miles thick of the granitic layer, then 14 miles of the intermediate layer (basalt or diorite), and then into the lower layer (diorite, peridotite, or eclogite). Mountain masses are relatively light foam, floating like icebergs in the denser sea of matter.

It may seem that much matter here discussed is pure geology; but geophysics employs the methods of pure physics to a study of terrestrial phenomena, making use of the information obtained and supplied by the geologist.

The inorganic chemist is interested in analysing, synthesising, and generally studying the extraction of materials in the earth's crust. All sciences must necessarily be interested in the same things, though approaching their studies from different points of view, and in some cases dealing only with things dead and earthy, in other cases with things living.

THIS WEEK—EARTH

The January series of University extension lectures will be delivered by Major E. H. Booth, M.C., B.Sc., under the general heading "The Scheme of Things," beginning on Monday next at 7.35 p.m. from 2BL. The syllabus of the first lecture, which will be called "Earth," appears on this page. The complete series will be as follows—

Monday, January 4—Earth
Monday, January 11—Water
Monday, January 18—Air
Monday, January 25—Fire.

WORLD-WIDIE TRADID

THE HAND THAT ROCKS THE CRADLE!

DR. LEON LEVY, secretary of the Columbia Broadcasting System, recently announced the invention of an ingenious microphone contraption, designed to warn the family, via a loud-speaker, in the dining and living rooms, when the baby should awaken. The invention is simplicity itself. It consists merely of a small receiver transformed into a transmitter to carry the baby's cries from the microphone at the crib by wires to the loud speakers.

NOW another invention is reported. It is a radio gadget that not only will give warning of the baby's cries, but will actually rock the baby's cradle, and perform other services by relay control. Mother and father need not be in the house at all. They may be out riding in their radio-equipped cars. Tuning in the baby's wails, mother modulates the carrier wave of the transmitter in the car to operate the relay controls at the baby's bedside. Those controls will either rock the cradle, hand the baby its milk bottle, or—maybe clout it on the head.

ONE commentator suggests that careful mothers must make sure that due to some maladjustment of the grid bias the baby be not overloaded in the matter of milk. He also sees danger in "jamming" of the relay controls, which might result in the baby getting a heavy clout, instead of its milk supply. Apart from this, he suggests, it might be cheaper to leave the child in charge of a nursemaid.

IF you were a listener to the B.B.C. programmes, you would be able to hear Mr. Harold Nicholson explaining "The New Spirit in Modern Literature." He is talking about the poetry of T. S. Eliot.—

"Now I take hold of 'The Waste Land,' and open the book at the notes. Here is a passage chosen at random:—

In the first part of Part V three themes are employed. The journey to Emmaus, the approach to the Chapel Perilous (see Miss Weston's book), and the present decay of Eastern Europe. Line 357. This is the Turdus concolor, the redstart, the hermit, through which I have heard in the Quebec country. Chapman says ("Hand-books of Birds of Eastern North America")

"But I shall not bother you with what Mr. Chapman says. I turn back to the passage in the poem itself to which these notes refer. I read as follows:—

After the torch light red on sweet faces
After the frosty silence in the gardens
After the agony of stony plains
The shouting and the crying
Prison and palace and reverberation
Of thunder of spring over distant mountains
He who was living is now dead
We who are living are now dying
With a little patience.

Here is no water but only rock
Rock and no water and the sandy road
The road winding above among the mountains
Which are mountains of rock without water
If there were water we should stop and drink.

"That puzzles you," continues Mr. Nicholson, and goes on to say how very rarely profound it all is, which we have no doubt our readers have already noticed.



SPOKE WELL FOR HIMSELF.—Hold your breath, girls—this is John Holbrook, N.B.C. announcer, of America, and more popular than the local movie stars. He speaks well, too. Thousands of young women have fallen in love with his soft baritone voice, and the American Academy of Arts and Letters recently awarded him the gold medal for good diction on the radio.

THE "Reichs-Rundfunk-Gesellschaft" has found Prof. Dr. Siebs, of the Breslau University, prepared to give general directions for a dictionary specially for broadcasting pronunciation. We suggest that the first word he explains should be the name of the journal mentioned.

THE management of the "Scala" Theatre at Milan has always objected to the broadcasting of performances in their theatre. Now a new director, Mr. Erardo Trentinaglia, of Venice, has been appointed. Under his direction the Scala Theatre will be used for broadcasting. First will be "Norma," the opera to be staged on the occasion of the commemoration of Bellini, will be broadcast. Others will include premieres of Pedrollo, Marinuzzi, and Mangiagalli, of Verdi "Ballo in Maschera," and of Mascagni "Ratcliff," will be given; also "The Flying Dutchman," of Wagner, "Turandot," and "Butterfly," of Puccini.



THE PLANS OF MEN AND MICE

NOW that the British Broadcasting Corporation is ready to move into its new London headquarters, "Broadcasting House," the engineers have allowed themselves to speak of the mice in the old studios at Savoy Hill. These mice, it seems, used to sleep all day, and chew the insulation tapes at night, with most interesting results. It has been suggested, however, that we should deny the rumor that the Director of Postal Services, Mr. H. P. Brown, is importing a set of these B.B.C. mice for the improvement of Australian transmissions. It has been explained that they are not needed.

EXPERIMENTS are now being carried out on the Graf Zeppelin for giving orders to the men on the aerodrome by means of loud-speakers. At a height of a hundred yards the commands are still intelligible. In this manner landing can be better controlled from the air, and will, therefore, be effected more expeditiously.

HUNGARY is to have a modern broadcasting system. At Lakihegy a broadcasting transmitter of 175 k.w. will be built, whose programmes will be relayed by four relay stations. One of these relay transmitters will have a power of 85 k.w., and each of the other 1.8 k.w. These relay transmitters will be distance-controlled, so that no separate operating staff is required. For these transmitters new directional aerials will be used, whose masts, 60 metres high, will be of wood, thus reducing electric losses to a minimum.

THIRTEEN makes of pianos were tried out for installation in the new B.B.C. Studios. Each piano was given a number, and three pianists took turns at each instrument, while one expert sat in the control room, and compared tone and timbre of each piano. On the second day, the numbers were changed, and the process was repeated, and again on a third day. When the weary expert handed in his notes, it was found that the same piano had won each day—a British piano. The expert said: "The experiment proved that no two makes of piano give the same results at the microphone. Some give too much prominence to the bass; others may sound satisfying down below, but tiny and snatchy up in the treble."

A SALES tax on radio receiving sets to aid in bolstering depleted revenues, is under consideration by the U.S. Government. With several million sets sold annually, internal revenue experts have decided that a small tax on set sales would yield substantial revenue, and yet not be felt either by the public or the industry. A sales tax, it is emphasised, is not to be confused with a licence tax on receiving sets. There is no thought of levying annual licence fees.

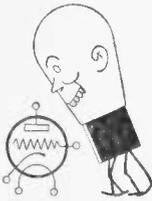
Begin the New Year by BEGINNING RADIO Now!



Calvin Walters Discusses Some Technical Topics for the Broadcast Listener

A FEW days ago I was buttonholed by a "friend" who informed me that a friend of a friend of his who knew a "lot" about radio told him that if a "dud" valve was placed in the detector socket of his set it would have the effect of cutting out static. Is this correct or is it not?

I must confess that the question was one of the most humorous that I had ever heard, but I readily answered in the affirmative, adding that the arrangement would cut out everything else as well, whereupon the "friend" immediately broke into a tirade of abuse. He cast aspersions on the characters of radio men generally. "That's the worst of you coves," he said, "all you want to do is put one over us poor technically ignorant broadcast listeners. When you write an article you always go into a lot of technical terms that we can't understand. How many of us know just what happens in our receivers? What we want is a little information as to what all those terms mean and what causes the music."



Wouldn't you almost tangle over if you saw your own symbol in black and white. Here you see a harmless a.c. triode valve biting its lips in chagrin at the idea.

Very well. I have given the matter a great deal of thought and I am going to endeavor to describe just "what causes the music" in as non-technical manner as possible. Bear in mind that this article is written for the BROADCAST LISTENER ONLY, so all you technically-minded fellows take heed—PLEASE KEEP OUT.

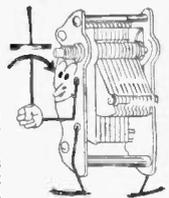
Let us begin with the transmitting station. This station sends out what are called electro magnetic waves. Never mind how. All you need worry about is that the waves are sent out. These waves are modulated. In other words, they carry the speech and music which we desire to hear, in the form of electric currents. Thus we have the term carrier wave, because the wave carries the speech or music to us. The carrier wave is ALTERNATING, which means that the electric current of which it is composed flows first in one direction then reverses and flows in the opposite direction, and at the same time the wave

moves forward as a whole, through the ETHER. The number of times it alternates in one second is called the FREQUENCY, and the movement from one direction to the other and back again is a CYCLE. One thousand cycles is a KILOCYCLE, so that in this case the wave is said to have a frequency of one KILOCYCLE PER SECOND. The wave-length of a station is determined by the FREQUENCY. If the frequency is very high the wave length is short, and vice versa.

Now that we have the wave we have to induce it to come into our receiver, and for that purpose we erect an aerial. The wave now flows down the aerial to the aerial terminal of our set. If we wanted to receive 2FC we would need to have an aerial the same length as the wave sent out by this station, viz., 451 metres. Now this is far too long to be convenient, so we use an aerial about 100 feet long and make up the balance by means of a tuning coil, one end of which is connected to the aerial terminal of the set. This would enable us to receive 2FC all right, providing the coil was the correct size. But we want to receive more than one station. Consequently we make use of a VARIABLE CONDENSER in conjunction with the coil. This condenser is made up of a number of metal plates all joined together but separated by about one-eighth of an inch from each other. Another set of similar plates are meshed with the first set and are insulated from them. This second set moves in and out of the first set, and the wave length is altered according to the distance that the moving plates are from the fixed plates. The moving is accomplished by means of the dial on the panel of the set. Now we have the wave a captive and we desire to make it get to work. If the wave is not strong enough we must magnify it, otherwise the detector valve may not operate. So it is fed into a valve where it is magnified or AMPLIFIED. This valve is called a HIGH FREQUENCY

AMPLIFIER, because it amplifies the wave while it is still alternating at a high frequency. If the wave is not then strong enough, it may be necessary to feed it into another one or two valves. The set is then said to have one, two, or three STAGES OF HIGH FREQUENCY AMPLIFICATION. We have now reached the stage when it is necessary to prepare the signal for use in the loud-speaker. THE DETECTOR VALVE does this part of the work. Before the signal reaches this valve it is vibrating too fast to operate the loud-speaker, so we must convert it into a slow-moving current. The detector valve cuts the wave in half and converts it into an AUDIO FREQUENCY current. Now here the signal may be strong enough to operate a pair of headphones, but if we desire to work a loud-speaker we must amplify it again. So we feed it into an AUDIO TRANSFORMER, so-called because it transforms the weak signal voltages into strong signal voltages. From the transformer the signals are fed into another valve called an AUDIO AMPLIFIER, which amplifies it still further and passes it on to our loud-speaker, where it vibrates the diaphragm and is converted into sound waves.

Now this must not be assumed to be anywhere a complete theory of radio communication. It is simply a hasty glance, as it were, at the signals as they are passing through the set, and is written in order to satisfy those who want to know roughly what happens inside their receivers. A complete exposition would take volumes, so I am afraid that I will have to leave it at that and get on to something else. What I want to do now is to explain some of those terms one often hears in describing the performance of a radio receiver. Also I want to answer some of the questions that I am being continually asked and which would be of interest to broadcast listeners in general. So if the Editor can find room in his precious pages, I will get on with the subject.



This is a variable condenser proudly bearing the symbol which characterizes him in a circuit diagram.

UNDISTORTED OUTPUT

One often reads in an advertisement that the receiver will give, say, 25 watts of undistorted output, and it has often occurred to me that it would be very handy if one could state just what that meant in terms of "noise." Now the most familiar instrument that could be



Don't be worried about any problems arising from your study of radio. The "Wireless Weekly" Radio Information Service is always open to answer any questions you may like to ask.

used for comparison is the ordinary "acoustic" gramophone of a good make. Therefore I set about obtaining the opinions of various people who knew something of this section of acoustics, and the opinions I gathered were somewhat varied. But after a good deal of discussion and comparison, the conclusion I came to was that the output of the ordinary good gramophone is about equal to a loud-speaker giving an output of about three-quarters of a watt. So that 2½ watts would be about three times as loud as a good gramophone.

FREQUENCY RESPONSE

The above term is mostly used in describing the performance of a loud-speaker or receiver as regards tone quality, and indicates the capacity of either instrument to reproduce the musical scale. All musical notes and tones are caused by the vibration of the air, and it is the speed at which the air waves vibrate that determines the note. The speed of vibration is called the frequency. High notes vibrate at high frequency and low notes vibrate at low frequency. Some loud-speakers reproduce high notes well, while low notes are missing. Such speakers have a good high note response and a poor low note response. A muffled tone or a mellow tone indicates that the high note response is poor. Obviously the best speaker is that which has both a good high note and low note response, and most of the modern "dynamic" speakers have this desirable characteristic.

DOES STATIC DAMAGE THE VALVES

I am continually being asked if static is likely to do any damage to the valves in a radio set. Now static is really an electromagnetic wave, just the same as a radio signal caused by the discharge of electrically charged atmospheric gas. These waves operate the set in the same manner as radio signals, and are heard as noises in the loud-speaker. Therefore no harm can be done to the valves by the type of static usually encountered.



The rheostat makes his bow to the symbol which has served him well in countless radio diagrams.

About the only kind of static that is likely to do any harm is that caused by a huge flash of lightning at close range. The transmitted wave may be so strong that by the time it is amplified in the receiver it may be too powerful for the power valve to handle, with the result that this valve may become paralysed. However, no person, unless mentally deranged, attempts to listen-in during a thunderstorm.

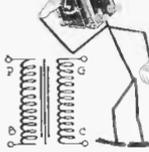
BATTERY SETS V. ELECTRIC SETS

A great number of people that are owners of battery sets are very reluctant to purchase an all-electric set because they have the impression that such a set is too expensive to maintain. The same people will have all the lights in their house switched on without giving it a second thought. Let us compare the two sets and see for ourselves. Take first the battery set. The accumulator will need re-charging, say, once a month. Each charge costs one shilling, or 12/ per year. Then there are high-tension batteries to consider. There are at least three 45-volt batteries used if the receiver is of any consequence. These cost at least 15/ each, and last on an average six months. Making a total of 55/2/ per year for charging and "B" batteries.

The cost would be just about the same whether the set was a modest three-valve affair or one of four or five valves. The modern electric set of four valves and rectifier consumes no more than 75 watts. A unit of electricity is equal to 1000 watt-hours and costs from 11d to 15d per unit—13 hours for 11d. Surprising, isn't it? Added to this low cost of upkeep there is the advantage of getting a very much greater efficiency from the electric receiver. Tone is far better, and it is safe to say that once one has had any experience with an electric receiver the battery set will be thought of as a wicker past.

CALCULATING CONSUMPTION

While on the subject of electric receivers it may be of advantage to the broadcast listener to know just how to calculate how many units of electricity their receivers consume. If the wattage consumption is known you proceed in this manner. Multiply the wattage consumption by the number of hours the receiver is in use per month. Divide this by one thousand, and the result is the number of units used



"Strike me dizzy, if it isn't my old symbol, says the audio transformer."

per month. If the wattage consumption is not known, then a rough estimate can be made in this way. Switch on some appliance on which the wattage is stamped, such as an electric iron, and watch the aluminium disc in the meter. Count the number of times this disc revolves in one minute. This can be done by watching the black mark on the disc. Say, for instance, that the iron consumes 500 watts and the disc revolves 50 times per minute. Now switch off the iron and switch the set on and count the number of times per minute the disc revolves. If it revolves, say, five times, then the set consumes one-tenth the current that the iron consumes, or 50 watts.

ABOUT AERIALS

The question whether it is better to have an outside aerial in preference to an inside aerial seems to be one that worries quite a number of people. Now quite a lot can be written about aerials, and much depends on location. Personally, I am always in favor of the outside aerial, no matter what the location. Of course, the matter of convenience enters into the subject to a great extent, and it is often impossible to have an outside aerial. Especially is this the case with people who live in congested areas and flats. Unfortunately these are just the instances where an outside installation would be of the most benefit, as it is in these areas that the problem of interference from electrical appliances, such as motors, refrigerators, etc., is greatest. It has been experimentally established that the greater portion of this interference reaches the set by way of the gas and water mains pipes, gutters, etc., these noises being propagated from the

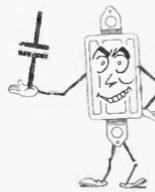
ground upwards. It is therefore unreasonable to operate a sensitive receiver with an inside aerial and expect to get complete satisfaction. Although a few high-powered stations can be received in this manner a point is soon reached as the volume control is advanced, when the interference level exceeds the strength of the transmission. Obviously the solution lies in the erection of a good outside aerial and a sound earth connection. We can't increase the power of the transmitting station, but by using an outside aerial we can receive the station at increased strength. A good aerial does not need to be very long, but should be raised well above the house tops, and the free end kept well clear of buildings, lead roofs, water pipes, gutters, and electric power lines, etc. By doing this we increase the signal strength of the station and reduce the coupling between the aerial and the ground interference, and the ratio of signal strength to interference is increased. Keep the lead-in wire about 3 feet from the house. Earthing the receiver to central gas pipes or the conduit of electric wires is very bad practice. Direct connection to a stout copper wire soldered to a copper tube buried in damp soil directly beneath the receiver offers the best solution, and in itself may be the means of reducing the interference. Those in possession of sensitive receivers would do well to consider the above advice, as the pleasure of listening-in will be greatly enhanced thereby.

DON'T MEDDLE

It is a pity that the penalty for meddling with things that one knows nothing about is sometimes not greater than it is. I was accosted by a gentleman one day who told me that in order to "improve" his reception he changed round all the valves in his receiver and can't understand now why his set is considerably worse than it was before. Of course, I know that his set was a perfectly good one, and his explanation of his disastrous meddling was simply a covering up of the true facts, namely, merely a desire to see "what would happen." Now he knows. It should be clearly understood by owners of sets who know nothing about the technical side that when they purchase their receivers all the components are placed in their correct positions. Each valve in particular has its own purpose in the set, and will not do anything not intended for it to do. It is therefore wise not to interfere with the inside of one's receiver. Any deviation from this rule may lead to very disastrous and expensive results. Particularly is this the case with electric receivers. It is possible to receive a very nasty and perhaps fatal shock while "fooling" with an electric receiver whilst the power is switched on. If instructions from someone CAPABLE OF GIVING INSTRUCTIONS has been given, and it is desired to replace, say, a valve that has gone "dud," then always switch the set off and REMOVE THE PLUG FROM THE POWER POINT be on the safe side. But always remember the golden rule:—DON'T MEDDLE WITH THINGS YOU KNOW NOTHING ABOUT.

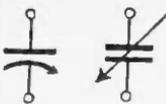
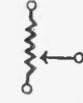
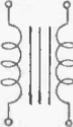
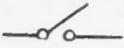
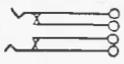
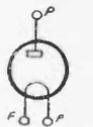
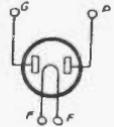
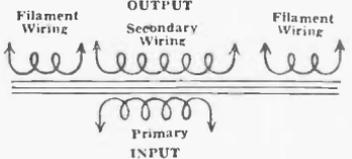
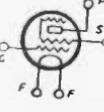
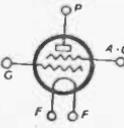


There are radio valves and radio valves, of course. But the one illustrated above, with its symbolic equivalent, is a comparatively recent addition to the f.o.d. It is the new screen-grid valve.



This cute gentleman is one variety of fixed condenser very cleverly balancing his circuit symbol on a hand which he does not possess in reality.

:: A KEY TO CIRCUIT SYMBOLS ::

 AERIAL	 EARTH	 TUNING COIL UNIT	 VARIABLE CONDENSERS	 FIXED CONDENSER	 A FILTER CHOKE
 FIXED RESISTOR	 VARIABLE RESISTORS	 POTENTIO METER	 TAPPED RESISTOR	 AN AUDIO TRANSFORMER	
 SINGLE CONTACT SWITCH	 SINGLE CIRCUIT JACK	 DOUBLE CIRCUIT JACK	 CRYSTAL DETECTOR	 RADIO FREQUENCY CHOKE	
 CELL	 Half-wave Rectifier Valve	 Full-wave Rectifier Valve	 A POWER TRANSFORMER		
 Three Electrode Battery or A.C. Valve	 Battery Screen-grid Valve	 Pentode Power Valve	 Three Electrode A.C. Valve	 A.C. Screen-Grid Valve	

DISTANT RECEPTION

When about to purchase a radio receiver, it is of great benefit to know just what one wants in the way of general reception, and how many valves are necessary for local or distance reception. If local reception only is required up to distances of 30 or 40 miles from a high-powered broadcasting station, then in the case of battery sets three valves will be ample or three valves and rectifier in the case of all-electric sets. If reception of all the main Australian stations is required, or if it is desired to receive all the lower-powered stations up to distances of 40 or 50 miles, then four valves for battery sets or four valves and rectifier for electric sets would be required. In all cases I am referring to full loud-speaker reception.

CURRENT CONSUMPTION

I have often been asked by listeners if their sets consume more current when they are listening to distant stations than when they are listening to local stations. This is not the case. The current consumption is the same in both cases.

WHAT IS A PENTODE?

As pentode valves seem to be coming into great favor, a word or two in explanation of their function may not be out of place. The valve derives its name from the fact that it has five elements inside the glass bulb. The ordinary valves that we have known hitherto have only three elements, and are therefore called triodes. The pentode is a power valve for the purpose of delivering a large amount of undistorted power to the loud-speaker. It is much more sensitive than the ordinary triode, and in specially-designed circuits will give a

volume very nearly as great as two triodes. As a comparison, the UX245 valve can be used. This valve has been in almost general use as a power valve for quite a long time, and can deliver 12 watt of undistorted power to the speaker. Now the voltage of the signal required to operate the valve to this extent is about 40 volts. Now with the new pentode that has made its appearance, namely, the UY247, the undistorted output obtainable is 2 1/2 watts, or nearly twice that of the UX245 and the signal voltage required to obtain this output is only 11 volts. So that a weaker signal will give more volume with a pentode than it will with a triode. A pentode circuit must have a specially-designed circuit and loud-speaker before it will operate correctly. The reproduction of a pentode is very brilliant if operated correctly.



BETWEEN YOU & ME & THE MICROPHONE

The Week's
Features

MRS. HEATH GREEN IN "THE SHIP"—
2FC, WEDNESDAY.

MRS. HEATH GREEN, who will appear as Janet in St. John Ervine's play, "The Ship," on Wednesday, January 6, through 2FC, is one of the best known repertory actresses in Australia, and will be remembered for her excellent work in Sydney theatres in "The Circle," by Somerset Maugham, "Jane Clegg," "Major Barbara," and "The Constant Nymph." Just prior to the war Mrs. Green was associated with the Court Theatre in London, famous then for its productions of Shakespeare plays—the Abrey Players and the Stage Society dramatic offerings.

AUSTRALIA is the Land of Sunshine, the A.B.C. Publicity Bureau informs us, so what could be more appropriate for the name of an Australian musical comedy than "The Sunset Girl." It's obvious. The idea is carried on in the plot, which tells of Ernest Morland and his French wife, Gabrielle, who live only for each other and their small daughter, Lucille. So that they might find fulfilment of happiness in the only way they believe possible, they decide to build a home in the wilds of some far-away country, where in an atmosphere of their own making, no ugly influence could be felt—and Australia is the land of their choice.

OBVIOUSLY William Muggidge, the Sydney author, has a genius for musical comedy. The characters are Paul Trentham, a wealthy young Sydney man-about-town; H. A. S. Walker, an Englishman on a visit to Australia, and because of his initials is always alluded to as "Have a Spot"; Collarene ("The Sunset Girl"); Mary (Collarene's black foster-mother); Bunya, an aborigine; Andy Todd, a chauffeur; Pearl, a housemaid; and Tom Mason, Harry Clancy, and Ronald White, graziers.

WITH such splendid local ingredients for a light opera, the publicity blurb continues. "The Sunset Girl," which is brimful of bright dialogue and catchy music, should set a standard in Australian operas. It will go over the air on Thursday next—see page 39 for programme details.

YOUNG listeners throughout the State will enjoy the treat that has been planned for the children's session from 2BL on Sunday, January 3, and from 2FC and 2NC on Thursday, January 7. On these occasions the entertainment will be provided by the West Australian schoolgirls during their visit to Sydney, under the auspices of the West Australian Federation of Parents and Citizens' Association.

ST. JOHN ERVINE, the author of "The Ship," which will go over the air again from 2FC next Wednesday, is one of the foremost dramatic critics in London. He hails from Belfast, and has written many plays, novels, and short stories. Belfast is, or has been, one of the great shipbuilding ports of the world, and many of the incidents in the play are founded upon the experiences of the author in his own youth. The story tells of the clash of will between a father who wishes his son to succeed him in his shipbuilding business and the son, who dislikes all kinds of machinery, including steamships.

"PANTO-RADIO" is from the pen of Aubrey Danvers-Walker, a young Melbourne writer, who has been responsible for a number of bright sketches and short plays, which have been produced over the air. "Panto-Radio" was specially written for 3LO, and will be presented in the evening of New Year's Day, under the guidance of Frank D. Clewlow.

Pantomimes, of course, must have a name. A though they turn out very much the same: Now here is one made up of many stories. Taken at random from the children's stories of Grimm, Hans Andersen, Scheherazade's nights. Re-told with many an added song and jest. A added to music always of the best: D designed for children and grown-ups, too. If they retain their youthful point of view. O n things which should bring unalloyed delights.

RELAY station 2NC will provide a programme arranged by Evan Lloyd for 2FC listeners on Thursday, January 7, when a concert programme will be broadcast from the Central Hall, Newcastle, by the Merewether Municipal Band.

THE Newcastle Choral Society, well known to listeners in this State, will sing "The Song of the Vikings," "May Day" (Müller), "The Snow" (Elgar), and "The Cars are Washing Lightly." The Newcastle Choral Society is conducted by Mrs. J. A. Hannell, who has been its conductor since 1918. The society has more than eighty members, and has competed at all the principal festivities in the State. In grand choral items it has competed 44 times, gaining 32 firsts and seven seconds. The ladies' choir has competed 26 times, winning on 23 occasions. In addition, the choir has won 12 cups and one shield outright, so it has every reason to feel proud of its long list of achievements.

HENRI STAELL, HUNGARIAN VIOLINIST—
2BL WEDNESDAY.

HENRI STAELL, the violinist, who will be broadcast in the programme from the Aeolian Hall on Wednesday, January 6, by 2BL, first came to Australia about thirty years ago. Born in Hungary, he received his early training at the Buda Pesth Conservatorium under the direction of Franz Liszt. He proceeded later to Paris, bearing an introduction from that distinguished master to Saint-Saens and the musical authorities in Paris. Mr. Staell is the leader of many chamber musical recitals in Sydney.

LYNDIN BRADFORD, down in the dance night programme at 2FC next Tuesday to sing several songs is a newcomer to radio in Sydney, although she has been heard many times through the B.B.C. London. She has just returned from a world tour, in association with Signor Ubaldo Russo, operatic baritone. When in Germany they were joined by Signor Bruno Sarti, tenor, who is well known to Australian music lovers.

ON Wednesday, January 6, an outstanding programme of great interest to all music lovers will be broadcast from the Aeolian Hall by 2BL and 2NC. The choir of St. Brigid's Church, Cooee, in association with the National Broadcasting Orchestra, under the conductorship of Joseph M. Post, will be heard in Johannes Brahms' famous "Requiem."

BRAHMS was born at Hamburg in 1833 and died in 1897. one of the greatest composers of the century. He displayed an aptitude for music and composition at a very early age. His "Requiem" was performed for the first time in April, 1868, at Cologne. It was recognised from the first moment of its performance that its magical contrapuntal development, splendid restraint, its overwhelming contrasts of grief and joy, its climaxes, its adaptation for vocal expression, and its orchestral unity, make it one of the greatest, if not the very greatest, of the choral works produced in the last century, and it placed Brahms at the head of all the German composers since Bach and Beethoven.

THE soloists for the performance of the "Requiem" by Brahms will be Millie Hughes (soprano) and Rowell Bryden (baritone). It will occupy the first half of the programme, from 8 until 9.15, and will undoubtedly create great interest.

What Is Meant By PENTODE

Anybody who has had anything to do with radio has heard of the valve which goes by this name. It has been boomed and boosted in technical articles and has even crept into sales talks as a magic symbol of merit. This article explains what it is all about.

By F. H. Boland

THE popularising of any new invention or idea has been found down through the ages, to be a most difficult problem. The pentode has been no exception to this.

It is but a short while ago that our American friends were jokingly referring to experiments being made with "screen grid" last stage tubes, or valves. An examination of the trend of events during the past eighteen months or so show that we have in Australia been enjoying pentode results for some considerable time.

Such types as the B443, C443, C243, D243, have been on the Australian market for over a year, sets to use pentodes having been described in "Wireless Weekly" as far back as February, 1929.

There are many features of interest in the pentode which the average person who deals with wireless may not be acquainted with; and this article proposes to deal with a few of the constructional and characteristic details of the pentode.

It should be understood that at present the pentode is essentially a multi-electrode valve for power amplification with this feature, that it will give a much higher undistorted output in watts with a given signal input, than the three element tubes with which we are familiar. Thus it requires less pre-amplification, and most modern set-builders have now abandoned the stage of amplification which was usually placed between the detector and the power tube, the pentode having taken the place of both tubes.

The characteristics given by the makers of a typical pentode are as follows—

- Fil. voltage, 4 volts.
- Fil. current, 25 amps.
- Anode voltage, 150 to 300 volts.
- With auxiliary grid at 200 volts; amplification factor 60.
- Mutual conductance (slope) 1.5 m.A. per volt; internal resistance 40,000 ohms, and a normal anode current of 22 m.A.

The internal arrangement of the C443 is shown in figure 1.

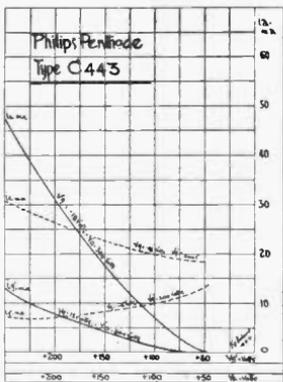
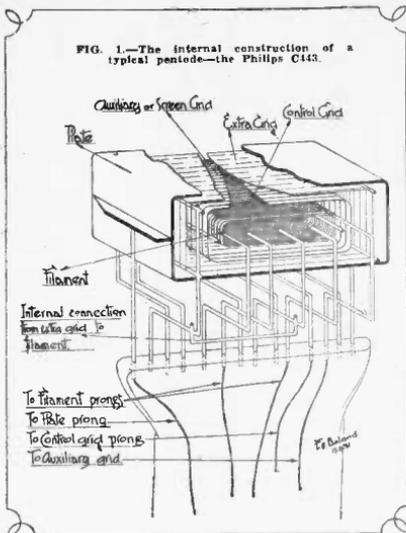


FIG. 3.—The second curve.

From this it can be seen that it is a multi-electrode valve having five separate electrodes, one of these electrodes having no external connection. It will be observed, in looking at figure 1, that the whole of the electrode assembly is rigidly supported with no less than fourteen upright rods. These come down from the electrodes in a uniform manner to the "pinch".

The "pinch" of the valve is that glass part which holds the connecting "dumit" wire, which in turn joins the outer leads to the inner supports and connections of these electrodes. This dumit wire is of special construction, and has the same co-efficient of expansion as the glass in which it is embedded. This ensures that the valve will remain airtight under various temperatures.

The anode, or plate, is supported by the two outer upright supports. Next to this, at a distance of about 1-16 of an inch, is the extra grid wound on four horizontal supports, which, in turn, are welded to the second upright from each end. About the same distance in from

this is the auxiliary, or screen grid, wound on two horizontal supports which are spot welded to the third upright support from each end. The next electrode is the control grid, which is wound on two horizontal supports similar to the auxiliary grid, and supported to the fourth upright from each end. Inside the control grid the filament is zig-zagged horizontally from one side of the assembly to the other, the remaining upright supports being used as connections, or anchors, for this electrode, as shown.

Additional rigidity is given by the internal connection from the extra grid to the mid-point of the filament. This extra grid, held at the potential of the mid-point of the filament, acts in such a way that the "space charge" effects of secondary emission from the anode are re-absorbed—without this "space charge" grid secondary emission would spoil the whole operation of the tube.

Apart from the various tests, many curves were drawn of the static behaviour of the valve.

The first curve is shown in figure 2, and was plotted with maximum voltage applied to both the auxiliary grid and anode. The anode current, and the auxiliary grid current resulting from the varying negative grid voltage can be followed on the curve.

The auxiliary grid current maintained a constant value of below 1-3 of the anode current throughout, the entire curve, this being a very desirable feature. The curve shown in figure 3 was next plotted to show the rise in anode current and auxiliary grid current, at a proportional rate with an increase in auxiliary grid voltage, anode, and control grid voltage being kept constant.

As was expected, this shows that the auxiliary grid voltage has a much greater effect on the anode current than the anode voltage itself. This was confirmed by our plotting on the same graph a dotted curve of the anode and auxiliary grid currents, at a constant auxiliary, and control grid potential, but with increasing anode voltage. This resulted with a variation of 200 volts on the anode (that is, from 50 volts to 250 volts) in an alteration of only 10 milli-

(Continued overleaf)

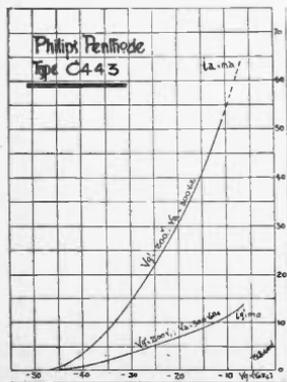


FIG. 2.—The first curve.

Wireless Weekly

Sydney: Friday, January 1, 1932.

Listening-in to the Elements

THE heavy bursts of static which ruined reception for Sydney listeners during the thunderstormy weather a few days before Christmas rewarded those who were valiant enough to tune-in and risk a deafening with some curious phenomena.

Static is common (too common) wherever there are radio sets, and the listener-in, whose pleasure it often interferes with, is not always disposed to bear it out. On this occasion, however, the formation of the static was unusual.

It was like listening-in to a caucus meeting of the elements—a peep into the conclave of heaven and earth and the oceans with perhaps an interjection from Mars or the moon! As the thunder disappeared a terrific burst of static would rattle the loud-speaker, and then be followed by two minutes of perfect reception. Stations never heard before could be tuned-in. A Perth B class station came in almost like 3LO on a "Wireless Weekly" Superhet, and 3HA, a difficult station to receive here, was heard like a local. Then gradually the music in the speaker would fade out to nothingness and be followed by another terrific burst of static which, as it died down, would leave in a crystal clear background the distant station playing away at full strength again. The process was repeated again and again at regular intervals of two minutes.

It was as if the storm acted as a huge sponge, absorbing in a few minutes all the mush and noise in the atmosphere. Then suddenly some gigantic hand would crush the sponge, releasing its contents, and all the sounds in the air would be let fall in a few seconds. Only, however, to be mopped up again.

Perhaps there is nothing extraordinary about such static formation, certainly not to the scientific observer. But to the casual listener, struck by a sudden curiosity, it appears strange and wholly fascinating. There are many aspects of radio which have this appearance, and that is why so many people reserve radio for their moments of idle curiosity.

NEXT WEEK'S TALKS

Maori Folk Lore

"THE Origin of the Kupenga (Fishing Net)" will be the subject of a further talk on Maori Folk Lore by Violet Roche, from 2BL at 4.45 p.m. on Sunday, January 3. Maoris have their folk lore and superstitions just as other primitive races—the tales of fairies, goblins, and spirits of our ancestors all have their counterpart in Maori legend. Like the ancient Greeks and Romans, as well as our British forbears, they peopled the forest and streams with fairies, some beneficent and some malignant. The legend Miss Roche will relate on this occasion was told to her father by an old Maori at Russell, in the Bay of Islands, New Zealand.

"The Marketing of Primary Products"

"THE Marketing of Primary Products" will be the title of a talk by Mr. A. A. Watson, Director of Marketing from 2FC, at 6.45 p.m. on Tuesday, January 5. Mr. Watson will review last year's experiences bearing upon the marketing of various primary products, and the lessons to be drawn therefrom. He will give some accounts of the history and activity of the three Marketing Boards of the State, namely those in relation to rice, eggs, and honey, and make mention of legislative activities concerning marketing facilities of the City of Sydney from the point of view of present and future requirements. Finally, a little time will be devoted to the marketing possibilities and requirements of the year ahead.

"Hiking"

J'OR his talk on "Hiking," from 2FC at 3.30 p.m. on Thursday, January 7. Norman Lyons, the popular organizer of the A.B.C. Model Aeroplane Association, has chosen the following headings: Companionship, How to Plan Your Route, Equipment, and General Advice. The theme of the talk will be the words of Horace Kephart, the famous hiker: "The man who goes afoot, prepared to camp anywhere and in any weather, is

the most independent fellow on earth. He can follow his bent, obey the whim of the hour. Where neither horse nor boat can go, he can go, seeing country that no other kind of traveller ever sees. And it is just these otherwise inaccessible places that have the strongest lure for anyone who delights in new discovery, in unspoiled nature, and in the charms of primitive society."

NEW FEATURES

FROM

2 U W

MRS ALBERT LITTLEJOHN will be heard from 2UW every afternoon, from 3.30 to 4.30, beginning on Monday, January 11.

ANOTHER popular personality heard from 2UW, Mr. S. H. Hunt, will, in his gardening talk on Wednesday, December 30, take for his subject, "The Most Suitable Plants for Various Positions in the Garden," and again on Wednesday, January 6. Mr. Hunt will discuss on the importance of shrubs and trees, and how to plant for contrast and general effect.

THAT further contributions can be looked for from Mayne Lynton through station 2UW will be indeed welcome news—the next transmission of this talented and popular actor will be the recital of "Evangeline" (Longfellow), with musical accompaniment, on the evening of Sunday, January 10.

JUST to hand, the new reception acknowledgment card issued by station 2UW, an original and striking design in two colors, containing an intimation of the trebled power supplemented by a list of the outstanding broadcasts which have put 2UW in the forefront of B class stations.

What is Meant by PENTODE

(Continued from Previous Page)

amps in the anode current, while, for the same alteration of 50 volts to 250 volts in the auxiliary grid voltage, a variation of some 45 milliamperes took place in the anode current.

The auxiliary grid current in the case of a varying anode voltage decreases slightly, against the proportional rise in the case of a varying auxiliary grid potential.

The above should show that care should be taken to see that the auxiliary grid voltage is of the correct value, while a slight variation in plate voltage is not so critical.

Figure 4 illustrates how the C443 may be connected in an audio frequency circuit.

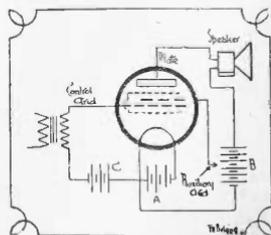


FIG. 4.—How the pentode may be used in an audio frequency circuit.

The SHOULD 2CO RELAY 3LO?

Dear Sir,—Through your journal, I think correspondence should be requested to find out if the above has been satisfactory to most of the listeners-in, in Victoria and southern New South Wales and South Australia. The north has its relay station, 2NC, so we can rule it out.

I think the authorities have made a colossal blunder in relaying 3LO's daily service. If Brown and Co. had taken the trouble to find out they would have found that the Riverina district, Victoria, and South Australia have been excellently served in the day time by 3LO and 3AR, any old set being able to pick up these stations very satisfactorily in the day, whereas the Sydney stations are poor compared to them, 2BL being nearly impossible, unless the weather is good, and 2PC being bad in the hot weather.

The position as it now stands is that we have a duplication of the very good service from 3LO and 3AR, and we are still in the same position for sporting broadcasts from Sydney—Yours, etc.

H. KAYE

West Wyalong (12/12/31).

"A" Class Programmes

Dear Sir,—As a regular subscriber to "Wireless Weekly," I wonder if you would allow me a small space in your "Safety Valve."

As I look at this week's programme I cannot help but think that the A-class stations are falling down on their job and falling hard at that. At a glance I can see as many as nine classical concerts between the two of them. Not being content with giving us all this dull and melancholy trash, they have the nerve to waste an hour and a quarter during one evening by giving us a radio reading on Treasure Island. It makes me wonder if our supposed-to-be intelligent and capable radio announcers were ever Sunday School teachers. The only two bright spots in the whole of the very dull programme are dance night and community singing night.

The class of plays the A.B.C. Players are putting over the air are not even worth the paper they are written on. There is not the least doubt that the B-class stations (especially 2KY) are carrying the A-class stations on their back, but how long is this going to last? I am inclined to think that if there is not a vast improvement in the class of programmes put over the air in the near future, the number of radio licences will considerably decrease, and is there any wonder?

I would also like to make an appeal for the people outback, people who are not so fortunate as we who live right on the doorstep of the city. Why not give them 30 minutes of news from the papers three times a day instead of the very short 15 minutes that they now get? Also, if Stadiums, Ltd., had a spark of the spirit of sport for which their name stands they would continue to give a description of the Saturday night boxing contest. If Stadiums, Ltd., could only

Safety Valve

see the smiles of satisfaction and pleasure that appear on some of those faces outback (also those lying in hospitals, don't forget) on tuning-in to the fight, they would feel that their effort had been worth while after all.

Trusting that my letter will open the eyes of the A-class stations re the trash they are putting over the air—Yours, etc.

JONATHAN A. METCALFE

H.M.A.S. Albatross (6/12/31).

Congratulating B's

Dear Sir,—Just a line to congratulate the B stations, particularly 2UW and 2GB, on the general superiority of their programmes.

I like the announcers of 2GB better than those of 2UW, with the exception of Jack Win, and both their programmes are far better and more popular than the "A's."

2GB puts on the only Saturday afternoon entertainment worth tuning-in, though the record selection in between artists could be bettered, also the broadcasting itself.

2UW have apparently the best broadcasting engineers, as their stuff is put over uniformly good, but Mr. Prentice has a tiresome style of announcing.

I also appreciate 2KY's Sunday evening popular music sessions, and think they are courageous to continue with them amid so much Sunday "Wowserism"—Yours, etc.

S. JENKINS

Darlinghurst (3/12/31).

Restrict Advertising

Dear Sir,—I fully agree with Mr. Leon Dranoel ("W.W.," 4/12/31), that advertising from B class stations should be restricted. At the present time there is no limitation, and in view of the welter that 2GB is making of advertisements, I consider that the time is ripe for some restriction to be imposed. I would suggest that advertising announcements be limited to four per hour and each ad. not to exceed three minutes in duration.

As the advertising time would be limited, competition amongst the advertisers for the time allotted would ensure sufficient funds for the stations

SHORT-WAVE SERVICE FROM LONDON

NEXT Monday the B.B.C., London, will inaugurate a 24-hour short-wave service through a special station, which has cost £10,000 to erect. The service will comprise music and news items, and is intended for the Dominions.

Readers are invited to express their views on all subjects pertaining to radio for publication on this page, which does not necessarily reflect editorial opinion. Correspondents, however, are requested to make their letters as brief as possible.

to carry on without annoying the listeners, as at present, with an endless succession of "two bob" ads. And then, perhaps, the stations would be able to find time to announce the details of records before they are played. The idea is to foster sponsored programmes.

In conclusion, I wish to add an appreciation on the care which 2UW take in the presentation of their records—Yours, etc.

A. YATES.

Waverley (4/12/31).

A Matter of Taste

Dear Sir,—It requires a sense of balance to criticise fairly the programme arrangements, and manner of presentation, of the B class stations. Leon Dranoel, a correspondent, in your last week's issue, ventures to set himself up as the voice of music lovers. Allow me to assure him that taste differs considerably in the matter of music amongst music lovers, and as a corollary music lovers like to be permitted to decide for themselves whether they enjoy "recordings" with the title given beforehand or after the rendition. There is no "ideal" method, it being purely a matter of taste.

Your correspondent suggests that in deleting announcements before record items additional advertising time is provided, but he forgets that extra time also permits the inclusion of additional musical items, and as for the title of the record, it matters little whether you tack it on the head or the tail of the item.

With regard to advertising Leon Dranoel would do well to be advised that 2GB is not on the air for his particular benefit; far from it. 2GB is on the "air" for unselfish public-minded people who are prepared to listen to excellent quality musical presentations and their splendid special sessions conducted by Mrs. Jordan and Mrs. Steiner etc., which are of extreme public benefit, and all 2GB asks in return is a ready ear to its advertising which is of incalculable benefit to both the advertiser and discerning listeners. 2GB is to be commended on its well-tempered advertising-to-music ratio, and as most wireless sets have control knobs, it needs little effort to tune to other stations if a certain station does not suit.

Leon Dranoel will find it requires less effort to do this than to indulge in an outburst of unbalanced criticism. Until such time as listeners contribute to the financial upkeep of B class stations it behoves them to refrain from adversely criticising such institutions. Constructive criticism, yes; but don't "howl"—it's bad manners.

Yours, etc.

C. A. MORRISON.

North Sydney (2/12/31).



£8/15/-
Complete—
Guaranteed

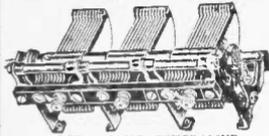
"The Porto" Portable Three Valve Set

£8/15/- Complete
Cash Orders Taken

ENTIRELY SELF-CONTAINED—ENCLOSED LOOP AERIAL.
Battery Charging Unit. Avoiding disconnecting accumulator—simply charge it wherever you are.
All local stations, with interslate under favorable conditions.

EQUIPMENT INCLUDES—
MULLARD SPEAKER, MULLARD VALVES, INSIDE ACCUMULATOR,
EVER-READY B BATTERIES

Weights only 19½lbs. complete.
Height: 11in. Width: 10in. Depth: 7½in.



PILOT 3-GANG CENTRALINE CONDENSERS (No. 1703).
Usually, 3/6. 12/6

While They Last
Note.—These Condensers have trimmers, and are suitable for the Variable-Mu Three Set and other popular outfits.

"THE GIFT SET"
THE DIRECT-COUPLED TWO.
Complete Kit of Parts, with Jensen D15 Speaker and Ken-Rad Valves.
£7/18/6.
Let us help you build it.

PILOT SINGLE DRUM
Illuminated Dial, 16/6.
Radiokes, Full Vision Dials, 4/6.
Geared Back of Panel Dials, Radiokes, 4/-.
Illuminated, 9/9

At a New Reduced Price

THE POPULAR A.C.2 AMPLION SPEAKER, 22/6

Hanging Cone Type Adjustable Unit.



THE "VOLMAX THREE"

£11/19/6
Don't judge its quality by the Price:
It's worth many pounds more.

Jensen D15 Speaker
Ken-Rad UY235, UY221, and UY217 Valves.
Handsome Cabinet.
Call and see and hear it.

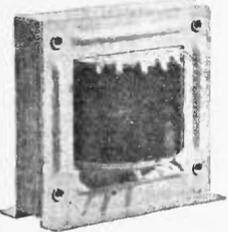
Same Day Service for Country Clients
ESTABLISHED TEN YEARS

PHONE. MA5543

THE WIRELESS SHOP

Miss D.V. Wallace 6 ROYAL ARCADE THE OLDEST RADIO SHOP IN TOWN

"Our Reputation is Your Protection"
MONEY BACK GUARANTEE.



The New "Truvoice" Power Transformer

FOR UNVARYING DEPENDABLE POWER

Experts Choose the "Truvoice" Power Transformers

For All Standard Circuits WE RECOMMEND THE NEW "TRUVOICE" UNIVERSAL TRANSFORMER
Price 25/- each

For All Direct-Coupled Circuits WE RECOMMEND THE NEW "TRUVOICE" 1930-FOUR TRANSFORMER
Price 27/6 each

PILOT VARIABLE CONDENSERS

00015, 00025, and 00035 mfd.
Latest Straightline Type—can be ganged.
Price 5/9 each

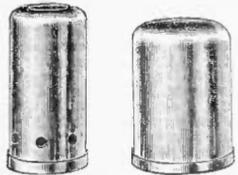
PHILIPS A.C. VALVES

UY227, UX226, and UX245.
To clear 6/9 each

FOR THE COUNTRYMAN
We can supply the following Sets in the form of completed and thoroughly tested Chassis, with full equipment of valves.
THE FORTY-FOUR BATTERY SET. £10/10/-

THE SUPER SIX. £15/15/-
THE INFINITE SIX. £15/15/-

Write for full details of any Set in which you are interested.



THE NEW IMPROVED VALVE AND COIL SHIELDS.
Polished aluminium, domed top, superior appearance. Valve shield ventilated to reduce temperature and prolong life of valve.
Now 1/- each

ALL OTHER TYPES ALSO 1/- EACH

SONOCHORD DYNAMIC SPEAKERS

THE LATEST AMERICAN INTRODUCTION. 3500 and 7000 ohms. Field resistance.
53/6 each

THE "XCEL" ELECTRIC SOLDERING IRON. A dependable Iron for continuous heavy duty work. 25/-



THE SET SUPREME THE 1932

"TRUVOICE" FOUR
Complete in Cabinet, as illustrated.
Price £20/0/0
THE 1932 TRUVOICE THREE.
£16/15/0

QUICK SERVICE
MAIL ORDER DEPARTMENT.
Telephone, MA2775.



MANUFACTURERS OF "TRUVOICE" RADIO SETS AND RADIO-ELECTRIC EQUIPMENT.

The Art of Understanding CIRCUIT DIAGRAMS

This article should be read by all those readers who are sufficiently interested to contemplate ever attempting to build themselves a radio set from our constructional articles. Here we have taken the circuit of the two-valve set published in last week's issue and dissected it, so that anyone can readily understand it, even if he has never had any previous experience with radio sets.

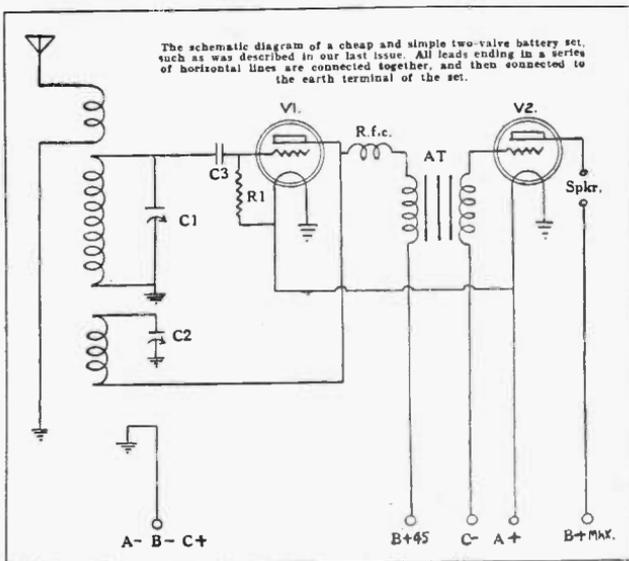
THE first stumbling block for the beginner when he starts to build his first set is the circuit diagram. At first glance it appears as a tangled mass of peculiar symbols and many a would-be set-builder has lost his enthusiasm at the first glance at the circuit. Actually there is not the slightest need for anyone to be worried about it. It simply indicates the method of wiring, except that, instead of the components being shown, they are indicated by symbols, and the wiring is laid out differently to the actual wiring of the set as regards its position in relation to the parts. "But how do we know what the symbols stand for?" is the cry. This is made simple by the fact that every component represented by a symbol is also tagged with a figure and letter. For example, in the circuit here we have a wriggly line labelled R1. Reference to the parts list published with the circuit will explain that R1 is actually a grid-leak type resistor, having a resistance of 2 megohms. There is no need for the beginner to worry about what a megohm might be; he need simply walk into a radio dealer's and ask for a "2 megohm grid-leak" and his wants will be immediately filled by the salesman. If the would-be set-builder thinks he is likely to forget the identity of the item he can take out his pencil and write "R1" on the label of the grid-leak, so that it will be readily recognised when the set is being built.

The Coil

ALTHOUGH not actually labelled in such a simple set as this one, the wriggles on the left hand side represent the coil unit. This unit is fully detailed in the constructional article so that this item will not cause a nny worry. The circuit diagram is handy, as it indicated which ends of the coils run to the various terminals of the set. Not that this will cause any trouble, as it is customary for coil winders to stick tags to the leads or on the former alongside the terminals so that they cannot be confused.



A typical tuning coil unit.



The earth connections may be confusing, but here is the simplest explanation we can give.

The Earth Connections

WHEN we speak of earth we refer to the base of the set in the case of an aluminium chassis, which is normally connected to the earth. Nowadays practically all sets are built on an aluminium base, and when this is the case all leads shown as ending in a series of horizontal strokes are actually connected to the aluminium base at the nearest point where contact can be made. The aluminium of the base acts as the return wire for the circuit. Such items as the variable condensers shown as C1 and C2 automatically earth themselves when they are mounted in the base.

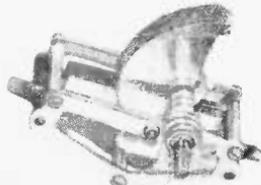
The Variable Condensers

BOTH C1 and C2 are variable condensers such as those shown here. C1 is the larger, and it is by moving the variable plates (rotors) of this condenser that we tune-in the desired stations. The other variable tuning condenser controls the squealing of the set. When the condenser has the



Typical variable condensers.

plates fully meshed the set is at loudest volume, but the limit is reached when the set starts to squeal. When the set squeals it is in a



condition which we term "oscillating," and on no account should a set be allowed to oscillate more than necessary, as when the set oscillates it radiates the squeal, and under some circumstances will cause interference with reception by other sets in the neighborhood. The practice of bringing

the set up near to the point where it will oscillate greatly increases the range, volume and selectivity of the set, but is only really necessary where only two valves can be used, and therefore they must give the greatest results.

The Fixed Condenser

THE condenser C3 is as different from the others as can be imagined. In appearance it is a small piece of bakelite about an inch square and a quarter of an inch deep with a soldering lug at each end. In purchasing the condenser it will be noticed that stamped upon it is the capacity which will be about .00025 mfd. in this particular case. Again if there is likely to be any confusion this item can be marked C3 when it is purchased.

The Radio Frequency Choke

COMING across the circuit we find a couple of more wriggles in the circuit with the mystic letters R.f.c. This is a radio frequency choke. A small item like the one shown here. It



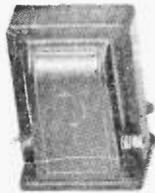
An R.F. Choke.

is simply a small bobbin of fine wire with a couple of terminals. It is not an important item, and in many cases it can be eliminated from the circuit altogether or replaced with a cotton reel on which are wound a couple of hundred turns of 34 gauge double silk covered wire. Speaking of wire reminds us that we might here mention that the finer the wire the higher the gauge number. 10 gauge wire is very heavy, 24 gauge is usually employed for coil winding, although often enough we find finer wire of up to 34 gauge specified.

The Audio Transformer

HERE is a photo of an audio transformer of the type indicated by the symbol AT of the diagram. The transformer is supplied with marked terminals, showing exactly the manner in which it is connected. No one will have the slightest difficulty in recognizing the abbreviations used in the markings. For example, the lead coming from the plate of the detector through the radio frequency choke will be labelled "P" or "Plate." The other end of this winding (known as the primary winding of the transformer) runs straight to the B battery, so is usually marked "B plus" or perhaps "HT," being the abbreviation for high tension, which is another name for B battery. The only point to watch when buying the audio transformer is the ratio. The usual ratio is either 3:1 or 5:1.

Generally speaking a transformer with a higher ratio will give louder volume, but poorer tone. The tone of a set is largely governed by the quality of the transformer used, and on this account we strongly recommend the medium priced transformers rather than the very cheapest. The only other items in the set are the valves. These items are more fully detailed in the circuit symbol diagram reproduced elsewhere in this issue.



An Audio Transformer.

PARTS LIST

Two-Valve Battery Set

Baseboard and panel.
Coil unit.
Variable condenser .0005 or .00035 mfd. (C1).
Re-action condenser .00025 mfd. (C2).
Audio transformer, 3½ or 5 to 1 (A.T.).
1-2 megohm grid-leak (R1).
1 .00025 mfd. mica condenser (C3).
1 Radio frequency choke (optional) (R.F.C.).
2 UX type valve sockets.
Necessary wires, screws, speaker batteries, etc.

The Valves

THERE are many dozens of different types of valves, and it might appear that they are going to confuse the beginner. But again the let-out takes the form of the parts list, or the constructional article being followed. For example, above we have V1 and V2. Reference to the parts list shows that both valves can be of the general purpose type, but that for preference, V2, should be a power valve. Since the set in question is a battery one the valves are naturally of the battery type, and there is really no reason why the valves themselves should not be indicated by blank circles. The reason for showing more of the valve is to show which terminals are which. The wriggly line across the middle indicates the grid, and the lead running here will be connected to the G terminal of the socket. Most sockets are stamped with the names of the terminals, and in cases where this is not so the dealer supplying the sockets will be only too pleased to mark the terminals if so requested.

The Plate

THE plate of the valve is indicated by the small rectangle as might be expected. The filament is also readily distinguished. Getting on into the radio game later we may encounter many other types of valves such as indirectly heated pentodes, screen-grids, etc., but there is no need to worry about these, as they are always fully detailed when being dealt with.

The Batteries

THE batteries are rather a difficult problem for us to explain. The "A" battery is usually an accumulator, and is used to light up the filaments of the valves. Its red terminal is known as the positive one, and is connected to the lead marked A positive, or A plus. The other terminal of the accumulator is connected to the negative terminal of the "B" battery, and also the positive terminal of the "C" battery. The "B" battery is a large dry battery, and may be made up of two or three batteries in series. When we say in series we mean that the battery to be the negative one has its negative terminal connected to the A negative lead. Its positive terminal of the highest voltage (all terminals are marked) is then connected to the negative terminal of the next battery. The positive terminal of the next battery becomes a positive terminal with a voltage equal to the voltage shown, plus the total voltage of the first battery. For example, if two 45 volt batteries are connected in series the voltage available at the positive

terminal of the second battery will be 90 volts. The terminals of the two batteries joined together will be the 45-volt tapping.

The "C" Battery

THE C battery presents no difficulty, as again it has all terminals clearly marked. Similarly if 9 volts of "C" bias is required two 4½ volt batteries can be connected in series.

The Speaker

AT the right hand side of the circuit we have two terminals marked "Speaker." These are the connections for the two terminals found on the speaker, which should be of the magnetic type for this type of receiver. If the greatest range is desired, then headphones can be used instead of the speaker. They are more sensitive than a speaker, and as all extraneous noises are excluded when they are being used, headphones are handy when faint signals are being received from far-off stations.

The Aerial

IN the extreme left hand top corner of the circuit we have a sort of trident with a line across the top. This represents an aerial. An aerial is simply an insulated wire strung up a fair height from the ground. In a decent location an aerial will be made of stranded copper wire, and will be about 75 feet long and 30 feet high. With a receiving set the matter of insulation is not very important except in wet weather. With modern highly-sensitive receivers, particularly in city locations, it is more common to find the aerial consists of merely ten or twenty feet of

NEXT WEEK

IN next week's issue we hope to describe the construction of a modern all-electric set of five valves in all which can be built by any novice at a small cost. The article will be even more fully illustrated than previously, and the building of the set described in such a clear manner that it will be suitable for beginners, as well as the more advanced amateurs. The design provides for two stages of high frequency amplification, employing variable- μ valves, with a screen-grid detector and a resistance-coupled pentode output valve.

fine wire lying along a picture railing or across the ceiling without any insulation.

The Earth

TO complete the set and get it into going condition we now need only an earth connection. The earth consists of a wire making actual metallic contact with a water pipe or other body of metal buried in the earth. Where water pipes do not run underground a wire should be soldered on to a kerose-
noline tin, and the tin then buried at a depth of three or four feet in damp soil. Some enthusiasts put a drain pipe down when filling in the hole, so that they can periodically pour a bucket of water in to dampen the earth around the tin, as it is only when wet that the earth makes good contact.



SHORT WAVE NOTES



AUSTRALIA'S own short wave station, VK2ME, now becoming so well known to short wave listeners as "The Voice of Australia," is rapidly becoming world-famous as a distributor of news of Australia, as well as providing a good musical programme for listeners on the other side of the world. The schedule of this station as given in these notes a fortnight ago makes it possible for 2ME to be heard in practically every part of the world.

A friend in far-away Tennessee (U.S.A.), in the person of Mr. John F. Stanbery, of the City Milling Co., Newport, waxes enthusiastic regarding 2ME as heard in his land. Mr. Stanbery is among the most successful amateurs in America, and his comments can be read as genuinely complimentary.

"Most Interesting Station"

Mr. Stanbery, *inter alia*, writes that 2ME, true to their slogan, have been "really telling the world." Continuing, he says: "This station is to me without doubt the most interesting station on the air at this time. I really delight in tuning it in, for its indeed most interesting programme each Sunday morning (American time, of course). I listen to 2ME from 4 to 7.30 o'clock each Sunday morning through their complete programme, without losing a word. And, Mr. Shaw, their volume is amazing of course 'my set!' that is, if you Australians can understand an American's sense of humor). But I have carried out tests that seem impossible. Tuning the station any Sunday makes no difference, any date, the station is always there with volume, and I mean VOL-UME, too. . . . I have walked over 200 paces from my home with my set turned on and the windows open in the room where it is located, and every announcement from 2ME came through clear as a bell—it is almost weird. 2XAF, 8XAL, 3XL, and other strong transmitters can't say a thing to 2ME about covering the world."

Station WIXAZ

ONC again this station seems to be coming into prominence, and the old queries arise as to the correct call-sign letters of the station, which is situated in Springfield, Massachusetts. As all older listeners know, the letter Z is pronounced Zee by the American announcers of all stations, and unless reception is very clear it is quite easy to confuse Zee with V or D. And this has been the experience of many experienced listeners also. The station now comes on the air about 10.30 p.m. (Sydney time), and a little later reaches excellent strength. One of our enthusiastic listeners (Mr. G. White, Dungeo) furnishes several reports on the station, and felt quite sure the call sign was WIXAV, and that the relay heard was from WDV and WDW. The stations relayed are WBZ and WBZA, and at times it is really very difficult to grasp the call signs. The station transmits a very interesting children's session at 11 p.m., including a realistic transmission of an incoming train, its arrival at the station, whistling, and departure. This station has been heard by us at much greater strength between 6 and 7 a.m. during the past week.

AUSTRALIA'S OWN STATION *Bouquet for 2ME*

Observations By R. N. Shaw

Moscow Stations

RECEPTION of both Moscow stations appears to have improved between 6 and 7 a.m., although this may, of course, be due to more favorable atmospheric conditions lately, and may thus be only temporary. Up till 6 o'clock REN (45.38) comes in at wonderful strength, as does its sister station on 50 metres. The latter, however, maintains its strength until a later hour than REN. By the way, the 50 metre station is known officially as RW59, although we have not heard this call sign over the air. It is invariably announced as "This is Moscow calling." The English sessions from the latter station are now regularly established and some of them are particularly interesting. Apart from the Communistic propaganda disseminated regularly, other comments and news are rather instructive and informative on subjects on which every Australian is vitally concerned. The English sessions are given from 6 a.m. on Monday, Wednesday, Friday, and Sunday.

American Relays

AS most listeners are aware there are quite a number of American and London stations operating on radio-telephone systems. Several of these can now be heard comfortably up till about 7 or 7.30 a.m. on the 30-32 metres band, and include such stations as GBU, GBW, GBK, WML, WMC and WND. Apart from telephonic business these networks are now being used for relaying musical programmes or addresses of important personages. Early on Monday morning we heard the several stations testing and arranging schedules, and precisely at 7 a.m. heard a musical programme commence on the American "hook-up," and which was a relay of the London broadcast station's programme of the previous evening. From remarks made by operators at various times it would appear as if such relays will be made a feature of transmission regularly during those hours when telephony is not being used.

Radio Maroc

THE French station at Rabat, better known as Radio Maroc, on 32.26 metres, is once more reaching the strength which made it so popular a year ago. The station, which is situated at Morocco, now comes on the air at 6 a.m. and provides some excellent musical programmes, interspersed with a

good deal of talk in French. Its position on the dials is rather close to GBK, one of the London 'phone stations. A correspondent (Mr. M. H. Rodney, Bellevue Hill) draws attention to the fact that Radio Maroc is also operating on Thursday morning in addition to the regular Monday programme. This also happened some six months ago, but the Thursday transmission was soon discontinued. It is to be hoped that it will now become a regular feature, as reception from Radio Maroc will show further improvement in the near future.

HVJ's Programme

IN reply to many inquiries of recent date we regret to state that HVJ, the Vatican station, Rome, which uses a wave length of 50.26 metres, is on the air for a limited period only each day. A recent statement issued by the station authorities indicates that there is no likelihood of the present hour of transmission being increased, as it distinctly states "we do not have and will not have regular broadcast programmes." At present HVJ is heard between 5 and 5.30 a.m., but on a number of mornings recently we were unable to hear the station even during those limited hours. HVJ also broadcasts on 19.84 metres each evening from 8 p.m., but this frequency is unsuitable for reception here at that time. Most of the time between 5 and 5.30 a.m. is taken up with religious announcements in either Latin or Italian language. Very little English is spoken.

3ME Testing

ON several afternoons recently we had the pleasure of listening to special tests carried out by 3ME on their usual wave length of 31.55 metres. The signals on each occasion were remarkably clear, and at times reached full speaker strength around 4 p.m. Some excellent recorded music was heard, whilst on one afternoon for some ten minutes what appeared to be the constant striking of a gong was transmitted. This station, by the way, is still being heard at maximum strength on every Wednesday and Saturday night between 8 and 10.

Station Interference

THE extraordinary strength of the signals radiated from F31CD, well known as Radio Saigon, is causing interference troubles in some localities, and particularly in receivers which are broadly tuned. Practically every evening two stations, Radio Saigon and WBXAL, come on the air simultaneously at 9.30. Numbers of correspondents report that the two stations, which are very close together on the dials on the 49 metre band, can be heard together. Personally we find that they can be separated fairly well. The supervisor of WBXAL writes us that many complaints are being made to WBXAL regarding the Indo-China station's interference. He hopes some arrangement can be come to which will eliminate the trouble, but mentions that WBXAL is limited in Europe also by the powerful Moscow station, which also affects reception of the American in European countries. However, both Radio Saigon and WBXAL are being heard to full advantage at the present time, that is when atmospherics are not too severe.



EVER-READY HEAVY DUTY 45 VOLT "B" BATTERY, 30 large cells in hermetically sealed moisture-proof containers with positive tapings at 18, 24, 30 and 45 volts, **18/8**

EVER-READY SUPER SERVICE 45 Volt "B" BATTERY, flat or vertical . . . **23/-**

THERE'S a wonderful programme on the air to-night! You mustn't miss it! Get that **EVER-READY** Battery to-day! Behind the **EVER-READY** Battery are the largest, oldest, most up-to-date battery laboratories in the British Empire.

When you buy an **EVER-READY** you are not buying an experiment but something which has been proved over a period of more than 30 years.

EVER-READY Batteries for every "A," "B" and "C" need at your Radio Dealer's.

Manufactured by
THE EVER-READY CO. (Gt. Britain) LTD.,
 SYDNEY AND LONDON

EVER READY

TORCHES, REFILLS & RADIO BATTERIES

FRIDAY *New Year's* Day JANUARY

2FC SYDNEY, 451 Metres

Early Session

(7.0 to 8.15 a.m. Relayed to 2NC, Newcastle, up to 8.5.)

Morning and Afternoon Sessions

(Relayed to 2NC, Newcastle, from 12.30 p.m.)

Scores in the Third Test—South Africa v. Australia, played at Melbourne—will be given at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

Scores in the match, Queensland v. N.S.W., played at the Sydney Cricket Ground, will be given at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

12.50: FROM RANDWICK: Description of the following races, in the running—

1. The New Year's Gift.
2. The Trial Stakes.
3. The Flying Welter Handicap.
4. Tattersall's Club Cup.
5. The Nursery Handicap.
6. The Alfred Hill Handicap.

Between 1.15 and 1.30, and 3.45 and 4 p.m., we will relay from 3LO, Melbourne, the description of the Third Test Match.

- 1.57 (approx.): Section Weather Forecast.
- 2.0 (approx.): A Glance at the afternoon "Sun" and "World."
- 4.35: Late Sporting Results.

Early Evening Session

- (5.40 to 8.0 p.m. Relayed to 2NC, Newcastle, between 5.40 and 5.45, and 7.5 and 8.0 p.m.)
- 5.40: RELAYED FROM 3LO, MELBOURNE—Description of the play in the Third Test Match.
- 6.0: Children's Stories, by the "Hello Man"—Little Norma will entertain.
- 6.45: THE A.B.C. MODEL AEROPLANE ASSOCIATION, conducted by MR. NORMAN LYONS.
- 7.5: Sporting Service, News, etc.

EVENING PROGRAMME

(8.0 to 11.30 p.m. Relayed to 2NC, Newcastle, between 10.30 and 11 p.m.)

★ TO-NIGHT AT 8.0 ★

An Hour with

THE A.B.C. OCTETTE

in association with

THE A.B.C. ORCHESTRA

Conducted by E. J. Roberts.

Musical Excerpts arranged by MADAME EVELYN GRIEG.

THE A.B.C. ORCHESTRA—

Overture, "A Musical Switch," Alfred THE A.B.C. VOCAL OCTETTE AND THE ORCHESTRA—

Vocal Excerpts from the Comic Opera, "Little Nellie Kelly" Cohan THE A.B.C. ORCHESTRA—

"Country Girl" Selection - Monchton THE A.B.C. VOCAL OCTETTE AND THE ORCHESTRA—

Light Opera Gems from "Dorothy" Cellier

"October Ale" (Quintette). "Tally Ho" (Chorus).

THE A.B.C. ORCHESTRA—

"The Rose" Selection - Middleton THE A.B.C. VOCAL OCTETTE AND THE ORCHESTRA—

FAIRINGS—

- Come to the Fair Martin
At Grendon Fair Marie
The Floral Dance Moss



VIOLET ROGERS, soprano, who is singing several groups of songs from 2BL to-night.

★ TO-NIGHT AT 9.15 ★

(Relayed from 3LO, Melbourne.)

A MILITARY BAND RECITAL

10.15: A talk on the day's play in the Third Test Match, played at Melbourne.

10.30: FROM THE STUDIO (RELAYED TO 2NC)—

A talk by the A.B.C. Sporting Editor on the day's play in the match, N.S.W. v. Queensland, played at Sydney. Relayed to 4QG, Brisbane.

10.45: Late Official Weather Forecast.

10.47: DANCE MUSIC FROM ROMANO'S.

11.30: CLOSE.

2BL SYDNEY, 351 Metres

Opening Session

(8.15 to 11 a.m.)

9.0: OLD FOLKS' SESSION—A Homely little "Heart-to-Heart" Talk on Age and Old Memories.

10.35: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley: "New Year's Greetings."



CLAUDE CORBETT will sum up the week's sport from 2BL at 9.30.



A.L. HAMMETT, saxophonist, 2BL 10-night.

Midday Session

(12 Noon to 2.15 p.m. Relayed to 2NC, Newcastle, between 12 Noon and 12.50 p.m.)

12.0: FROM THE SYDNEY CRICKET GROUND—A Description of the Match, New South Wales v. Queensland.

NOTE.—At approx. 12.10, Metropolitan forecast and weather synopsis. Scores at the fall of each wicket, at lunch and tea adjournments, and stumps drawn, in the THIRD TEST MATCH, played at Melbourne.

Afternoon Entertainment

(2.15 to 6.0 p.m.)

2.15: FROM THE SYDNEY CRICKET GROUND—A Description of the match, NEW SOUTH WALES v. QUEENSLAND.

The Dinner Hour

(6.15 to 8 p.m.)

EVENING PROGRAMME

(8.0 to 10.30 p.m. Relayed to 2NC, Newcastle, between 8.0 and 10.30 p.m.)

8.0: PIPER THOMAS MACKAY—"The Piper's Controversy" March. Lady Madelina Sinclair, Strathgry.

Neil Gow

8.3: VIOLET ROGERS, Soprano—

"A Group arranged by Moffatt

"Spinning Wheel"

"A Scotch Lullaby."

8.10: AL HAMMETT, Saxophonist—

Christles and Heather. Arr. Al Hammett

Krazy Kapors Clarke

8.17: ROWELL BRYDEN, Baritone—

The Border Ballad Cowen

A Fond Kiss

8.24: ENID ELLIOTT, Organist—

March Militaire Gounod

Fantasia on Scotch Airs Arr. Enid Elliott

8.31: BERYL AULT, Violinist—

Scotch Sonata Alfred Hill

8.38: A. B. ("BANJO") PATERSON, in

REMINISCENT MOOD.

8.53: VIOLET ROGERS, Soprano—

A Group arranged by Moffatt

"Annie Laurie."

"O Whistle and I'll Come."

"Conin' Thro' the Rye."

9.0: ENID ELLIOTT, Organist—

A Scotch Carol Guilmant

Spring Song Hallins

9.7: BERYL AULT, Violinist—

Fantaisie Mignonne Papius

9.14: ROWELL BRYDEN, Baritone—

"The Return."

"Green Grow the Rushes Oh"

9.21: AL HAMMETT, Saxophonist—

Hashera Gurewicz

Saxomania Parker

9.28: ENID ELLIOTT, Organist—

Chant Heroique Cesar Franck

Romance in D Flat Lom

9.38: CLAUDE CORBETT WILL GIVE

HIS SPORTING TALK.

10.0: ENID ELLIOTT, Organist—

Priere Boellmann

Fanfare Lemmerz

10.7: A RECORD RECITAL (repeated).

10.25: Late News and Weather Forecast.

10.30: CLOSE.

2GB SYDNEY, 316 Metres

Day Sessions as usual.

8.0: Orchestra.

10: Contralto Solo.

9.13: STORVETTE OF INDUSTRY

10: LESLIE HERFORD, Baritone—

The Ballad Monger Earlhone Martin

23: Orchestra 8.28: Rose and Welch, Duo

Harmonious Duo 8.38: Violin Solo. 8.47:

Hilda Nilsson, Pianist. 8.50: Soprano Solo

8.55: Vocal Quartet. 9.0: Weather Report

9.3: Orchestra.

10: LESLIE HERFORD, Baritone—

Roadways Lohr

23: Lorraine, Lorraine, Lorraine Copel

25: Rose and Welch, the Harmonious Duo

23: Organ Solo

9.28: Violin Solo 9.43: Piano Solo 9.50: Orchestra. 9.50: Instrumental Soprano Solo

RESUME OF SATURDAY'S SPORTING EVENTS. 10.45: Slumber Music. 11.15: Close down.

SATURDAY JANUARY 2



THE SEVILLA GYPSIES, who are programmed for 2HL to-night.

2FC SYDNEY,
451 Metres
Early Session
(7.0 to 8.15 a.m. Relayed to 2NC, Newcastle, up to 8.5.)

Morning and Afternoon Sessions
(Relayed to 2NC, Newcastle, from 12.30 p.m.)

Scores in the Third Test—South Africa v. Australia, played at Melbourne—will be given at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

Scores in the Match, Queensland v. N.S.W., played at the Sydney Cricket Ground, will be given at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

12.50: FROM WARWICK FARM—Description of the following races in the running:—

1. The Maiden Handicap.
2. The Sefton Handicap.
3. The Maiden Nursery Handicap.
4. The Farm Novice Handicap.
5. The Warwick January Handicap.
6. The Berala Handicap.

Between 1.15 and 1.30, and 3.45 and 4 p.m., we will relay from 3LO, Melbourne, the description of the play in the Third Test Match.

1.57 (approx.): Sectional Weather Forecast.

2.0 (approx.): A Glance at the afternoon "Sun" and "World."

4.35: Late Sporting Results.

4.45: CLOSE.

Early Evening Session

(8.40 to 8.0 p.m. Relayed to 2NC, Newcastle, between 8.40 and 8.45, and 7.5 and 8.0 p.m.)

5.40: RELAYED FROM 3LO, MELBOURNE—Description of the play in the Third Test Match.

6.0: Children's Stories, told by the "Hello Man."

6.45: MR. CONRAD CHARLTON will speak on "POULTRY FARMING."

7.5: Sporting Service, News, etc.

EVENING PROGRAMME

(Relayed to 2NC, Newcastle.)

8.0: THE A.B.C. ORCHESTRA—

"Martial Moments—Pot-pourri of Marches" *Arr. Winter*

8.7: CHARLES NICIS, Tenor.

8.10: MAY WILLIS, Pianiste—

The Harmonious Blacksmith . . . *Handel*

Song of Roses *Gron Dahl*

Boating *Gron Dahl*

Tarantelle, No. 1 *Nicods*

8.20: THE A.B.C. ORCHESTRA—New Musical Comedy Sketch *Hall* (First Performance.)

8.32: HEATHER KINNAIRD, Contralto—

Caro Mio Ben, *Giordani*

Hindoo Song, *Bemberg*

8.39: THE A.B.C. ORCHESTRA—

"Bitter Sweet" Selection *Coward*

8.49: NORMAN MARTIN, Cellist—

Memoire *Popper*

Mennetto *Popper*

8.56: CHARLES NICIS, Tenor.

9.3: THE A.B.C. ORCHESTRA.

9.12: HEATHER KINNAIRD, Contralto—

Vonewiger Liebe (Love Triumphant), *Brahms*

9.21: MAY WILLIS, Pianiste—

Fantaisie, Op. 49 *Chopin*

9.31: THE A.B.C. ORCHESTRA—

Petite Suite de Concert *Tyler*

9.46: CHARLES NICIS, Tenor.

9.49: NORMAN MARTIN, Cellist.

An Meer *Schubert*

Gavotte Humoristique *Spuice*

9.56: HEATHER KINNAIRD, Contralto—

Seekin' (Negro Spiritual) *Marshall-Hall*

9.59: THE A.B.C. ORCHESTRA—

"The Last Waltz" Selection . . . *Strauss*

Dreamland Bells *Howell*

10.15: RELAYED FROM 3LO, MELBOURNE—A Talk on the day's play in the Third Test Match.

10.30: THE A.B.C. Sporting Editor will give a talk on the day's play in the match, N.S.W. v. Queensland, played at Sydney. Relayed to 4QC, Brisbane.

10.45: Late Official Weather Forecast.

10.47: MEDITATION MUSIC.

11.30: CLOSE.

2BL SYDNEY,
351 Metres

Opening Session

(8.15 to 11 a.m.)

10.40: MR. GEORGE COOPER will speak on "GARDENING."

Midday Session

(12 Noon to 2.15 p.m. Relayed to 2NC, Newcastle, between 12 Noon and 12.50 p.m.)

12.0: FROM THE SYDNEY CRICKET GROUND—A Description of the match, NEW SOUTH WALES v. QUEENS LAND.

At approx. 12.10: Metropolitan Forecast and Weather Synopsis.

SCORES at the fall of each wicket, at lunch and tea adjournments, and stumps drawn, in the THIRD TEST MATCH, SOUTH AFRICA v. AUSTRALIA, played at Melbourne.

Afternoon Entertainment

(2.15 to 8.0 p.m.)

2.15: FROM THE SYDNEY CRICKET GROUND—A Description of the match, NEW SOUTH WALES v. QUEENS LAND.

4.15: FROM THE SYDNEY CRICKET GROUND—A Description of the match, NEW SOUTH WALES v. QUEENS LAND.

6.0: Close.

The Dinner Hour
(6.15 to 8 p.m.)
EVENING PROGRAMME
(8.0 to 12.0 p.m.)

★ TO-NIGHT AT 8.0 ★ INHERITANCE

A One Act Farce

By S. D. DOUGLAS

Presented by

THE A.B.C. PLAYERS

Production:

LAURENCE HALBERT

CHARACTERS:

"Boodles" (A Gentleman's Servant) *Leo Stark*

Montague Barrington *Arthur Keane*

Lancelot Barrington *John Warwick*

Lord Wardour *John Bodouin*

"Ball" Edwards *Jack Seittle*

Dolly Edwards *Molly Raynor*

8.50: SCOTT FOX, Baritone—

Mate o Mine *Elliott*

Molly Bramagan *Stanford*

8.57: THE SEVILLA GYPSIES, Instrumentalists—

Yours and Mine *Burke*

For You *Dubin*

Gladiators' Farewell *Blakenburg*

Let's Get Friendly *Yellen*

9.7: RONALD RILEY, Entertainer—

"My Girl."

9.14: YETA WAREHAM, Violiniste—

Aloha-Oe *Arr. Kreisler*

Old Vienna *Ordlu*

9.21: FLORENCE PATON—Songs at the Piano.

9.28: THE SEVILLA GYPSIES, Instrumentalists—

While Hearts are Singing *Strauss*

Estudiantina *Waldteufel*

Good-night, Sweetheart *Noble*

Rosemary *Zamecni's*

9.38: RONALD RILEY, Entertainer—

"Arehie on Ships and Sailors."

9.45: THE SEVILLA GYPSIES, Instrumentalists—

Dark Eyes *Salami*

Marceline *Trinkaus*

You Don't Have To Tell Me *Donaldson*

9.53: SCOTT FOX, Baritone—

The Harvesters' Night Song *Baynton-Parker*

Jane *Burke*

Look Down, Dear Eyes *Lambert*

10.1: THE SEVILLA GYPSIES, Instrumentalists—

Casabianca *Evans*

Senora *Nathan*

O Sole Mio *Di Capua*

Imp March *Alford*

10.11: DANCE MUSIC FROM THE ORIENTAL.

10.25: Late News and Weather Forecast.

12.0 Close.



NORMAN MARTIN, cellist, 2FC to-night.



CHARLES NICIS, tenor, 2FC to-night.

SATURDAY, JAN. 2

(Continued)

40G

BRISBANE, 395 Metres

2GB

SYDNEY, 316 Metres.

- 7.0 a.m. Breakfast Session, conducted by Aunt Etta.
- 7.5 News from "The Daily Telegraph"
- 8.0 Music and Entertainment.
- 9.0 Morning Musical Session.
- 10.0 STORYETTE OF INDUSTRY. 10.1: Music 1.0: Close down.
- 10.15 Saturday Afternoon Musical Programme. Lionel Lunn.
- 4.30 STORYETTE OF INDUSTRY. 4.32: Music. 4.45 Uncle George's Tiny Tots' Session.
- 4.50 Children's Session, by Uncle George.
- 5.0 CHOC'S AEROPLANE TRIP. 6.45: Music.
- 7.0 MOTOR SESSION, by Mr. FRED BERRY.
- 10.0 STORYETTE OF INDUSTRY. 7.16: Music 8.0: Musical Session.
- 8.15 STORYETTE OF INDUSTRY
- 8.16: Music.
- 10.45: Slumber Music.
- 11.15: Close Down.

2UW

SYDNEY, 267 Metres

- 7.30: Breakfast Session. 9.0: Close.
- 10.30: Music and request items. 12.30: CLOSE.
- 1.15: Latest scores for THE TEST MATCH. 5.15: CHILDREN'S SESSION conducted by Uncle Jack. 6.0: DINNER MUSIC, interspersed with latest cricket scores in the THIRD TEST MATCH—SOUTH AFRICA v. AUSTRALIA. 6.30: Music. 7.0: Musical programme.
- 7.30: Commentary on today's play in the THIRD TEST MATCH, South Africa v. Australia, by Captain E. W. Bullantine, relayed through JDB Melbourne. 8.0: Brisbane, SAID through 2UB Sydney. 7.45: Music. 8.15: "Fidelity" Serenade by Fercival. 8.20: Music. 10.0: Bridge Talk by F. V. McEadam. 10.15: Music. 10.30: CLOSE.

2UE

SYDNEY, 293 Metres

- Day Sessions as usual.
- 12.30: Description of the Races at Warwick Farm by Mr. J. McNeill.
- 6.0: Auntie May and Simple Simon. 7.1: Late Sporting results. 8.0: Overture "Morning, Noon, and Night." 8.10: Selected Musical Programme. 10.1: Light Opera selection—"Maid of the Mountains." 10.15: Close.

2KY

SYDNEY, 280 Metres

- AFTERNOON SESSION
- 12.30: Description of Pony Races by Mr. Rufe Navlo.
- 4.30: Closing Announcements.
- 6.0: Birthday Calls.
- EVENING SESSION
- 6.45: Dinner Music.
- 7.30: Racing Revelations—Mr. Rufe Navlo
- 8.1: Sporting Feature from Newtown Stadium—Full Description of Main 15-Rounds Event, by HERBERT BEAVER.
- 10.0: Closing Announcements.

2SN

SYDNEY, 236 Metres.

- 7.30: Breakfast Hour—Light music, vtz. march, musical comedy, film theme, belad song, dance music. 8.30 a.m.: Close down.
- 10.0: Women's Session—8.5: Interest to women, book review, theatre review, story. Inter-ferential light music. 11.0: Close down.
- 1.15: Children's Session—Stories, call, incidental music. 8.30: Announcements, news of the day, music. 7.0: Sports review talk. 1.15: Dinner music. 8.0: Music. 10.30: Close down.

3LO

MELBOURNE, 375 Metres

- Day Sessions as usual.
- AFTERNOON SESSION.
- 2.0: During the afternoon Eric Welch will give descriptions of the Mentone Race Results and the Novice Handicap—1 mile.
- 3.0: Mentone Race—2 1/2 furlongs.
- Brush Steeplechase—2 miles 1 furlong.
- January Handicap—1 mile.
- 4.0: Mentone Plate—4 furlongs.
- Sporting Results, including Progress Scores in the Third Test Match—South Africa v. Australia—played at the Melbourne Cricket Ground, also New South Wales v. Queensland—played at Sydney, will be broadcast as they come to hand and repeated at every half-hour.
- Sporting descriptions will be interspersed with a Studio Programme of specially selected recorded music.
- 4.30: Close down.
- 5.45: The Children's Corner.
- EVENING SESSION.
- 6.35: Sporting Results, News, etc.
- 7.1: Countryman's Session. Weather Synopsis. Rainfall Data. River Reports.
- 7.25: Golden Opportunities—"How to Find Gold"—Mr. A. J. Bolton, F.G.S.A.

- 7.45: Hints to Young Cricketers—"Batting—Strokes in Front of the Wicket"—Mr. Rod McGregor.
- At Approximately 7.0 p.m. Stumps Scores in the Cricket Matches—Third Test Match, South Africa v. Australia, and New South Wales v. Queensland, will be given.

- NIGHT SESSION
- 8.0: A. B. C. CONCERT ORCHESTRA—Overture, Zampa. Herold
- Eda Bennie Soprano
- Elizabeth's Greeting to the Hall of Song, from Tannhauser. Wagner
- A. B. C. CONCERT ORCHESTRA—Ballet Suite, La Source. Delibes
- EDOUARD LAMBERT Violin. Massenet
- Meditation, from This
- EDA BENNIE Soprano. Mignon, Thomas
- Polonaise, Je suis Thania.
- EDITH PARNELL Piano—Allegro de Concerto. Granados
- EDA BENNIE Soprano. Sewius Song. Sanderson
- A. B. C. CONCERT ORCHESTRA—Der Freischutz. Weber

- 9.0: A MYSTERY STORY—"The Wall in the Goss," told by MR. J. HOWLETT ROSS VARIETY

- 9.15: A. B. C. NOVELTY ORCHESTRA—No. 10—Line Out of a Hundred. Sherman Reaching for the Moon. Berlin
- NELL FLEMING and the BOY FRIEND—The Bird and the Hawk. Cha. MacDuff WILLIAMS, Saxophone—Sousouvi. Drlis
- GEORGE NICHOLLS, Baritone—Little Northern Window. Anthony Dore Listening to the Violin. Rolfer With Violin Obligato by MacDuff WILLIAMS.

- A. B. C. NOVELTY ORCHESTRA—Poupee Velante. Poldini
- NELL FLEMING and the BOY FRIEND—More Before.

- 9.54: GORDON CRAIG, Marimba—The Old Reelin. Kreisler
- GEORGE NICHOLLS, Baritone—Two Gipsy Songs—Gipsy Love Song" from "The Fortune-Teller. Herber

- I Travel the Road. Thayer
- A. B. C. NOVELTY ORCHESTRA—Melodies from "The Student Prince." Romberg

- 10.15: TEST CRICKET (Relaying to every State.) Resume of the day's play in the Third Test Match, SOUTH AFRICA v. AUSTRALIA, played at the Melbourne Cricket

- 10.30: WEATHER, ETC.
- 10.35: DANCE MUSIC.
- 11.30: Close down.

3AR

MELBOURNE, 492 Metres

- Day Sessions as usual.
- MIDDAY SESSION
- 12.0, 2.15, and 4.15: Descriptions of Third Test Match, Australia v. South Africa, at Mentone Cricket Ground. (Relaying to all States.)
- 6.0: Stump Scores, Weather Data, Shipping Information.
- Note—During the afternoon Progress Scores of Sheffield Shield Match N.S.W. v. Queensland, will be broadcast as they come to hand.
- EVENING SESSION.
- 6.15: Dinner Music.
- 6.32: Sporting Results, Stump Scores in Cricket Matches—Test Cricket Australia v. South Africa, at M.C.G., and Sheffield Shield Match, N.S.W. v. Queensland.

- NIGHT SESSION
- A Variety Programme, with Intermittent Dirt Track Events Description.
- 8.0: THE BRASS BAND, under the Conductors of T. B. DAVIDSON, will play—"The Rambler" by Chapman Foot, Laughing at the Rain, by Guy Waltz, Will of the Wisp. Bourne
- Overture, The Village Bride. Rimmer
- Corset Solo, A Persecuted Bond
- Selection, Maysappa. Day
- Greenwood
- March, The Bohemians. Le Duc
- Mrs. LILLEY, Contralto, in a Popular

- Arise O Sun. Day
- To Sing Again. Drummond
- When Dawn Breaks Through. Wood
- He Be Hopin' You Remember. Clarke
- THE MASTER COUR QUARETTE, in "Harmony Up-to-Date."

- REEB SAUNDERS will entertain with bright Racings at the MCG, TORONTO, and by MEL MORRIS of Dirt Track Racing at the EXHIBITION, will be given.

- NOTE: At intervals during the evening descriptions by ERIC WELCH of High Speed Racings at the MCG, TORONTO, and by MEL MORRIS of Dirt Track Racing at the EXHIBITION, will be given.

- NOTE: At intervals during the evening descriptions by ERIC WELCH of High Speed Racings at the MCG, TORONTO, and by MEL MORRIS of Dirt Track Racing at the EXHIBITION, will be given.

- 10.20: NEWS SESSION.
- 12.0: Close.

Day Sessions as usual.

- 1.15: A Description of the Play in the Third Test Match, between Australia and South Africa, will be relayed from the Melbourne Cricket Ground.
- Q.T.C. RACES.—The Queensland Turf Club's New Year Meeting will be described from the Ascot Racecourse.
- THE SECOND TRIAL HANDICAP—200 Sovs—6 furlongs
- THE THIRD TRIAL HANDICAP—200 Sovs—5 furlongs
- THE SHORTS HANDICAP—200 Sovs—4 furlongs
- THE JANUARY HANDICAP—300 Sovs—1 mile and a quarter
- THE SECOND WELTER HANDICAP—200 Sovs—7 furlongs
- THE THIRD NOVICE HANDICAP—200 Sovs—1 mile

- Descriptions of play in the Third Test Match between South Africa and Australia will be relayed from the Melbourne Cricket Ground between 3.45 p.m. and 4.0 p.m., and between 5.40 p.m. and 6.0 p.m.
- 1.2: Scores in the Sheffield Shield Match between Queensland and New South Wales will be announced during the day.

- EARLY EVENING SESSION
- 6.0: Interstate Race Results.
- 7.0: MICK FLANAGAN will review To-day's Q.T.C. Races.
- 7.15: General Sporting News, including Stumps Scores in the Test and Sheffield Shield Matches.
- 7.30: News Service.
- 7.37: Sailing Notes by Stan Phillips.
- 8.0: NIGHT SESSION

- 8.0: HILLY ROMAINE and HIS TIVOLIANS in the Stage Presentation from the Tivoli Theatre.
- 8.10: POPULAR VARIETY ENTERTAINMENT (Entirely new) featuring—BILLY COTTON'S ORCHESTRA, OUNTEN McLEAN (Organist), KEN MAUGHAN (Singer), LIPSCOMB AND FIELD (Comedian), JACK SHILKRET (Pianist).

- JOE BROWN will describe the Main WRESTLING BOUNTS from the BOHEMIA STADIUM, SOUTH BRISBANE.

- 10.0: News.
- 10.15: A Review of To-day's Play in the Third Test Match between South Africa and Australia, will be relayed from Melbourne.
- 10.30: A Review of To-day's Play in the Sheffield Shield Match between Queensland and New South Wales will be relayed from Sydney.
- 10.45: MEDITATION MUSIC.
- 11.30: Close.

5CL

ADELAIDE, 411 Metres

- Day Sessions as usual.
- During the day Scores of the Third Test Match—South Africa v. Australia—at Melbourne—and the Sheffield Shield Match—N.S.W. v. Queensland, at Sydney—will be broadcast immediately they come to hand. Descriptions of the Third Test Match will be broadcast by relay from Melbourne at 12.45 p.m. and 4.15 p.m.
- 1.0: During the afternoon Mentone Race Results and Musical Numbers will be broadcast.
- 5.15: During the afternoon Progress Scores in the Third Test Match—South Africa v. Australia.
- 7.5: Cricket Score in To-day's Matches—South Africa v. Australia, at Melbourne, and N.S.W. v. Queensland, at Sydney.
- TENNIS SCORES by K. GERRMAN
- 7.10: 5CL Weekly Sketch, conducted by KERVIN MACGATHE.
- 7.20: CROCKET TOPICS, by LEN FORD.
- 7.30: Rev. G. E. HALE, B.A., will speak.
- 7.45: ALL SPORTING RESULTS.
- NIGHT SESSION

- 8.0: "BETTER TIMES"—An Optimistic Presentation from "THE JOY ARK," including Surprise Packages of Novelties, Topical Burlesque, and Racey Revue.
- 9.45: FROM 3LO MELBOURNE—A Resume of To-day's Play in the Third Test Match—South Africa v. Australia, at the Melbourne Cricket Ground.

- 10.0: DANCE MUSIC, with Vocal Interpersions.
- 10.15: NEWS SESSION.
- 10.25: DANCE MUSIC Reproductions.
- 11.30: Close down.

6WV

PERTH, 435 Metres

- Day sessions as usual.
- During the day Progress Scores will be broadcast immediately received—Third Test Match, and N.S.W. v. Queensland, at Sydney.
- AFTERNOON SESSION
- 1.15: Synopsis of to-day's Sporting Fixtures.
- 1.15: From Headquarters, Running Commentary of the Australian Hurdles, the Commonwealth Handicap, the Fremantle Plate, the State Handicap, the Coronation Plate, and the Final Handicap.
- EVENING SESSION
- 7.20: State and General Sporting Results.
- NIGHT SESSION

- 8.0: A. B. C. LIGHT ORCHESTRA—Anthea. Thurban
- 8.17: PHYLIS OLLETT, Mezzo Soprano—A Blood Red Ring Hung Round the Moon. Malinson
- 8.10: GIL DECH, Novely Pianist—1 Miss a Little Miss. Shades of Blue.

SUNDAY. . . JANUARY 3

2FC

SYDNEY.
451 Metres

The Church Hour
(10.0 a.m. to 12.30 p.m.)

10.0: Announcements, Music, News.
10.50: FROM ST. JUDE'S CHURCH OF ENGLAND—MORNING SERVICE.
Organist—F. R. Cooke.
Rector—Canon Cakebread
Bells of St. Jude's.

10.55: Organ—
Prayer and Cradle Song . . . *Guilmant*
11.0: Hymn 79, "As With Gladness" (*Dix*); Collect, Epistle, Gospel, Creed; Notices; Hymn 76, "Earth Has Many a Noble City" (*Fit*); Sermon—Canon Cakebread, "The Wise Men and Their Gifts"; Hymn 74, "Father, Let Me Dedicate" (*Macfarren*); Ethel Lish and Wilfrid Holloway, Duet, "Love Divine" (*Stainer*); Prayers, Communion Service; Hymn 590, "Come, All Ye Faithful"; Lord's Prayer: Gloria in Excelsis; Benediction; Hymn 324, "Jesu, Gentlest Saviour"; Nunc Dimittis: Tonus Peregrinus; Organ solo, "Overture to the Messiah" (*Handel*).

Afternoon Entertainment
(2.0 p.m. to 4.30 p.m.)

3.0: FROM THE CENTRAL METHODIST MISSION, LYCEUM HALL.
PLEASANT SUNDAY AFTERNOON
Doxology, Prayer.
CARL CAMERON, Baritone—
The Lutepeler *Allitsen*
Invictus *Huhn*
GWEN SHERWOOD, Elocutioniste.
EILEEN CRELLIN, Violiniste—
Legende *Wienieski*
Hejre Kati *Hubay*
MARJORIE SWINDEN, Soprano—
Cast Thy Burden *Hamblen*
Nearer, My God to Thee . . . *Brown*
Notices, Offering.
AMBROSE GIBBS, L.L.C.M., Organist—
There's a Song Down Every Roadway
Haydn Wood
REV. JOSHUA ROBERTSON, M.A.,
Dip. Soc. Sc., F.R.G.S.—
"Guiding on the Franz Josef Glacier."
Acknowledgments, National Anthem.
Benediction.
4.30: Close.

EVENING PROGRAMME
(6.0 to 10.30 p.m. Relayed to 2NC Newcastle between 6.0 and 7.0 p.m., and 8.30 and 10.30 p.m.)

6.0: A RECORD RECITAL—Annotations by Discobolus.
7.15: FROM THE CHURCH OF CHRIST, PADDINGTON—
Organ; Hymn 79; Prayer; Hymn 60; Announcements; Hymn 905; Scripture Reading, Colossians, 1, 18-29; Solo, "No Burdens Yonder" (*Habershon*); Sermon, "Giving Christ the Pre-eminence," Mr. Thos. Hagger; Hymn 450; Benediction; Vesper.
8.20: KAROL SZRETER, Pianist (r.)—
Dance Macabre *Saint-Saens*
Anitra's Dance ("Peer Gynt") . . *Grieg*

★ TO-NIGHT AT 8.30 ★
Relayed to 2NC Newcastle, from 8.30, and 4QC Brisbane, and 4RK Rockhampton, from 8.45 p.m.)

A Concert, featuring
THE AUSTRAL SYMPHONY ORCHESTRA,
Conducted by Fred Quintrell.
8.30: THE AUSTRAL SYMPHONY ORCHESTRA—
Overture, The Beautiful Galatea
Von Suppe



OLIVER KING, who has an interesting bracket of songs of the countryside to sing from 2FC to-night.

8.40: LEONORE GOTSCH, Soprano—
Come, Mary, Take Comfort . . . *Wolf*
To My Baby *Strauss*
Serenade *Strauss*
8.47: THE AUSTRAL SYMPHONY ORCHESTRA—
Suite, Salambo *Ahrends*
8.57: OLIVER KING, Basso—
Twice Ten Hundred Deities . *Purcell*
Isobel *Brullge*
9.4: THE AUSTRAL SYMPHONY ORCHESTRA—
Selection, "The Student Prince" . *Romberg*
9.14: "SIDELIGHTS ON OLD SYDNEY."
9.29: LEONORE GOTSCH, Soprano—
The Unhappy Mariner *Cuschmann*
The Nightingale *Albief*
9.36: THE AUSTRAL SYMPHONY ORCHESTRA—
Overture, La Burlesque *Kela Bela*
9.46: Chinese Lullaby *Bouwers*
Japanese Sunset *Zamecnic*
9.56: OLIVER KING, Basso—
Songs of the Countryside *Michael Head*
"When I Came Forth This Morn."
"The Temper of a Maid."
"Robin Bedbreast"
"Sweet Chance That Led My Steps Abroad"
"Money O!"
10.3: THE AUSTRAL SYMPHONY ORCHESTRA—
Fantasia, Hungarian *Moses*
Ballad Music, La Source *Delibes*
10.28: Late Official Weather Forecast.
10.30: CLOSE.

2BL SYDNEY.
351 Metres

Midday Session
(10.55 a.m. to 3 p.m.)

10.55: Announcements.
11.0: HIGH MASS from ST. MARY'S BASILICA—
Celebrant, FATHER JOSEPH O'DONNELL.
1.45: "FROM MY EASY CHAIR," by A. C. C. STEVENS.
Late Afternoon Session
(4.30 to 6.0 p.m.)
4.30: BERLIN STATE OPERA HOUSE ORCHESTRA, playing (r.)—
Furyanthe Overture *Weber*
Abu Hassan *Weber*

4.45: VIOLET ROCHE will tell of "THE ORIGIN OF THE KUPENGA FISHING NET."
5.0: VIENNA PHILHARMONIC ORCHESTRA, playing (recorded)—
Suite from the Music to "Le Bourgeois Gentilhomme *Strauss*
LILY PONS, Soprano (recorded)—
Lucia di Lammermoor *Donizetti*
(a) Arlon g^l incensi.
(b) Spargi di Amaro Pianto.
ALFRED CORTOT, Pianist (r.)—
Variations Symphoniques.
Cesur Franck

Children's Hour
(6.0 to 6.50 p.m.)

6.0: The Children's Session, conducted by JUDITH.
6.15: THE WEST AUSTRALIAN SCHOOL GIRLS, who are now visiting Sydney under the auspices of the West Australian Federation of Parents and Citizens' Associations, will entertain the children—
Xylophone Solo JOYCE PARMOR
Chorus THE GIRLS
Recitation DOROTHY ROACH
Song BARBARA MITCHELL
Chorus GIRLS
Piano Solo JOYCE DAY
Chorus GIRLS
Message ELSIE HOLDERNESS
6.30: More Stories by JUDITH.

EVENING PROGRAMME
(6.50 to 10.0 p.m.)

6.50: MUSICAL ITEMS (recorded).
7.15: EVENING SERVICE, FROM ST. JOHN'S PRESBYTERIAN CHURCH, WAHROONGA; Preacher, REV. D. J. FLOCKHART, M.A.—
Sanctus, Introductory Sentences, Prayer and Lord's Prayer, Hymn 601, Scripture, Solo—How Lovely are Thy Dwelling (*Liddle*), MISS PEGGY DUNBAR; Prayer, Hymn 562, Notices and Offerings, Anthem—"Holy Art Thou," Prayer, Hymn 205; SERMON by REV. D. J. FLOCKHART, M.A.; Prayer, Hymn 301, BENEDICTION, Threefold Amen.

★ TO-NIGHT AT 8.30 ★
(Relayed from 3AR, Melbourne)

CONCERT

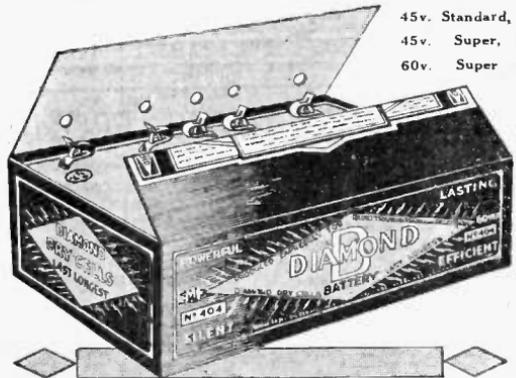
arranged by Professor Bernard Heinze, F.R.C.O.

ARTISTS—
HERMIA BARTON, Violinist.
PHOEBE BARTON, Soprano.
HAROLD MURPHY, Baritone.
LINDSAY BIGGINS, Pianist
Sonata for Violin and Piano in D Major,
Joseph Gibbs
SONGS—If You Would Dance *Mozart*
Now Your Days of Philandering are Over *Mozart*
Sonata in A Major for Piano . *Mozart*
SONGS—Someone *Besley*
Faery Song *Boughton*
Song of the Palanquin Bearers . *Shaw*
Chaconne for Violin *Vitali*
SONGS—In the High Hall Garden,
Somervell
Come into the Garden, Maud, from
Tennyson's "Maud."
PIANOFORTE—"Berceuse, *Voormolen*
Twilight *Voormolen*
Clair de Lune *Debussy*
SONGS—To the Birds *Georges Hue*
Your Eyes *Rene Rubey*
The Butterflies *Chausson*

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- AMY CASTLES (Soprano)—Nevin
- The Rosary
- COURT SYMPHONY ORCHESTRA—Sullivan
- Yeoman of the Guard
- G. WREAY-GIBBS (Baritone)—Gibbes
- Red Rosebud
- CLARENCE ADLER (Pianist)—Sinding
- Ruile of Spring
- GRENADEIER GUARDS BAND—Bishop
- Lo Here the Gentle Lark
- SAVOY ORPHEANS ORCHESTRA—Romberg
- Desert Song Selection
- BROWNING MUMMERY (Tenor)—Wilson
- My Lovely Celia
- SIR THOMAS BECHAM AND ROYAL PHIL-HARMONIC ORCHESTRA—Delibes
- On Hearing the First Cuckoo
- ENRICO CARUSO (Tenor)—Sullivan
- The Lost Chord
- ALMA GLUCK (Soprano)—Foster
- Old Black Joe
- FELIX GERDES (Pianist)—Leybach
- Norma
- FLANAGAN BROTHERS (Duetists)—Nugent
- Sweet Rosie O'Grady
- NEW CONCERT ORCHESTRA—Komzak
- Life in Vienna
- PETER DAWSON (Bass-Baritone)—French
- The Darlin' Girl from Clare
- AMELITA GALLI CURCI (Soprano)—Albief
- Russian Nightingale Song
- MAYFAIR CONCERT ORCHESTRA—Daykin
- Sir Roger De Coverley
- 4.30. Close.
- EARLY EVENING SESSION
- 6.0. A SPECIAL SERVICE FOR CHILDREN arranged by THE QUEENSLAND COUNCIL OF CHURCHES, Broadcast from the Studio.
- 6.30. THE CHILDREN'S OWN HOUR.
- NIGHT SESSION
- 7.30. THE EVENING SERVICE will be broadcast from THE CITY CONGREGATIONAL CHURCH—
- Stories for the Children, Organ Salutations, Hymn, Prayer and Lord's Prayer, Anthem or Solo Scripture Solo Announcements, Anthem, Hymn, Sermon, Hymn, Benediction, Sewnwind Amen, Organ Postlude.
- 8.45. Relay from 2PC (see programme).
- 10.0. Close.

- 5CL ADELAIDE, 411 Metres**
- MORNING SESSION
- 10.30. Music
 - 11.1. MORNING SERVICE from ST PETER'S BAPTIST CHURCH
 - 12.30. Close down.
 - AFTERNOON SESSION
 - 3.0. A PLEASANT SUNDAY AFTERNOON SERVICE from MAUGHAM CENTRAL MISSION
 - 4.30. Close down.
 - EVENING SESSION
 - 6.0. CHILDREN'S BIRTHDAY GREETINGS
 - 6.10. CHILDREN'S SING-SONG
 - 7.0. EVENING SERVICE from STOW MEMORIAL CHURCH—
 - Preacher: Dr. G. H. WRIGHT
 - NIGHT SESSION
 - 8.22. Relay from 3LO (see programme).
 - 9.50. News
 - 10.0. Close.

- 77A HOBART, 517 Metres**
- 11.0. Morning Service from St. David's Cathedral, Hobart. Preacher, Very Rev. Dean Rivers.
 - AFTERNOON SESSION
 - 3.0. A programme of pleasant Sunday Afternoon Music.
 - EVENING SESSION
 - 6.1. Service of Song—Children's Community Singing, under the leadership of C. Thompson.
 - 7.0. Evening Service from Melville Street Methodist Church. Preacher, Rev. D. Lewis.
 - NIGHT SESSION
 - 8.30. A CONCERT by the PROFESSIONAL MILITARY BAND—
 - "Rigue March" (Wagner), "Rose Mousse," "Figue Dame" (Suppe), "Serenata (Toscaff)," "Blue Danube Waltz," "Weber Suite," "Blumlinge Fluster," "Il Y Trovatore."
 - ENID BRADLEY—"All in an April Evening," "My Ship," "The Carpet."
 - CHAS CLAY—"Passing By," "Give a Man a Horse he can Ride," "Mary of Argyle," "Dina."
 - 9.45. News
 - 10.0. Close down.

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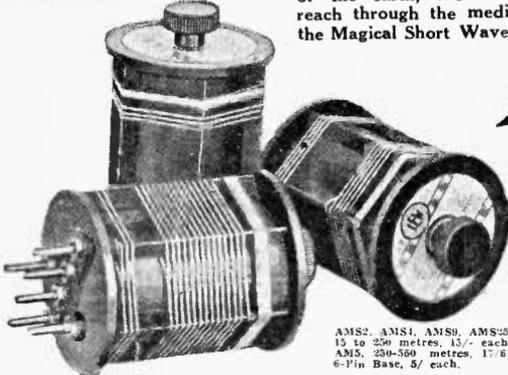
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NOTES AND NEWS FROM THE RADIO CLUBS

St. George

THE St. George Radio Club is contemplating "big things" in the future, and has completed plans for an intensive organising campaign, which it is anticipated will result in this club becoming the premier organisation of its kind in the Commonwealth. It is with pleasure that we outline briefly a few of the proposals:—

(a) Regular weekly Morse classes each Monday at 8 p.m.

(b) An intensive and comprehensive instructional course and series of lectures each Thursday at 8 p.m., for the benefit of those taking their A.C.P.C. examination.

(c) A regular monthly dance at "Radio Hall," Arncliffe.

(d) The maintenance to a strict schedule of experimental transmissions from 8 p.m. to 10 p.m. daily, for the purpose of putting over the air Morse practice, lectures, etc., etc.

(e) Arranging of visits of inspection to various wireless stations, studios, factories, and other places of interest to members.

As regards the Morse class on Monday evening, non-members are invited, upon payment of a fee of sixpence per night.

On Saturday, December 12, through the courtesy of Mr. A. S. McDonald, assistant manager, Amalgamated Wireless (A'sia), Ltd., a number of club members visited that company's station at Pen-nant Hills, and were cordially welcomed

by Mr. Cookson, engineer-in-charge, who personally conducted the party.

Intending members, or those wishing to attend the Morse class, should get into touch with the secretary, Robt. H. W. Power, Esq., 26 Cuiwalla Street, Hurstville (phone during the day, MA2377).

Leichhardt and District

THE Leichhardt and District Radio Society held its weekly meeting on Tuesday, December 15, at the club rooms, 35 Albert Street, Leichhardt.

The president, Mr. Pinnell, occupied the chair. After the usual preliminary business had been dealt with, Mr. W. G. Nichols proceeded to deliver a very interesting lecture on "Loud Speakers." The lecture proved to be a most instructive one, and Mr. Nichols was accorded a hearty vote of thanks at its conclusion. The next meeting of the society will be held on Tuesday, January 5, 1932, and all interested are cordially invited to attend, as we have arranged a very attractive programme for the coming year. All inquiries should be addressed to the hon. secretary, Mr. Maclaren, 56 Hawthorne Parade, Haberfeld.

Harringtons

A LARGE number of members were present at the meeting held on December 18. The event of the evening was the "C" grade examination, for which 36 members sat. This meeting also marked the breaking-up of the club for the year; the club will hold its first meeting in the New Year on Janu-

ary 8. The results of the examination will then be known and two new classes will be formed accordingly.

The Sydney section of the club has definitely closed its membership for an indefinite period. All other branches of the club are open for membership, which offers interesting attractions, particularly to those in the country districts.

The Christmas issue of "QSO" has been released. This number is crammed full of very interesting information and humor and has been voted far in advance of previous issues. All those desirous of a copy should apply immediately, as only a very limited number is available for sale at 6d per copy.

The Bathurst branch of the club has commenced weekly lectures, delivered by Mr. T. Evans, VK2NS, and the meetings are proving very popular. The members are at present building their transmitting station, which they expect to have in operation early in January. Full particulars regarding this section may be obtained at the branch club meetings, which are held every Wednesday night at 8 o'clock at No. 8 Park Street, Bathurst. Mr. Russel-Smith is the branch secretary.

Further information regarding the activities of this club in general can be obtained from the honorary executive secretary, Mr. J. Duffy, c/o club headquarters, 386 George Street, Sydney.

MESSRS LEVENSÓN'S RADIO wish it to be announced that the line, "Casser Valves, Manufactured by Phillips," which was incorporated in their advertisement last week, should not have appeared at all, as it is wholly incorrect.

MONDAY, JANUARY 4

2FC

SYDNEY,
451 Metres

Early Session
(7.0 to 8.15 a.m. Relayed to 2NC, Newcastle)
Morning Session
(10.30 a.m. to 12.30 p.m., as usual. Relayed to 2NC, Newcastle, between 10.40 and 12 Noon.)
Scores in the Third Test, played at Melbourne, will be given at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

The Lunch Hour
(1.0 to 2.15 p.m., as usual)
The Radio Matinee
(2.15 to 4.30 p.m., as usual. Relayed to 2NC, Newcastle, between 2.30 and 4.30 p.m.)

2.15: FROM THE SYDNEY CRICKET GROUND: Description of the play in the match, N.S.W. v. Queensland.

4.0: THE BERLIN STATE OPERA HOUSE ORCHESTRA (recorded)—The Egyptian Helen Strauss

4.8: JOHN COATES, Tenor (recorded)—"Phyllida Flouts Me."

4.11: ORABIO DE CASTRO, Cellist (recorded)—Nocturne in E Flat Chopin

4.15: THE SALISBURY SINGERS (r.)—Sleep, Gentle Lady Bishop

4.18: VICTOR OLOF INSTRUMENTAL SEXTET (recorded)—To a Water Lily MacDowell

4.24: CLAIRE DUX, Soprano (recorded)—I Would Weave a Song for You, O'Hara

4.27: H.M. COLDSTREAM GUARDS BAND (recorded)—Spring Song Mendelssohn

4.30: Close.
Early Evening Session
(7.40 to 8.0 n.m., as usual. Relayed to 2NC, Newcastle, between 8.40 and 8.45, and 7.5 and 8.0 p.m.)

5.40: RELAYED FROM 3LO, MELBOURNE—Description of the play in the Third Test Match.

6.0: FROM 2FC STUDIO—Stumps drawn Scores in the match, N.S.W. v. Queensland, played at Sydney.

6.2: Children's Stories, by the "Hello Man," assisted by "Aunt Filly."

6.45: BOY SCOUTS' and GIRL GUIDES' SESSION.

7.5: Sporting Service, News, etc.

★ TO-NIGHT AT 8.0 ★
FROM THE ROCKDALE TOWN HALL—

COMMUNITY SINGING

Under the direction of
CHARLES LAWRENCE

with
WILLIE AND THE BOYS
(Relayed to 2NC, Newcastle.)



GEORGE EDWARDS and NELL STIRLING who will make an appearance at Rockdale to-night.

Assisting Artists—
AMY OSTINGA, Mezzo—
Sing Along Penn
There's a Song Down Every Roadway Haydn Wood
Rosamond Del Reigo
The Voice of the Doe Wilbey
GEORGE EDWARDS and NELL STIRLING—
Sketches—
The Charm George Edwards
Off on Their Holidays, George Edwards

10.15: RELAYED FROM 3LO, MELBOURNE—A Talk on the Day's Play in the Third Test Match.

10.30: THE A.B.C. SPORTING EDITOR will speak on the Day's Play in the match, N.S.W. v. Queensland (Relayed to 4QG, Brisbane).

10.45: Late Official Weather Forecast.

10.47: DANCE MUSIC FROM ROMANO'S CAFE.

11.30: Close.

2BL

SYDNEY,
351 Metres

Opening Session
(8.15 to 11 a.m.)

10.35: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley—(a) "Tennis Queries and Their Answers," (b) "Hints on Fashion."

Midday Session
(12 Noon to 2.30 p.m. Relayed to 2NC, Newcastle, between 12 Noon and 1.30 p.m.)

12.0: FROM THE SYDNEY CRICKET GROUND—A Description of the Match, NEW SOUTH WALES v. QUEENSLAND.

NOTE.—At approx. 12.10, Metropolitan Forecast and Weather Synopsis.

SCORES at the fall of each wicket, at lunch and tea adjournments, and stumps drawn, in the THIRD TEST MATCH, played at Melbourne.

Afternoon Entertainment
(2.30 to 5.45 p.m.)

2.42: RUDY WIEDOEFT, Saxophonist (recorded)—La Palma Arr. Wiedoeft

2.45: THE WOMEN'S HOUR, conducted by THE A.B.C. WOMEN'S ASSOCIATION—

"C.W.A. News," by Miss Ferguson.

DEBATE—"That the Qualities and Virtues of the 1831 Girl are Superior to those of the 1931 Girl!"

Affirmative—MRS. EMILY BENNETT. Opposing—MRS. RUBY DUNCAN.

"Play Reading," by Miss Doris Fitton. "Let's Go for a Motor Trip," by Miss Gwen Varley.

3.45: JOHN McCORMACK, Tenor (r.)—Holy Night Schubert
The Trout Schubert

Impromptu Schubert
To the Lyre Schubert

3.49: FRITZ KREISLER, Violinist (r.)—Slavonic Dance, No. 1, in G Minor Dvorak

3.52: SELECTIONS BY ORCHESTRAS OF THE WORLD (recorded).

4.2: DORA LABBETTE and HUBERT EISEDELL, Vocal Duet (recorded)—The Little Irish Girl Lohr

4.5: PABLO CASALS, Cellist—Apres un Reve Faure

4.8: WILHELM BACKHAUS, Pianist (recorded)—Menuetto in B Minor Schumann

4.12: EDGAR COYLE, Baritone (r.)—Beauty's Eyes Tosti
4.15: FROM THE SYDNEY CRICKET

GROUND—A Description of the Match, NEW SOUTH WALES v. QUEENSLAND.

6.0: Close.
The Dinner Hour
(8.15 to 8 p.m.)

6.15: THE A.B.C. STRING SEPTET.

7.35: THE UNIVERSITY EXTENSION BOARD LECTURE—General Subject, "THE SCHEME OF THINGS." To-night MAJOR E. H. BOOTH will speak on "EARTH."

(See syllabus overleaf.)
EVENING PROGRAMME
(8.0 to 10.30 p.m.)

★ TO-NIGHT AT 8.0 ★

A Concert Hour, arranged by
MUSICAL ASSOCIATION OF N.S.W.

8.0: CECILY ADKINS, Soprano—As Joseph was a-Walking Thiman
New Year Song Mullinson

8.6: ALEXANDER SVERJENSKY, Pianist—A Group by Chopin—Nocturne in F Sharp Major. "Impromptu in F Sharp Major."

"Etude, No. 3, in E Major." "Etude, No. 4, in C Sharp Minor."

8.19: STANLEY CLARKSON, Bass—The Wanderer Schubert
Within These Sacred Bowers, from "The Magic Flute" Mozart

8.25: RONALD WILKINSON, Violinist—La Gitana Kreisler

8.30: CECILY ADKINS, Soprano—Morning Hymn Haydn
The Next Market Day Hughes

Nancy's Hair Arr. Kennedy Fraser

8.37: ALEXANDER SVERJENSKY, Pianist—Barenolle Liszt
Prelude in B Minor Liszt

Fairy Tale, in E Minor Medtner
Etude, Tableau, in E Flat Minor. Rachmaninoff

Etude, in C Minor Stravinski

8.48: STANLEY CLARKSON, Bass—Silent Noon Vaughan Williams
Linden Lea Vaughan Williams

Five Eyes Armstrong Gibbs

8.54: RONALD WILKINSON, Violinist—Romance Beethoven

9.0: "LEAVES OF MEMORY." Another Chapter of which we will hear to-night, adapted for radio by—
ELLIS PRICE

Will again enable us to hear characters from books or plays brought to life by the memory of our old friend, the Book Lover. We will now transport you to his library.

9.15: THE A.B.C. ORCHESTRA—Fingals' Cave, Overture, Mendelssohn

9.25: VONNIE O'SULLIVAN, Mezzo—Summer Rain Wilbey
A Brown Bird Singing Wood
Ma Curly Headed Baby Clusman



CECILY ADKINS, soprano, 2BL to-night. VONNIE O'SULLIVAN, mezzo, 2BL to-night.

MONDAY, JANUARY 4 (Continued)

- 9.32: THE A.B.C. ORCHESTRA—Melodie... Rachmaninoff, arr. Englemann
- 9.40: CHANDRA PARKES, Monologues—A Waltz Quadrille... Wilcox
- Moon Song... Service
- Our Kiddie... Elkin
- 9.47: ALARD MALING AND FRED WHAITE, Novelty Bell and Piano Solo—Kiss Me Again... Herbert
- 9.52: VONNIE O'SULLIVAN, Mezzo—A Memory... Thomas
- Life's Recompense... Dol Regie
- 9.59: THE A.B.C. ORCHESTRA—Four Fancies Suite... Somerville
- 10.9: CIANDRA PARKES, Monologues—The Wee Shoop... Servic
- Sunny Jim... Murphy and McConnell
- Many Happy Returns of the Day, Burke
- 10.16: THE A.B.C. ORCHESTRA—Madame Pompadour Selection... Fall
- 10.25: Late News and Weather Forecast.
- 10.30: Close.

2GB SYDNEY, 316 Metres

- Day Sessions as usual.
- 8.0: Orchestra—The Merry Widow Selection... Lehar
- 8.10: Flute Solo—The Witches' Dance
- 8.15: Leonard Howell, Tenor—Cello Solo
- 8.20: Dance Arab—Cello Solo
- 8.25: AN EPICLUDE BY FATHER NEPTUNE
- 8.35: Douglas McKinnon, Concertina and Saxophone Artist—Orchestra—The Waltz Dream
- 8.50: Violin Solo—Dance of the Goblins
- 8.55: Organ Solo—Frohne's Millere
- 9.0: Weather Report
- 9.3: Soprano Solo—It is Destiny
- 9.8: Cello Solo—Hassan Serenade
- 9.13: Leonard Howell, Tenor—Orchestra—Waltz Poi
- 9.28: Douglas McKinnon—Cello Solo
- 9.38: Violin Solo—La Ciochetti
- 9.43: Little Humor
- 9.48: Organ Solo—Blue Danube
- 9.54: Orchestra No 2—Polonaise No 2
- 10.0: Instrumental Music
- 10.5: Musical Music
- 11.15: Close down.

2UW SYDNEY, 267 Metres

- Day Sessions as usual.
- 8.0: CLOSE NOTE Scores in the THIRD TEST MATCH will be given at frequent intervals during the afternoon
- 5.15: CHILDREN'S SESSION conducted by Jill and the Froehs
- 5.45: "Play Tots" night
- 7.0: Short Commentary on the match N.S.W. v. Queensland by Mr. Upton Brown.
- 7.10: Quiz
- 7.30: Commentary on to-day's play in the THIRD TEST MATCH by Captain E. W. Bradline—relayed through 2GB Melbourne, 4BC Brisbane, 5AD Adelaide, and 2TW Sydney.
- 7.45: Music
- 8.0: PIANO-FOUR RECITAL by IONAZ FRIED—Old Vienna... Schubert
- 8.10: Valse in A Minor (op. 34 No. 2)... Chopin
- 8.15: Etude (Op. 10 No. 12)... Chopin
- 8.20: Etude (Op. 10 No. 7)... Chopin
- 8.25: Voca: Plaisir d'Amour... Martini
- 8.30: Pronouncements (Posthumous)... Chopin
- 8.35: Violin Humoresque... Tchaikowsky
- 8.40: Moonlight Sonata... Beethoven
- 8.45: Vocal: Ireland (Nepolitan Folk Song)
- 8.50: Elle Danse (She Dances)... Friedman
- 8.55: Musical Programme
- 10.30: Close

2UE SYDNEY, 293 Metres

- Day Sessions as usual.
- 8.0: EVENING SESSION
- 8.0: Aunt Willa and Simple Simon
- 8.15: Dinner Music
- 8.55: News from the Sun
- 9.1: Overture, "Poet and Peasant"
- 8.10: BROADCAST OF 20th OLD-TIME DANCE Music by Rex Albert's Radiolans. M.C. Mr. S. Meredith
- 9.45: MARCH, "Rising to Fame"
- 2. WALTZ, "Hills of Dear Old Matine"
- 3. BORN DANCE, "The Big Sunflower"
- 4. SONG—Miss Billie Grewell
- 5. BOSTON TWO STEP, "Yankee Grit."

- 6. SCHOTTISCHE, "The White Swan"
- 7. VALETTA, "The Druid's Prayer"
- 8. MELBODIE, "The Veer"
- 9. MAXINA, "The Maxina"
- 10. LANCERS, "Count of Luxembourg"
- 11. SONG, Mr. Jack Stevens
- 12. DESTINY WALTZ, "The Original Des-LATLY"
- 13. BON TON, "Marceline"
- 14. BORN DANCE, "The Hayseeds' Dream"
- 15. SCHOTTISCHE, "The Veer"
- 16. MELBIE, Schottische, Polka, Waltz.

2KY SYDNEY, 280 Metres

- Day Sessions as usual
- 8.0: EVENING SESSION
- 8.45: Dinner Music
- 7.40: A Talk on the Garden—Mr. G. L. GEL-LATLY
- 8.1: Studio Programme
- 9.0: Programme of Musical Comedy Selections
- 10.0: Closing Announcements

2SM SYDNEY, 236 Metres.

- 7.30: Breakfast Hour—Light Music, v.i.v. march, musical comedy, film theme, ballad song, dance music
- 8.30: Close down
- 8.45: Children's Session—Stories, calls, incidental music
- 6.30: Announcements, news of the day, music
- 7.0: Tennis review
- 7.15: Dinner music
- 8.5: Music
- 10.30: Close down.

3IO MELBOURNE, 375 Metres

- Day sessions as usual
- 2.0: The Week's Work in the Garden—"Answers to Listeners Queries." Mr. A. Antonio, under the auspices of the Royal Horticultural Society of Victoria
- 2.20: The A.B.C. Women's Association, conducted by Hattie Knight. This Session will include an interview with a prominent woman

THE RADIO MATINEE

- 3.0: Metropolitan Fire Brigade Band (Conductor, F. C. Johnson)—March "Foden's Own" (Greenwood)
- Overture: "The Jolly Robbers" (Von Suppe)
- 3.45: Harold Smith, Baritone—Two Songs by Martin Shaw
- "O Palmyra is a Pine Town"
- "I Know a Bank"
- 3.14: Ethel Newman—Piano Shortcuts
- 3.20: Bells Across the Meadows—Selection: "Lactime" (Schubert-Glitsam)
- 3.30: Frances Lea in Popular Numbers—"When the Clock is Striking Twelve" (Wayne "Hur") (Solomon)
- 3.36: Violet Parkinson, Piano—"Waltz 'Gold and Silver' (Lehar)
- 3.40: "Mazurka from 'Coppelia Ballet' (Delibes)
- 3.50: Ethel Newman—"Radio Shards"
- 3.56: Band—"Bells Across the Meadows"
- 4.0: G. Willemsen Smith, Baritone—"Baquette" (Daisy McGeeagh)
- "Tomorrow" (Fred Keel)
- 4.12: Frances Lea in Popular Numbers—"Many Happy Returns of the Day" (Burke)
- "Why Shouldn't I" (Freud)
- 4.18: Land—Musical Switch" (Alford)
- 4.50: Close down.

During the afternoon progress Scores in the Third Test Match, South Africa versus Australia, played at the M.C.C. also in the Sheffield Shield Match, New South Wales versus Queensland, played at Sydney will be broadcast as they come to hand

4.55: THE CHILDREN'S CORNER

EVENING SESSION

- 6.35: Women Sport: A Summary of the Week's Activities, Miss A. Beckingsale
- 7.1: Countryman's Session
- 7.25: Colonel Lawrence—"Things I heard About Him in Arabia," Mr. George Matthews
- 8.0: Harry in Stone—"When Westminster was Young," Miss Frances Fraser
- At approximately 7.0 p.m. "Stumps" Scores in the Third Test Match, South Africa versus Australia, played at the M.C.C. also in the Sheffield Shield Match, New South Wales versus Queensland, played at Sydney will be broadcast as they come to hand

NIGHT SESSION

- 8.0: "THE LIT. STAGE" An Original Comedy in Four Acts by Henry Arthur Jones.
- PERSONS REPRESENTED—COLONEL SIR CHRISTOPHER DERING, EDWARD FALKNER, ALBERT NEPEAN, Lady Jessica's husband, GEORGE NEPEAN, Gilbert's Brother, FREDDIE TATTON, Lady Rosamund's husband.
- ARCHIBALD COKE, Dolly's husband
- WALTER ATHER, "The Star and Garter"
- ALBERT NEPEAN, as Freddie Tatton's servant
- TATLIN, Sir Christopher's servant
- Footman at Cadogan Gardens
- LADY JESSIE NEPEAN
- LADY ROSAMUND TATTON, Sisters.
- DOLLY COKE, their cousin.
- BEATRICE EBERNOE.

MRS. CRISPIN FERRIS, Lady Jessica's maid.

SYNOPSIS OF SCENERY

ACT I—Text on the Lawn of Freddie Tatton's House in the Thames Valley, after Dinner, on Summer Evening.

ACT II—Private Sitting-room No. 10 at "The Star and Garter" at Sheppeford on the following Monday Evening.

ACT III—Lady Rosamund's Drawing-room, Cadogan Gardens, Chelsea, on the Tuesday morning.

Act IV—Sir Christopher Dering's Rooms in Victoria Street on the Tuesday evening.

TIME: 7.15 p.m.

Incidental Music by the A.B.C. CONCERT ORCHESTRA

Produced by FRANK D. CLEWLOW.

10.15: TEST CRICKET (Relaying to every station a Resume of the day's play in the Third Test Match, SOUTH AFRICA v. AUSTRALIA, played at the Melbourne Cricket Ground.)

10.30: WEATHER, Etc.

10.55: DANCE MUSIC.

11.30: Close down.

3AR MELBOURNE, 492 Metres

- Day Sessions as usual.
- MIDDAY SESSION.
- 12.0, 2.15, and 4.15: Description of Third Test Match—relayed from South Africa, at Melbourne Cricket Ground.
- Note—Progress Scores of Sheffield Shield Match—A Resume of the day's play as they come to hand.
- 6.0: Stump Scores—Weather data. Shipping Information, and close down.

EVENING SESSION

- 6.15: Dinner Music
- 7.32: Sporting Results, Stumps Scores of Third Test Match at M.C.C., and Sheffield Shield Match, N.S.W. versus Queensland.

NIGHT SESSION

- 8.0: THE WRECKENBERG—"The Downfall of the Celebrated Bully, Forbes"
- MR. G. R. LEGGOTT
- BRASS BAND AND BALLAD CONCERT.
- 8.20: EXCELSIOR BRASS BAND—Conductor T. B. DAVISON—March, King of the Air... Johnson
- Polka, Topsy Turvy Talk... Sarony
- 8.25: EDWARD BEACHCROFT, Tenor—Listen to the Violin... Rotter and Grothe
- Roses and Women... Grothe
- Both sung German
- 8.37: EXCELSIOR BRASS BAND—Intermezzo, Milinda's Fairy Bower... Hume
- 8.42: Thirty Minutes' Light Classics by KAR-OOLA TRI-O—Song, The Star... Rogers
- Serenade, Espanole... Chamizade
- Pianoforte, Valse Brillante, Op. 34, Chopin
- Song, Morgen... Strauss
- Violin, Scherzo, Op. 12... van Goyen
- Pianoforte, Polka (Novelty Number, Zameknic
- Song, Ships That Pass in the Night... Stevenson
- Violin, Serenade... D'Ambrosio
- La Foge

9.12: EXCELSIOR BRASS BAND

- Selection, Maid of Orleans... Laurent
- 9.22: HAROLD McKELVIE, Baritone—The Juggler's Song... Adams
- Invictus... Huhn
- 9.28: HELGA BRENNECKE, Cello—Habenera... Ravel
- The Ardellino... Martini-Kreidler
- 9.35: EXCELSIOR BRASS BAND—Overture, The Village Bride... Rimmer
- 9.45: EDWARD BEACHCROFT, Tenor—You Are My Heart's Desire... Lehar
- The Blind Lover... Keyes
- 9.50: EXCELSIOR BRASS BAND—Concert Solo, The Hammer... Diz
- 9.58: HAROLD McKELVIE, Baritone—A Yagabond's Song... Cundell
- McCall
- 10.5: EXCELSIOR BRASS BAND—March, The Winning Fight... Holtzman
- Waltz, The Waves... Rosas
- 10.15: NEWS SESSION
- 10.30: Close Down

7.45: 2UW BRISBANE, 395 Metres

Day Sessions as usual.

Progress Scores of the Sheffield Shield Match between New South Wales and Queensland will be announced at intervals.

A description of the play in the Third Test Match between Australia and South Africa will be relayed from Melbourne between 7.0 and 7.15 p.m.

7.30: TALK ON BOOKS, by Mr. J. DOYLE

7.40: A.B.C. Sporting News, including latest scores of the Australian and New South Wales v. Queensland Matches.

NIGHT SESSION

To-night a Novelty Programme will be presented 4QG and 4RK listeners, consisting of an imaginary trip to the Art Gallery. For the entertainment of radio enthusiasts certain well-known pictures will be selected, and the stories connected with the subjects will be presented. At a quarter past 10 a review of the day's play in the Third Test Match between South Africa and Australia, relayed from Melbourne, and at half-past 10 a review of the day's play in the Sheffield Shield Match between Queensland and New South Wales will be relayed from Sydney.

8.0: A TRIP THROUGH THE ART GALLERY—A trip to the Art Gallery provides one much more than is of interest and education. Let us visit an imaginary gallery to-night and inspect some of the works of art from the brushes of Old Masters.

The first picture to meet the eye is one of Cleopatra, the beautiful Queen of Egypt. She is seated in her royal barge surrounded by the beauty and splendor of old Egypt itself. How it reminds us of—

EGYPTIAN BALLET Luigini
Now before us is a picture of a handsome youth crowned with grape leaves and clusters, riding in a chariot drawn by panthers—"Bacchus," the God of Wine and Revelry. Let us have—

THE DRINKING SONG.
Here is a painting of Mecca's great Mosque, the golden place of earth to the Mohammedan. It is the hour to obey the call of Allah—
THE MOUNTAINS OF ALLAH Gechi
SALAM Long

The next picture shows us Echo and Narcissus—two characters from the classical myths. Their story is well known, and loses none of its beauty as the years roll on—

NARCISSUS
Many pens and brushes have painted "Lorelei," the siren who rests on a rock on the banks of the Rhine and combing her golden hair—

LORELEI
Now let us take a glimpse of a beautiful Alpine landscape with fur-clad slopes hemming in narrow grassy valleys. How beautiful it looks in the—

DUSK OF THE TWILIGHT Parker
We now come to the portrait of the beautiful young Heloise, whose memory Paris still keeps green—

SERENADE IN A Widor
Here is a painting entitled "Le Pardon du Feu" which, translated, means "The Ordinal of Fire" for it denotes a festival over which a child is being swung. This is still celebrated in France—

JOHN'S NIGHT Folk Song
Depicted in the attractive setting of a beautiful garden we see Dante and Beatrice. How mysterious and how Beatrice remained the inspiring force of his life—

LOVE SONG
Now we see a picture representing a carnival. How pretty appears our—
VERY OWN PIKETTIE Attingham

As a contrast to the next we see a number of cowboys are mounted on horseback and are lassooing a bear—
OH THEY GALLOW

The next picture has a mythological subject—"Cupid and Psyche" The very name of Cupid brings to our mind—
LOVE SONGS.

Now we see a picture of a sailing ship. In the foreground the sailors are at work hitting the anchor. How their shanties ring out, and what a particular appeal is made by—

HOODAH DAY.
Here is a picture of the hanging gardens of Babylon which again bring to our mind the glories and the mystery of the East. How to have been in vain, and we have been both entertained and educated. We leave the Galleries to the strains of—

EGYPTIAN SUITE Luigini
9:15: Weather Forecast.

STUDIO PROGRAMME.
9:18: **THE TENDR** will sing—
Airing in Athlone Lohr
Sitting at Home by the Fire Brahe
GLEE DECH and **ORCHESTRA**—
Hearts and Flowers

THE CONTRA will sing—
Kate O'Spaine Irish
The Young May Moon Irish

THE ORCHESTRA—
Italian Nidias
THE SOPRANO will sing—
She Wandered Down the Mountain Side Clav
Valley of Laughter Sanderson

THE ORCHESTRA—
Adrian
MIXED QUARTETTE—
Under the Lilac Bough Schubert

THE BARI will sing—
So Fair a Flower Lohr
Bambas

THE ORCHESTRA—
Simple Avenu Theme
MIXED QUARTETTE—
The Victor's Return Mendelssohn
Love is Meant to Make Us Glad German

10:0: **FINAL NEWS BULLETIN.**
10:15: A Review of 10-days in the Third Test Match—between Australia and South Africa, relayed from Melbourne.

10:30: Review of 10-days in the Sheffield Shield Match between Queensland and New South Wales, relayed from Sydney.

10:45: **DANCE MUSIC.**
11:0: **CLOSE.**

7:20: **THE SCL TWINKLER BOYS' CLUB,** conducted by "THE TWINKLER" (Mr. F. J. Mills).
7:50: **TALK.**

NIGHT SESSION
8:0: **NEW PROGRAMMES FOR THE NEW YEAR.**

A **THEME PRESENTATION OF GLEES, PART SONGS, AND CHORUSES,** by **THE SCL MALE CHOIR,** OF VOICES.

Assisted by
MAVIS ROBERTS—Soprano, and Piano, with Orchestral Theme Accompaniments.
THEME BELLS AT EVENTIDE.

1. Overture—Theme
2. (a) When Evening Twilight Hatton
(b) Calm as the Night.
3. Winds That Waft Thy Sighs to Me Wallace

With Soprano Obligato by **MAVIS ROBERTS.**
5. **SOPRANO SOLO**—**MAVIS ROBERTS.**
6. **Lullaby** Lee Williams
7. **The Owl and The Pussy Cat** De Koven

8. **Theme Melody.**
9. **Italian Salad** Jenee
With Soprano Obligato by **MAVIS ROBERTS.**

10. (a) **Maiden Listen.**
(b) **Won't You Day My 'Rm** Quartette
11. **Theme Chimes.**
12. **The Forge Song** Kempter

13. **SOPRANO SALO**—**MAVIS ROBERTS.**
14. **FINALE.**
The Song of the Northman Maunder

THEME UYD.
9:0: **INTERMISSION FOR THE MAN ON THE LAND.**

Wheat, Market, and Weather Reports.
9:2: **A MINIATURE INSTRUMENTAL AND VOCAL CONCERT.**

RICHARD SMITH, Violophonist.
9:5: **FRED WILLIAMSON,** Tenor—
Farewell Requests.

9:13: **HARRY HUTCHINS,** Violinist—
A Recital of Short Selections.
9:19: **VI GEORGE,** Soubrette—
New Song Hits.

9:20: **FRED WILLIAMSON,** Tenor—
Recital of His Most Popular Ballads
9:49: **RICHARD SMITH,** Violophonist—
A Violophonie Novelty.

9:45: **FRONT SLO MELBOURNE**—Resume of today's play in the Third Test Match—South Africa v. Australia.
10:0: **VI GEORGE,** Soprano—
Songs at the Piano

10:7: **HARRY HUTCHINS,** Violinist—
10:15: **News Service.**
10:25: **DANCE MUSIC.**
11:0: **CLOSE.**

7ZL HOBART,
517 Metres

Day sessions as usual.
NIGHT SESSION

8:1: **Recital by ROSALIND TRELEAVEN**—"March Hongroise" (Konczski), "Valse de Concert" (Schubert), "Trottoir No. 9" (Chopin), "Valse No. 11" (Chopin).

FREDA ELLIOTT—"Serenade" (Schubert), "To a Talk" (Schubert), "Hindoo Song" (Hobart), "Still as the Night" (Hobart), "Sambora" (Schubert).

ROSALIND TRELEAVEN—"Moonlight Sonata" (Beethoven), "Air de Ballet" (Chaminade), "Wings of Lynda Sheen"—"Spanish Dance" (Wasserkopf), "Andante" (Mendelssohn), "Wings of Song" (Mendelssohn).

ROSALIND TRELEAVEN—"Irish Airs in Vari-ety," "Variations"—"Prelude No. 9" (Chopin), "Valse No. 7" (Chopin), "Tarentelle" (Dohler).

THE JESTERS COMEDY COMPANY, under the direction of **HARRY GUY,** introducing "The Army A.B.C.," "The Wayward Guild," "Patser, Song, and Story."

10:0: **News.**
11:0: **CLOSE.**



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D.C. Homechargers, for operating off 240 volts D.C., complete with ammeter, charging leads, and variable switch. Price, £2.
Rotary Converter, to work from 220 volts D.C. and give 240 volts filtered D.C. with a capacity of 50 watts. Price, £15.
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5CL ADELAIDE,
411 Metres

Day Sessions as usual.
During the day Scores of the Third Test Match—South Africa v. Australia, at Melbourne, and the Sheffield Shield Match—N.S.W. v. Queensland, at Sydney, will be broadcast immediately after the close of the recaptions of the Third Test Match will be relayed from Melbourne at 12.45 p.m. and 5.10 p.m.

12:45: **FROM THE MELBOURNE CRICKET GROUND**—Description of the play in the Third Test Match—South Africa v. Australia.

5:10: **FROM THE MELBOURNE CRICKET GROUND**—Description of the play in the Third Test Match—South Africa v. Australia.

7:3: **Sporting Service,** including Cricket Scores in the Third Test Match—South Africa v. Australia, at Melbourne, and the Sheffield Shield Match—N.S.W. v. Queensland, at Sydney.



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2BL WOMEN'S SESSION

DEBATE FROM 2BL

DEBATES during the Women's Session from 2BL are ever popular, and on Monday, January 4, the subject chosen to be debated—"That the qualities and virtues of the 1931 girl are superior to those of the 1931 girl"—is sure to arouse keen interest. The pros. and cons. will be argued by Miss E. D. Curtin, of the United Associations (affirmative) and Mrs. Ruby Duncan, who is also a prominent member of the United Associations, for the negative. The debate will take place during the Women's Session, commencing at 2.45 p.m.

MAKING THE MOST OF YOURSELF.

THE value of Poise will be dealt with by Miss Gwen Varley in her talk on "Making the Most of Yourself," from 2BL, during the Women's Session, commencing at 10.35 a.m. on Tuesday, January 5. Exercises to attain a good carriage will be recommended, and the importance of training children to hold themselves erect emphasised.

MODERN BEAUTY CULTURE.

THE first of a series of talks on Modern Beauty Culture will be given by Mr. Ross Buchanan from 2BL during the Women's Session, commencing at 10.35 a.m., on Tuesday, January 5.

Mr. Buchanan was associated for a period of three years with one of the largest beauty salons in Australia in the capacity of expert dermatologist and cosmetician. He has travelled extensively abroad, studying Continental and

American methods of beauty culture and scientific weight reducing, and also a special study of arthritic and rheumatic diseases, under the guidance of a London specialist.

Mr. Buchanan requests listeners to submit to him any problems they may have on skin or hair.

MOTOR TRIP.

"LET'S Go for a Motor Trip" will be the title of a bright talk by Miss Gwen Varley during the Women's Session commencing at 2.45 p.m. on Monday, January 4. Miss Varley will take listeners on a "magic carpet trip" along the new concrete road to Kangaroo Point, across the ferry, along the road to Gosford, from Gosford to Tuggerah, and thence to Chinaman's Beach.

AU REVOIR.

LISTENERS will be interested to hear that Mrs. Mary Liddell, who has given a number of widely appreciated talks from 2BL on Fashion and Handicraft, is leaving Sydney in the new year for Melbourne.

MRS. BANNISTER, the assistant hon. secretary of the A.B.C. Women's Association, called for the New Hebrides on Saturday, December 19, where she will take up her residence in the Island of Tanna. The popularity of this enthusiastic worker was testified by the presentation of a diamond wristlet watch and diamond brooch to match, from members of the association.

HEINZE CONCERT

PROFESSOR BERNARD HEINZE has arranged the special programme for 2BL, relayed from 3AR on Sunday. The opening item will be "Sonata for Violin and Piano in D Major" (Joseph Gibbs), played by Hermia Barton (viola) and Lindsay Biggins (piano).

LINDSAY BIGGINS is a young Melbourne pianist, who recently returned from Germany, where he studied with Max Pauer, and where he was also associated with Frau Julie Muller-Hartung, who is famed throughout Europe and America as a Lied singer of the front rank. On returning to Melbourne, Mr. Biggins took up an appointment at the University Conservatorium as chief study piano teacher, and was also appointed examiner of the Australian Music Examination Board and pianist and deputy conductor of the Royal Victorian Liedertafel.

THE assisting vocalists will be Phoebe Barton (soprano) and Harold Murphy (baritone). Harold Murphy has appeared on several occasions with the Melbourne Philharmonic Society, the Royal Victorian Liedertafel, and the Oriana Madrigal Society.

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TUESDAY JANUARY 5

2FC

SYDNEY,
451 Metres

Early Session

(7.0 to 8.15 a.m. Relayed to 2NC, Newcastle.)

Morning Session

(10.30 a.m. to 12.30 p.m. Relayed to 2NC Newcastle, between 10.40 and 12 Noon.)

Scores in the Third Test, played at Melbourne, will be given at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

The Lunch Hour

(1.0 to 2.15 p.m., as usual.)

1.15: RELAYED FROM 3LO, MELBOURNE—Description of the Play in the Third Test Match.

1.30: Lunch Adjournment Scores in the Match, N.S.W. v. Queensland, played at the Sydney Cricket Ground.

The Radio Matinee

(2.15 to 4.30 p.m. Relayed to 2NC, Newcastle, between 2.30 and 4.30 p.m.)

2.15: FROM THE SYDNEY CRICKET GROUND—Description of the Play in the match, N.S.W. v. Queensland.

4.0: RAIE DA COSTA, Novelty Pianist (recorded)—

What Good am I Without You . . . *Ager*
Shoo the Hoodoo Away . . . *Harris*

4.6: ESSIE ACKLAND, Contralto (r.)—
Five Little Piccaninies . . . *Anthony*

4.9: H.M. ROYAL AIR FORCE BAND (recorded)—
The Contemptibles . . . *Stanley*

4.13: ELSIE AND DORIS WATERS (r.)—
In the Parlor when the Company's Gone . . . *Western*

4.16: RUDY WIEDOEFT, Saxophone (recorded)—
Saxophonia . . . *Wiedoeft*

4.19: DORA LABBETTE and NORMAN ALLIN (recorded)

4.22: OPERA COMIQUES ORCHESTRA (recorded)—

4.30: Close.

Early Evening Session

(5.40 to 8.0 p.m. Relayed to 2NC, Newcastle between 5.40 and 6.45, and 7.5 and 8.0 p.m.)

5.40: RELAYED FROM 3LO—Description of the Play in the Third Test Match.

6.0: Stumps Drawn Scores in the match, N.S.W. v. Queensland, played at Sydney.

6.2: Children's Stories, by the "Hello man"—"BRINGA" will tell of "ABORIGINAL CHILDREN."



LYNDA BRADFORD, Soprano, 2FC, to-night

6.45: DEPARTMENT OF AGRICULTURE—Mr. A. A. Watson, Director of Marketing, will speak on "The Marketing of Primary Products."
7.5: Sporting Service, News, etc.

EVENING PROGRAMME

(8.0 to 11.30 p.m. Relayed to 2NC, Newcastle, between 8.0 and 11.0 p.m.)

RADIO DANCE

NIGHT

**With the
A.B.C. DANCE
BAND**

(Relayed to 2NC, Newcastle.)

8.0: THE A.B.C. DANCE BAND—

Foxtrot

Blues

Quickstep

DAVID CRAVEN, Baritone—
Swingie Vine . . . *Grosvenor*
Tween Decks . . . *Lumsdane*

Blues

Foxtrot

Quickstep

FRANK RYAN, Comedian—
You Can Always Find Someone Worse
Off than Yourself . . . *Lery*

Waltz

Waltz

Foxtrot

LYNDA BRADFORD, Soprano—
Puccini . . . *Fibich*

Blues

Quickstep

Foxtrot

DAVID CRAVEN, Baritone—
The Little Old Church in the Valley, . . . *Kahn*
Sometimes You'll Remember . . . *Head*

Foxtrot

Blues

Quickstep

FRANK RYAN, Comedian—
Only Dog . . . *Stadger*

Waltz

Waltz

Foxtrot

LYNDA BRADFORD, Soprano—
L'Ultima Canzone . . . *Tosti*

Blues

Foxtrot

Quickstep

DAVID CRAVEN, Baritone—
Song of the Highway . . . *Val May*
Through the Night, from "The Swordsman" . . . *Genster*

Blues

Quickstep

Foxtrot

FRANK RYAN, Comedian—
Bedtime Tales . . . *Ryan*

Waltz

Waltz

Foxtrot

LYNDA BRADFORD, Soprano—
That Dear Old Song . . . *Love*

Foxtrot

Blues

Quickstep

10.15: RELAYED FROM 3LO, MELBOURNE—A Talk on the Day's Play in the Third Test Match, played at Melbourne.

10.30: The A.B.C. Sporting Editor will give a Talk on the Day's Play in the match, N.S.W. v. Queensland, played at the Sydney Cricket Ground.

10.45: Late Official Weather Forecast.
10.55: THE A.B.C. DANCE BAND.
11.30: Close.

2BL

SYDNEY,
351 Metres

Opening Session

(8.15 to 11 a.m.)

10.35: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley—

"Making the Most of Yourself,"
"Modern Youth Culture," by Mr. Ross Buchanan

Midday Session

(12 Noon to 2.30 p.m. Relayed to 2NC, Newcastle, between 12 Noon and 1.30 p.m.)

12.0: FROM THE SYDNEY CRICKET GROUND—A Description of the match, NEW SOUTH WALES v. QUEENSLAND.

NOTE—At approx. 12.10, Metropolitan forecast and weather synopsis.

SCORES in the Third Test Match, played at the fall of each wicket, lunch and tea adjournments, and stumps drawn.

Afternoon Entertainment

(2.30 to 5.45 p.m.)

2.30: RECORDINGS.

3.0: MURIEL BRUNSKILL, Contralto (recorded)—
Sea Wreck . . . *Hurty*

3.4: YELLY D'ARANYL, Violinist (r.)—
Tango . . . *Dushkin*

3.7: COURT SYMPHONY ORCHESTRA—
"ERA"
"Princess Ida" Selection (recorded)

3.15: THE MAESTROS VOCAL QUIN-TET (recorded)—
After the Ball . . . *Harris*

3.18: ARTHUR MEALE, Organist (r.)—
"Cavalleria Rusticana" Intermezzi . . . *Mascagni*



HARRY KLASS, violinist, 2BL, to-night.

TUESDAY, JANUARY 5 (Continued)

2SM SYDNEY. 236 Metres.

- 3. 21: HUBERT EISEDELL, Tenor (r.)—*Quilter*
Go, Lovely Rose
- 3. 24: J. H. SQUIRE CELESTE OCTET (recorded)—*Squire*
Moonbeams and Shadows
- 3. 27: LONDON SYMPHONY ORCHESTRA—*TRA*
In a Summer Garden (recorded) *Delius*
- 3. 39: VLADIMIR DE PACHMANN, Pianist (recorded)—*Chopin*
A Group by Mazurka in C Sharp Minor.
Mazurka in A Minor.
Nocturne in E Minor.
- SOPHIE BRISLAU, Contralto (r.)—*Schubert*
Die Junge Nonne
- 3. 51: WILL EVANS, Comedian (r.)—*Arthur*
Binding a Chicken
- 3. 57: POPULAR BALLADS OF THE DAY (recorded)
- 4. 9: JACKY PAYNE and the B.B.C. DANCE BAND (recorded)—*King*
Roll On, Mississippi
When the Moon Comes Over the Mountains
- 4. 15: FROM THE SYDNEY CRICKET GROUND—A Description of the match, NEW SOUTH WALES v QUEENS LAND.
- 6. 0: Close.

The Dinner Hour

15.15 to 8 p.m.

EVENING PROGRAMME

8.0 to 10.30 p.m.

- 8. 0: THE A.B.C. MILITARY BAND, conducted by J. PHELOUNG—*Auber*
Overture, "Masaniello"
- 8. 7: CLEMENT Q. WILLIAMS, Baritone, You Are My Heart's Delight—*Lehar*
The Fisherman of Pusilluco *Taglia Ferri*
- 8. 10: HARRY KLASS, Violinist—*Fernes Bloch*
Baal Schlem
Fraskutta Serenade—*Lehar-Kreisler*
- 8. 17: THE A.B.C. MILITARY BAND—*Puccini*
Selection, "Madam Butterfly"
- 8. 20: ETHEL DAW, Contralto—*Barrett*
Coronach
St. Nicholas' Day in the Morning
Serenade and Waltz from "The Student Prince"—*Romberg*
- 8. 27: THE A.B.C. MILITARY BAND—*Marshall Hall*
Seekin' Without a Song ("The Prodigal")
- 8. 54: THE A.B.C. MILITARY BAND—*Kalman*
Selection, "The Gipsy Princess"
- 9. 6: FRED CONLEY, Pianist—*Chopin*
Two Numbers by
E. Minor Waltz
Scherzo, C Sharp Minor.
- 9. 16: ETHEL DAW, Contralto—*Hunichs*
The Princess
- 9. 19: THE A.B.C. MILITARY BAND—*Finck*
Pot-pourri, Baerhanalia
- 9. 30: HARRY KLASS, Violinist—*Couperin-Kreisler*
Paraphrase
Estrellita—*Ponce-Heifetz*
- 9. 37: CLEMENT Q. WILLIAMS, Baritone—*Day*
Beware of the Maidens
Molly Brannigan—*Stanford*
- 9. 40: THE A.B.C. MILITARY BAND—*Coleridge-Taylor*
Petite Suite de Concert
- 9. 50: ETHEL DAW, Contralto—*Grieg*
I Love Thee
9. 53: FRED CONLEY, Pianist—*Debussy*
Ballade
Second and third movements, "Sonatine"—*Ravel*
- 10. 3: THE A.B.C. MILITARY BAND—*Godfrey*
Reminiscences of Scotland Arr.
10. 25: Late News and Weather Forecast.
- 10. 30: Close.

2GB SYDNEY. 316 Metres

- Day Sessions as usual.
- 8. 0: 2GB QUARTET, Leader, Horace Keats—*Eric Coates*
Summer Days
- 8. 10: Baritone Solo—*Shall Return*
- 8. 18: Dan Scully, Violinist—*Kreisler*
Cabrice Viennois
- 8. 19: Contralto Solo—*Brahe*
Down Here
- 8. 24: OBE TRIPLO—*Tchaikowsky*
Chanson Triste
Hamoresque—*Tchaikowsky*
- 8. 32: Horace Keats, Pianist—*Rachmannoff*
Hamoresque
- 8. 40: Vocal Duet.
- 8. 45: Organ Solo—*Hawaiian Sandman*
- 8. 50: Baritone Songs—*Herbert*
O Sweet Mystery of Life
Santa Lucia—*Traditional*
- 9. 0: Weather Report.
- 9. 3: 2GB Quartet—*Delibes*
Valse Coppelie
Passepied—*Delibes*
- 9. 10: Contralto Solo—*I Passed by Your Window*
- 9. 18: Obe Triffo, Cellist—*Goltzman*
Cantilena
- 9. 30: 2GB Quartet—*Ibanes*
Cupid's Arms
Fugata—*Bratton*
- 9. 27: Vocal Quartet—*Drink, Brothers Drink*
- 9. 32: Piano Solo—*Schumann*
Aufschwung
- 9. 37: Orchestra—*Lehar*
The Glow Worm
2. Tenor Solo—*Lehar*
You Are My Heart's Delight
3. Orchestra—*Waltz Refrain*
4. *Strauss*
Lehariana
- 10. 5: Instrumental Music.
- 10. 45: Slumber Music.
- 11. 15: Close down.

2UW SYDNEY. 267 Metres

- Day Sessions as usual.
- NOTE: Latest scores in the THIRD TEST MATCH South Africa v. Austral played at Melbourne will be given during the day at frequent intervals.
- 7. 0: BROWN'S SESSION conducted by Uncle Jack and Jill.
- 7. 10: Commentary on to-day's play N.S.W. v. Queensland played at Sydney—by Mr. Upton Brown.
- 7. 10: Musical programme.
- 7. 15: Commentary on to-day's play in the THIRD TEST MATCH, played in Melbourne by Captain Ballantine—relayed through 2SM Melbourne, ABC Brisbane, 5AD Adelaide and 2UW Sydney.
- 7. 45: Music.
- 8. 0: AN HOUR WITH SCHUBERT—*Memories of Schubert*
- 8. 10: Songs Abschied (Leaving) *Rosamunde*
- 8. 15: Violin Ballet music
- 8. 18: Songs (a) With a Green Ribbon
(b) Withered Flowers
- 8. 24: Cello: Slumber Song
- 8. 27: Band March Militaire
- 8. 31: Trio: Serenade
- 8. 34: Song: Faith in Spring
- 8. 36: Piano: The Trout.
- 8. 42: First Movement, Trio in B flat
- 8. 52: Song: Who is Sylvia?
- 8. 56: Piano: The Trout.
- 9. 0: Talk on Foreign Affairs by Mr. J. M. Pringle—2.10. Music
- 9. 15: Shell Interlude by Savon. 9.45: Music 10.30: CLOSE

2UE SYDNEY. 293 Metres

- Day Sessions as usual.
- EVENING SESSION
- 6. 0: Auntie May and Simple Simon. 7.10 Resume of To-morrow's Races—Mr. Tom Ellis
- 7. 30: Sporting Talk—Mr. Oscar Lind. 7.40: Billie Grant. 7.55: News from "The Sun."
- 8. 1: Overture, "Marmarella." 8.10: Selected Studio Programme. 10.1: Light Opera Selection. "Lilac Time." 10.10: Music. 10.15: Close

2KY SYDNEY. 280 Metres

- Day Sessions as usual.
- EVENING SESSION
- 6. 45: Dinner Music.
- 7. 30: Racing Revelations—Mr. Rufe Navlor.
- 7. 45: Musical Interlude.
- 8. 1: FROM A BURN TOWN HALL—*F. J. PALMER'S*
COMMUNITY CONCERT.
SYD HAYNES Leading.
UNCLE BERT and GEORGE,
Musicians and Assisting Artists.
- 10. 30: Closing Announcements.

7.30 a.m. Breakfast Hour—Light music, viol. March, musical comedy, film theme, ballad song, dance music. 8.30: Close down.

10.0 Women's Session—News of interest to women, book review, theatre review, story, incidental light music. 11.0: Close down.

5.45 Children's Session—Stories, calls, incidental music. 6.30: Announcements, news of the day, music. 7.0: Our Doctor talks 7.15: Dinner music. 8.0: Justice. 10.30: Close down.

3LO MELBOURNE. 375 Metres

Day sessions as usual.

2.0 Frances Story Tellers—"La Grande Betliche" (Honora de Balkau), Miss Beatrice Tonsau.

During the afternoon Eric Welch will describe the Competation Race Meeting at Moonee Valley.

From 3.0 to 4.30 p.m. the Studio Programme will be provided by:
Freda Treweck, Mezzo-Soprano—*"Waking" (Teresa Del Riego)*
"When a Wild Bird Sings" (Raymond Loughborough).

Two Old English Songs—*"Nymphs" (Purcell)*
"When Love is Kind" (A.L.)
Billy Maloney, Comedian—*"The Children's Corner"*
With Orchestral Music by the Famous Orchestras of the World.

During the afternoon progress scores in the Third Test Match, South Africa versus Australia, played at the M.C.C. also in the Sheffield Shield Match, New South Wales versus Queensland, played at Sydney, will be broadcast as they come to hand.

5.45: The Children's Corner.

EVENING SESSION

6.33: At Home and Abroad, by "The Watchman."

7.25: For the Man on the Land—"Sulphuring and Spraying Vines," Mr. F. de Dastella, under the auspices of the Department of Agriculture.

7.45: Propeller Talk—"Aero Club Notes and News," by LINDA PHILLIPS, under the auspices of the Aero Club of Victoria.

At approximately 7.45 p.m. "Stumps" Scores at the Third Test Match, South Africa versus Australia, played at the M.C.C., also the Sheffield Shield Match, New South Wales versus Queensland, played at Sydney, will be broadcast.

NIGHT SESSION

8. 0: A PROGRAMME OF JEWISH MUSIC, arranged by LINDA PHILLIPS, under the auspices of the Aero Club of Victoria.

PIANOORTE SOLI—Hebrew Folk Songs and Dances, arr. Lazare Samirsky—
(a) Song and Dance of the Feast.
(b) Sabbath Dance.
(c) Chassidic Religious Melody
(d) Chassidic Dance of the Feast.
Played by LINDA PHILLIPS

SONGS—
(a) Sabbath (sung in Hebrew). Rubinstein Mein Ruhe Platz (My Birth Place). J. Haskin (Sing in Yiddish).
—JULIA RUSSELL

CELLO SOLI—
(a) "Dwejkuth" (Hebraic Meditation) Joseph Staischewsky
(b) Festival Melody: "Rejoicing of the Law" (arr. by Linda Phillips).
—DON HOWLEY and LINDA PHILLIPS

SONGS—
Folk Songs from Palestine—
(a) "Rizbo (Love Song)"
(b) "Shir Shom'im" ("The Watchman's Song").
(Sung in Hebrew)
—JULIA RUSSELL

PIANOORTE SOLI—
Hebrew Folk Songs and Dances
(a) "Love Song"
(b) "A Merry Wedding Dance"
(c) "Lullaby"
(d) "Chassidic Religious Dance."
—LINDA PHILLIPS

VIOLIN AND PIANOORTE—
Hebraic Melody (arr. by Linda Phillips) (This piece is written in two of the old Jewish Scales).
—MISCHA KOGAN and LINDA PHILLIPS

SONGS—
Hunting Song (Rubinstein) (Sung in Yiddish).
"Dos Naie Lied" ("A New Song") (J. Roskin).
—JULIA RUSSELL

VIOLIN SOLI—
(a) "Vidui" ("Confession") from "Baal Shem Suite" (Ernest Bloch).
(b) "Jewish Folk Song" (arr. Linda Phillips).
—MISCHA KOGAN and LINDA PHILLIPS

SONGS—Folk Songs from Palestine—
(a) Rizbo (Love Song)
(b) Shir Shom'im (The Watchman's Song). (Sung in Hebrew).
—JULIA RUSSELL

CELLO SOLI—
(a) Festival Melody, Rejoicing of the Law, Arr. by Linda Phillips
(b) Dwejkuth (Hebraic Meditation).
—DON HOWLEY and LINDA PHILLIPS

SONGS—
Hunting Song (sung in Yiddish) Rubinstein Dos Naie Lied (in Yiddish) J. Roskin
—JULIA RUSSELL

VIOLIN AND PIANOORTE—
Vidui (Confession) from "Baal Shem Suite" Ernest Bloch

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THE 2GB WOMEN'S SERVICE

THE REAL OLD SCOTCH SHORT-BREAD.

(Conducted by Dorothy Jordan)

THE housewife in Old Scotland would consider she had failed in her duty as hostess if she did not have a dish of shortbread on her table on New Year's Day. Frequently it is made weeks ahead, and thus it matures and is much better eating. This is an old recipe straight from the Land o' Heather.—Take two pounds of flour and 1lb of butter, 6oz sugar, 1 teaspoonful salt (or preferably use butter one-half salt) Lemon peel for the top of the short-

bread. Beat the butter and sugar, add the flour, and knead well. The secret of making good, fine shortbread is in the kneading. Turn the mixture out to greaseproof paper and knead into shape, prick all over, and mark into blocks with a sharp knife. Pinch the edges all round, and decorate with a slice of lemon peel (or hundreds and thousands), and cook in a very slow oven. An easier way to make the shortbread is to turn the mixture, after everything has been added, straight on to the baking sheet and then knead in shape; then decorate and mark with a knife as suggested.

PLUM WHIP.—1lb of plums, the whites of 2 eggs, one dessertspoonful of granulated gelatine, and sugar to taste. After washing the plums put on to cook with the sugar in a very small amount of water and stew slowly until quite soft. When cold strain off the syrup and dissolve the gelatine in it. Remove stones from the plums and reduce to a pulp by beating, add to the syrup. When almost set beat in the stiffly beaten whites, continue beating until the mixture is stiff and thick. Heap roughly on to a glass dish and freeze. Serve with whipped cream or custard made from the yolks of the eggs. Any seasonal fruit, such as strawberries, peaches, apples, or rhubarb may be used for this pie.

PEACH MERINGUE.—Peel the peaches and cook, removing the stones. Blend a little cornflour in milk. Put on the fire a pint of milk to boil; when

boiling add the cornflour, cook until thick. Add two ounces of sugar and the yolks of two eggs well beaten to the milk, cook for one minute without boiling. Then pour the mixture over the peaches. Beat the whites of eggs to a stiff froth, add two tablespoonfuls sugar to the beaten whites; now pile roughly over the custard and place in a cool oven to brown the meringue. Delicious eaten cold. Again, any fruit may be used for this.

APRICOT SHORT CAKE.—This is an unusual way of ringing the changes on apricot. Take 4oz. of butter and 4oz. of sugar, 1 egg, 1 tablespoonful of milk, 1lb. of self-raising flour, and stewed apricots. Cream the butter and sugar, add the well-beaten egg, then the milk, and lastly the flour, making all into a very dry dough. Turn on to a floured board and cut into two pieces. Roll out into an oblong and put into a greased swiss roll tin, spread the cooked apricots on the dough, roll out the other piece and place on top of the apricots. Press down and mark into squares with the back of a floured knife. Glaze with egg and sprinkle thickly with coarse sugar. Cook in moderate oven for twenty to thirty minutes. Cut up into squares. Serve hot with apricot sauce.

Too fat, and had poor skin

Whatever Mrs R.—did seemed to make no difference. She remained far too fat; her complexion was really shocking—sallow, freckly, unhealthy altogether. Then one day she read of clynot berries, the one reducing remedy she hadn't tried! Goodness, the change was marvellous. In a short time the excess fat disappeared—it is after all a matter of correct food assimilation.

Overjoyed at her success, she set about improving her complexion; applied merciolized wash regularly for a few nights and at morning. The sallowness and freckles quickly vanished. Now her skin is fresh and smooth and lovely as a girl's. This new beauty made her hair seem faded; grey streaks showed up. But Mrs R.—had more sense than to dye it. Instead she used tannalite. This lotion restored her grey hairs to their pretty natural colour. To wash her hair this now attractive woman uses stallax granules. So quick, so pleasantly fragrant, so very cleansing. Your chemist has them.

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WEDNESDAY... JAN. 6

2FC

SYDNEY,
451 Metres

Early Session

(7 to 8.15 a.m. Relayed to 2NC, Newcastle.)

Morning Session

(10.30 a.m. to 12.30 p.m. Relayed to 2NC from 10.40 a.m.)

The Lunch Hour

(1.0 to 2.30 p.m., as usual.)

The Radio Matinee

(2.30 to 4.30 p.m. Relayed to 2NC, Newcastle.)
2.30: Announcements.

2.32: MARJORIE SKILL, Soprano—
The Little Damsel Novello
A Little Birdie Puccini
Violet Mallinson

2.39: SIM SOLOMONS, Violinist—
In a Spanish Garden Rubinfoff
La Capricieuse Elgar

2.46: THE BIG FOUR, Vocalists (r.)—
Reaching for the Moon Berlin

2.49: ALLANAH DELIAS, Pianist (r.)—
Italian Concerto in F Major Bach

2.53: ALICE THORNTON, Contralto—
The Piper of Life Carew

2.56: J. H. SQUIRE CELESTE OCTET
(recorded)—
None But the Weary Heart,
Tschaikowsky

3.0: DENNIS NOBLE, Basso (r.)—
The Old Brigade Barri

3.3: SIM SOLOMONS, Violinist—
Passing Thoughts Reser

3.6: JIMMY O'DEA and HARRY
O'DONOVAN, Comedians (r.)—
"Sixpence Each Way."

3.9: ALICE THORNTON, Contralto—
Slave Song Del Riego
Daddy Boy Featherly

3.16: EDITH LORAND ORCHESTRA
(recorded)—
Underneath the Lilac Tree,
Schubert-Borje

3.20: FRITZ KROEGER, Xylophone Solo
(recorded)—
Espanita Kroeger

3.23: MARJORIE SKILL, Soprano—
My Bird of April Days Besly
Romance Rubinstein

3.25: GRAHAM KENT WILL GIVE A
TALK ON "BRIDGE."
3.45: SIM SOLOMONS, Violinist—
The Little Windmills Couperin
Fiddlin' the Fiddle Rubinfoff

3.49: LIGHT OPERA COMPANY (r.)—
"Songs of Wales."
3.53: ALICE THORNTON, Contralto—
Love's a Merchant Carew

3.56: ELSCHUGO TRIO (recorded)—
Spanish Dance Moszkowsky

3.59: H.M. GRENADIER GUARDS BAND
(recorded)—
Old Folks at Home, and in Foreign
Parts,
Arr. Roberts

4.30: Close.

Early Evening Session

(5.45 to 8.0 p.m. Relayed to 2NC, Newcastle,
between 5.45 and 6.45, and 7.5 and 8.0 p.m.)

5.45: Children's Stories, by the "Hello
Man."

6.0: Uncle Ted and "Sandy" will entertain.

6.45: THE COUNTRY WOMEN'S ASSOCIATION.
7.5: Sporting Service, News, etc.

EVENING PROGRAMME

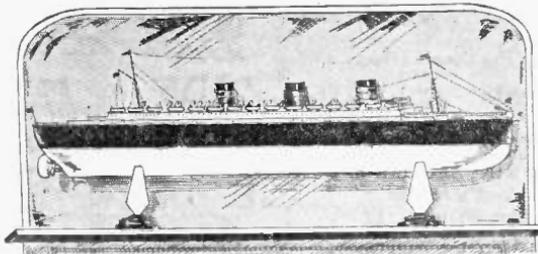
(8.0 to 11.30 p.m. Relayed to 2NC, Newcastle,
between 10.30 and 11.0 p.m.)

8.0: THE A.B.C. PLAYERS in
"THE SHIP"
(See details in panel.)

9.10: THE METROPOLITAN BAND,
conducted by JOHN PALMER—
Oriental Tone Picture, in Old Tibet,
Arr. Hume

★ 2FC TO-NIGHT AT 8.0 ★

The A.B.C. Players in



THE SHIP

A Play by St. John Ervine

WHEN the play opens it is a Saturday afternoon in autumn, and the scene is laid in John Thurlow's country house, near his shipyard at Biggport, England. The room is handsomely furnished, for the Thurlows are people of taste. Prominently displayed in the room are models of ships. Old Mrs. Thurlow is seated by the fire. She is an old woman, aged 83. Her daughter-in-law Janet Thurlow, or Young Mrs Thurlow, as she is sometimes called to distinguish her from her mother-in-law, is seated by the tea-table on the other side of the fire. A maid is placing a tea-tray on the table. Hester Thurlow, her daughter, whose age is 19, is seen walking about the garden outside.

John Thurlow wishes his son Jack to go into his shipbuilding business, but Jack dislikes all machinery, and decides to go farming. His father, having failed to ruin his prospects in that direction, becomes ill, and the son is at last prevailed upon to take his father's place aboard the new liner Magnificent on her first voyage. Later on news comes that the ship

CAST:

Old Mrs. Thurlow	Madeline Howell
John Thurlow	Herbert Leigh
Janet	Mrs. Heath Green
Jack	Arthur Keane
Hester	Phyllis McGrath
Captain Cornelius	Eric Masters
George Norwood	Leo Stark
Maids	

PRODUCTION: LAURENCE HALBERT.

9.17: DES TOOLEY, the Girl with the unusual voice—
Little Alabama Coon Starr
I'm Thru With Love,
Kahn and Livingston

9.24: THE METROPOLITAN BAND—
Cornet Polka, Lizzie Hartmann

9.30: "SIDELIGHTS ON OLD SNEYDEY."
9.45: HERBERT LEIGH, Entertainer—
The Actor's Story Teece

9.52: THE METROPOLITAN BAND—
Musical Comedy, Toreador Monckton

10.0: DES TOOLEY, the Girl with the unusual voice—
Many Happy Returns of the Day,
Dubin and Bourke

Roll On, Mississippi West and Ringie

10.7: THE METROPOLITAN BAND—
Selection, "Schubert" Arr. Round

10.15: Late Official Weather Forecast.

10.17: THE METROPOLITAN BAND—
Waltz, The Chorists Phelps

March, Palmer House Pettee

10.30: MEDITATION MUSIC.

11.30: Close.

2BL

SYDNEY,
351 Metres.

Opening Session

(8.15 to 11 a.m.)

10.35: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley—
"Nursery Education,"
"Knowing Australia," by Miss Lyall Hilliard.

Midday Session

(12 Noon to 2.30 p.m.)

Afternoon Entertainment

(2.30 to 5.45 p.m.)

2.30: H.M. COLDSTREAM GUARDS BAND (recorded)—
Marche aux Flambeaux Meyerbeer

2.34: OLD-FASHIONED BALLADS (r.)

2.42: THE CHERNIAVSKY INSTRUMENTAL TRIO (recorded)—
Aimant le Rose le Rossignol
Rimsky-Korsakoff

2.45: THE WOMEN'S HOUR, conducted by THE A.B.C. WOMEN'S ASSOCIATION—

WEDNESDAY, JAN. 6 (Continued)

"Cochet Creations," by Mrs. Eugenia Bailey.

"Care of the Scalp," by Sister Rita.

"Stories Told on Stamps," by Mr. F. Neal.

"Keeping Fit at 45," by Miss Gwen Varley.

3-45: SELECTIONS.

3-57: LAWRENCE SALERNO, Baritone (recorded)—

Querida Valdez

The Dinner Hour (6.15 to 8.0 p.m.)

EVENING PROGRAMME (8.0 to 10.30 p.m. Relayed to 2NC, Newcastle.)

★ TO-NIGHT AT 8.0 ★

FROM THE AEOLIAN HALL—

We Present

THE CHOIR OF ST.

BRIGID'S CHURCH

COOGEE

in association with

THE NATIONAL BROADCASTING ORCHESTRA

Under the Conductorship of

JOSEPH M. POST,

in Johannes Brahms' "REQUIEM."

For Soli, Chorus, Orchestra, and Organ. Soloists: MISS MILLY HUGHES, Soprano.

Mr. ROWELL BRYDEN, Baritone.

9-15: HORACE KEATS, Pianist—

A Group by Cyril Scott

"Hand-lin Rhapsody" Cyril Scott

"Valse Sentimentale" Bizet

"Spanish Dance" Bizet

9-25: MOLLY DE GUNST, Soprano—

King of Thule and Jewel Song scenes from "Faust" Bizet

9-35: HENRI STAELL, Violinist—

In association with THE NATIONAL BROADCASTING ORCHESTRA—

Slow Movement from "Concerto" Wieniawski

9-40: THE NATIONAL BROADCASTING ORCHESTRA—

Musical Gems of Tchaikovsky Langey

9-47: HORACE KEATS, Pianist—

The Sea Rowley

The Ledbury Parson Harrison

Two Sea Shanties Rutland

(b) Shenandoah Rowley

(c) Billy Boy Elkin

The Light Heart Elkin

9-57: MOLLY DE GUNST, Soprano—

Two Numbers by Tosti

"A Melody," Tosti

"A Vucchella," Tosti

10-4: HENRI STAELL, Violinist—

In association with THE NATIONAL BROADCASTING ORCHESTRA—

Tarantella Wieniawski

10-11: THE NATIONAL BROADCASTING ORCHESTRA—

The Reign of Terpsichore—Ballet

Francis Hosmer

10-25: Late News and Weather Forecast

10-30: Close.

2GB SYDNEY, 316 Metres

Day Sessions as usual.

12.0: F. J. PALMER'S COMMUNITY CONCERT.

FROM SAVOY THEATRE.

CONDUCTED BY UNCLE GEORGE.

8.10: Gwen Foster, Soprano—

The Bitterness of Love Dunn

Boat Song Wars

8.19: Piano Solo by Clive Henry.

8.23: Violin Solo

8.28: Leslie Herford, Baritone—

Glorious Devon Gernap

A Sailor's Song Lohr

8.36: Piano Solo

8.40: Glen Foster, Soprano—

Light Chorus of Snowdrops Philips

Carmena Wilson

8.53: Leslie Herford, Baritone—

Love, Could I Only Tell Thee Copel

9.0: Weather Report.

9.3: Leslie Herford, Baritone—

Time To Go Sanderson

9.7: Piano Solo by Clive Henry.

9.12: "Cello Solo" 9.25: Vocal Duet.

9.30: Band Selection. 9.40: Instrumental Quartet. 9.50: Harp Solo.

10.0: Instrumental Music. 10.45: Slumber Music. 11.15: Close down.

NOTE: If the THIRD TEST MATCH is still unfinished, scores will be given during the afternoon.

5.15: FARMER'S CHILDREN'S SESSION. An all story night conducted by Uncle Jack.

6.45: Gardening Talk by Mr. S. H. Hunt.

7.15: If the THIRD TEST MATCH is still unfinished, a commentary on the day's play will be given by Captain Ballantine and relayed through 3DB Melbourne, 4BC Brisbane, 3AD Adelaide, and 2JW Sydney.

7.30: Musical programme.

8.0: THE CARNIVAL OF ANIMALS (Saint Saens)—

(a) Introduction and royal march of the Lion.

(b) Hen and Rooster.

(c) Wild Asses.

(d) Tortoises.

(e) Elephants.

(f) Aquarium.

(g) Donkeys.

(h) Aviary.

(i) The Cuckoo in the Wood.

(j) Pianists and Fossils.

(k) The Swan.

(l) Finale.

8.30: Two Nocturnes (Debussy).

8.45: SHURON PROGRAMME—

Piano. Alice, Where Art Thou? Ascher

8.48: Trio That Thy Teaspoon Raimond

8.52: Song Queen of the Earth Pinauti

8.55: Choro. The Flowers of the Forest (Traditional).

9.00: Talk on Foreign Affairs by Mr. J. M. Prentice.

9.10: Music.

9.15: FOX TALKIETONES FROM THEIR MINIATURE THEATRE.

9.45: Music

10.30: CLOSE

2UE SYDNEY, 293 Metres

Day Sessions as usual.

12.15: Description of the Ponies by Mr. L. Melville.

EVENING SESSION

6.0: Auntie May and Simple Simon. 7.1: Dinner Music. 7.5: Model Aero Club—Mr. Ivor Freshman. 7.15: Musical programme. 7.35: News from THE SUN. 8.1: Overture. "William Tell" 8.10: Selected Studio Programme. 8.30: Popular Dance Music. 9: Dance Items. 10: Light Opera Selection. "Mikado" 10.10: Music. 10.15: Close.

2KY SYDNEY, 280 Metres

Day Sessions as usual

3.30: Description and Results of Pony Races. by RUFE NAYLOR

EVENING SESSION

6.45: Dinner Entertainment.

7.30: Racing Revelations—Mr. RUFE NAYLOR

8.0: Studio Programme.

9.0: Dance Hour, presented by HERBERT BEAVER

10.0: Closing Announcements

2SM SYDNEY, 236 Metres.

7.30: Breakfast Session—Light music, viz. march, musical comedy, film theme, ballad song, dance music. 8.30: Close down.

10.0: Women's Session—News of interest to women, book review, theatre review, story, incidental light music. 11.0: Close down.

5.45: Children's Session—Stories, calls, incidental music. 6.30: Announcements, news of the day, music. 7.0: Sports review, talk. 7.15: Dinner music. 8.0: Music. 10.30: Close down.

3LO MELBOURNE, 375 Metres

Day sessions as usual.

AFTERNOON SESSION

2.0: THE A.B.C. Women's Association, conducted by Hattie Knight.

During the afternoon Eric Welch will describe the Geelong Race—Trial Three-year-old Handicap, 6 furlongs; Novice Plate, 6 furlongs; Welter Handicap, 6 furlongs; St. Patrick's Day Handicap, 1 mile; Novice Purse,

5 furlongs; Novelly Pony Race, 4½ furlongs. From 3.0 to 4.30 p.m. the Studio Programme will be provided by—

Thomas George Bass—

"The Border Ballad" (Cowens).

"Fleeting" (Kramer).

"Fling Broad the Sails" (Galnes).

Iza Crossley—

"The Sunshine Girl."

"East and West," in Tenor Duets. With Orchestral Music by the Famous Orchestras of the World.

4.30: Close down.

During the afternoon progress scores in the Third Test Match, South Africa versus Australia, played at the M.C.G., will be broadcast as they come to hand.

5.45: The Children's Corner.

EVENING SESSION

6.35: French—Madame de Mowat.

7.25: University Extension Board Lectures—Joseph Conrad. Mr. Ian Maxwell.

7.45: Our Radio Service to Listeners, Mr. H. K. Love.

At approximately 7.0 p.m. "Stumps" Scores in the Third Test Match, South Africa versus Australia, played at the M.C.G., will be given.

NIGHT SESSION

AN ORCHESTRAL CONCERT

A.B.C. WIRELESS SYMPHONY ORCHESTRA, Conducted by PERCY CODE

Leader: EDOUARD LAMBERT.

Assisting Artists: PAULYNE BINDLEY, Soprano.

NORMAN MENZIES, Baritone.

8.0: A.B.C. WIRELESS SYMPHONY ORCHESTRA—

Overture, "A Midsummer Night's Dream," Mendelssohn

Symphony No. 8 in F Verdi

PAULYNE BINDLEY, Soprano—

"Lo So From 'The Magic Flute' Mozart

Super Vortexes from 'La Ballo in Maschera' Verdi

(Orchestral Accompaniment.)

ORCHESTRA—

Prelude, L'Après Midi d'un Faune Debussy

NORMAN MENZIES, Baritone—

Eri Tu from "The Masked Ball" Verdi

Devotion Strauss

9.0: "The Wind of the Open Road," told by WILLIAM TAINSH.

PART II. OF ORCHESTRAL CONCERT

9.15: A.B.C. WIRELESS SYMPHONY ORCHESTRA—

March Heroique Saint-Saens

Scenes Pittoresques Massenet

PAULYNE BINDLEY, Soprano—

Qui la Voce from "I Puritani" Bellini

THE ORCHESTRA—

London Symphony Orchestra Grainger

The Flight of the Bumble Bee, Rimsky-Korsakov

Dance des Bouffons Rimsky-Korsakov

NORMAN MENZIES, Baritone—

My Captain Scott

Moonlight Quilter

A.B.C. WIRELESS SYMPHONY ORCHESTRA—

Three Dances from "Neil Gwynn" German

Overture, "Tannhauser" Wagner

10.15: TEST CRICKET (Relaying to Every

Station.) A Relay of the Test play in the

Third Test Match, SOUTH AFRICA v. AUSTRALIA played at the Melbourne Cricket Ground.

10.30: WEATHER, Etc.

10.35: DANCE MUSIC.

11.30: Close down.

3AR MELBOURNE, 492 Metres

Day Sessions as usual.

MIDDAY SESSION.

12.0, 2.15, and 4: Description of Third Test Cricket Match Australia v. South Africa, at Melbourne Cricket Ground.

Market Scores. Weather data. Shipping Information.

NIGHT SESSION

8.0: GREAT SHRINES OF THE WORLD—

St. Peter's Cathedral, Rome—

MR. J. S. GAWLER

BRASS BAND AND VARIETY.

8.30: ST. AUGUSTINE'S BOYS' BAND, Conducted by PERCY OWEN.

Selection, Faust Gounod

8.45: THE COMEY INTERLUDE—

"The Up-to-the-Moment" Revue," produced by HUGH HUXHAM.

9.0: ST. AUGUSTINE'S BOYS' BAND—

Neapolis Knight of Honor Nevin Greenwood

9.0: GODFREY BECKWITH, Tenor—

C. F. King of All the World, Woodford-Finden Sally Roses Bostelmann

9.17: MARK SOLOMON, Banjo—

Clay Pick Mandell

Lay My Head Beneath a Rose, Falkenstein

9.22: VIOLET SEMPLE, Contralto—

Cradle Song Kreister Armstrong

9.29: ST. AUGUSTINE'S BOYS' BAND—

Selection, The Desert Song Romberg

9.30: GODFREY BECKWITH, Tenor—

Bird Song at Eventide Costes Nelson

Maid of Arville Costes Nelson

9.47: ST. AUGUSTINE'S BOYS' BAND—

Cornet Solo, Tlamm Rimmer

9.53: VIOLET SEMPLE, Contralto—

Prelude Minuet Cyril Scott

Second Minuet Besley

9.58: MARK SOLOMON, Banjo—

Oh, Boy, What a Girl! Wright-Bessinger

Prayer Little Drum Crummit

10.5: ST. AUGUSTINE'S BOYS' BAND—

Selection, Pirates of Penzance Sullivan

10.15: NEWS SESSION.

10.30: Close down.

4QG

BRISBANE,
395 Metres

Day Sessions as usual.
7.30: FRENCH—"HOW TO SAY IT—HOW TO PUT IT" No. 3, by Dr. E. A. D'EDGERLEY.
7.40: A.B.C. Sporting Notes.

NIGHT SESSION

- 8.0: THE CARLTON BAND—
Ho Hum Heyman
If You're Really and Truly in Love Wallace
Just One More Chance Johnson
You Didn't Have to Tell Me.
THE LADIES' QUARTETTE—
Roses of Picardy Wood
THE CABARET ORCHESTRA—
I Bring a Love Song
You Will Remember Vienna.
One More Waltz.
While Hearts are Singing.
ANN SAMMON (Mezzo-Soprano)—
Fairy Tales of Ireland Coates
THE CARLTON BOYS
My Canary has Circles.
You'll be Mine.
She's a Gorgeous Thing.
Reaching for the Moon.
DOROTHY LAMB (Contralto)—
Summer Rain Willeby
THE CARLTON BAND—
Swinging in a Hammock.
Whoopee.
For You.
Wabash Moon.
THE LADIES' QUARTETTE—
Waltz Song Gounod
THE CARLTON CABARET ORCHESTRA—
Painting the Clouds.
Walkin' My Baby Back Home.
My Bluebird was Caught.
Sweet Jeanie Lee.
MARY COLLINS (Contralto)—
The River of Years Marzalo
THE CARLTON BAND—
I Found a Million Dollar Baby
I Wouldn't Change You for the World.
I'm Used to You Now.
Yours and Mine
MAY O'SHEA (Soprano)—
My Dearest Heart Sullivan
THE CARLTON BAND—
Reaching for the Moon.
Dancing with Tears in My Eyes.
Around the Corner.
Jane O'Hara Courtney
THE LADIES' QUARTETTE—
Woodland Song Cluckson
THE CARLTON ORCHESTRA—
Say a Little Prayer For Me.
Dream a Little Dream of Me.
Exactly Like You.
Drink Brothers, Drink
THE LADIES' QUARTETTE—
Rose of My Heart Lohr
THE CARLTON ORCHESTRA—
Here Comes the Sun.
Little White Lies.
One Heavenly Night.
Confession.
10.0: FINAL NEWS BULLETIN
10.15: More Dance Music.
11.0: CLOSE.

5CL

ADELAIDE,
411 Metres

Day Sessions as usual.

NIGHT SESSION

- 8.0: REVUE—
"HAPPY DAYS ARE HERE AGAIN"
A CONTINUITY PROGRAMME by
TED SMITHERS' ENSEMBLE.
GORDON LECORNU Xylophonist
O. H. SUMMERTON Cornetist
J. ALEXANDER BROWN Baritone
WINFRED MOVERLEY Entertainer
9.0: Wheel, Market, and Weather Reports.
9.2: MODERN DANCE MUSIC, by THE JOY
ARK DANCE BAND, conducted by THE JOY
SUMMERTON with Vocal Interpersions by
J. ALEXANDER BROWN, Baritone, and
WINFRED MOVERLEY, Entertainer.
10.15: NEWS SESSION
10.20: DANCE MUSIC
11.0: Close Down.

7ZL

HOBART,
517 Metres

Day sessions as usual.

During the afternoon running descriptions will be given of the Mornington Races, repeated from 3LO, Melbourne.

EVENING SESSION

- 7.15: Educational Session—J. L. Rycroft, Talk: "Life in the School."
7.30: Sporting Interlude.
7.40: A. M. Barker, Talk: "Submarine Warfare."
NIGHT SESSION
8.1: LIGHT ORCHESTRAL CONCERT, A.B.C. STUDIO ORCHESTRA—
"Coun' of Lunenburg," "Gipsy Love"
"Merry Widow."
LILA HARVEY—"I Love You Truly," "One Morning Very Early," "My Message."
JOAN SCOTT-POWER in a Short Pianoforte Recital.
TALK—"Pipe and Slippers," by the "Maple."
HUMOROUS ONE-ACT PLAY, "The Camberley Triangle," presented by MISS M. EADY.
10.1: News.
11.0: Close down.



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THURSDAY JANUARY 7

2FC

SYDNEY,
451 Metres**Early Session**

(7.0 to 8.15 a.m. Relayed to 2NC, Newcastle.)

Morning Session

(10.30 a.m. to 12.30 p.m. Relayed to 2NC from 10.40 a.m.)

The Lunch Hour

(1.0 to 2.30 p.m., as usual.)

The Radio Matinee

(2.30 to 4.30 p.m. Relayed to 2NC, Newcastle.)

2.30: Announcements.

2.32: RAIMUND PECHOTSCH, Violinist—

Minuet *Porpora-Kreisler*

2.39: GWLADYS EVANS, Soprano—

I Did Not Know *Trotter*

2.42: H.M. COLDSTREAM GUARDS BAND (recorded)—

"Floradora" Selection *Stuart*

2.50: EMIL SUSSMILCH, Baritone—

A Sheepfold Song *Ronald*The Last Fairing *Martin*Young Tom o' Devon *Kennedy*

2.57: ALFRED CORTOT, Pianist (r.)—

Pathetic Study *Scriabine*

3.0: J. H. SQUIRE CELESTE SEITET (recorded)—

Romance *Rubinstein, arr. Sear*Toreador et Andalouse, *Rubinstein, arr. Sear*

3.6: GWLADYS EVANS, Soprano—

Ah! Sweet Mystery of Life *Herbert*I Love the Moon *Rubens*Come Back to Surriento *Curtis*3.13: A HUMOROUS INTERLUDE—
WISH WYNNE (recorded)—There's Always Something *Witlock*

3.16: RAIMUND PECHOTSCH, Violinist—

Liesbeslied *Pechotsch*

3.19: EMIL SUSSMILCH, Baritone—

Love's Coronation *Aylcard*Harp of the Woodland *Martin*

3.22: THE DAJOS BELA ORCHESTRA (recorded)—

Woodland Peace *Favella*The Court Ball *Lamer*

3.30: "HIKING" by NORMAN LYONS.

3.45: TERENCE CASEY, Organist (r.)—

Annie Laurie *Arr. Casey*

3.49: GWLADYS EVANS, Soprano—

A Song Remembered *Coates*

3.52: RAIMUND PECHOTSCH, Violinist—

"Hungarian Rhapsody."

3.55: BALIEFF'S COMPANY (r.)—

Chause Souris (Dark Eyes) *Trad.*

3.58: ADA LASSOLI, Harp Solo (r.)—

Menuett *Hasselmanns*

4.1: EMIL SUSSMILCH, Baritone—

Mandalay *Willeby*

4.4: VARIED MOMENTS MUSICAL (r.)

4.28: Stock Exchange, third call.

4.30: Close.

Early Evening Session

(5.15 to 8.0 p.m. Relayed to 2NC, Newcastle, between 5.45 and 6.45, and 7.5 and 8.0 p.m.)

5.45: Children's Stories, by the "Hello Man."

6.0: The West Australian School Girls, who are now on a visit to Sydney, will entertain the children.

6.45: GWLADYS OWEN will tell listeners of her recent experiences "OUT-BACK."

7.5: Sporting Service, News, etc.

EVENING PROGRAMME

(8.0 to 11.30 p.m. Relayed from 2NC, Newcastle, between 8.0 and 10.15. Relayed to 2NC, Newcastle, between 10.15 and 11 p.m.)

★ TO-NIGHT AT 8.0 ★

(Relayed from 2NC, Newcastle.)

From the Central Hall, Newcastle,

A CONCERT

Arranged by EVAN L. LLOYD.

8.0: THE MEREWETHER MUNICIPAL BAND—

March, Appreciation *Powell*

8.6: IRWIN PAGE, Tenor—

The Prize Song, from "The Meister-

singers of Nuremberg" *Wagner*From the Land of the Sky Blue Water, *Cudman*

8.14: LANCE GRAHAME, Monologues—

"An Old Sweetheart of Mine."

"Spotts."

8.22: THE MEREWETHER MUNICIPAL BAND—

Fantasia, An American Tour *Round*

★ 2BL TO-NIGHT AT 8 ★

The A.B.C. Light Opera Company

in a Concert Version of

THE SUNSET GIRL

An Australian Comic Opera by
WILLIAM MUGGRIDGE

TO Ernest Morland and his wife, Gabrielle, the social world was an intrusion, for with it they had nothing in common. They lived only for each other and their little daughter, Lucille—soft-eyed, olive complexioned—a perfect replica of her French mother.

So that they might find a place where no influence would disturb their glorious conception of happiness, the idea suggested itself that they should build a home in the wilds of some far-off country, where, in the atmosphere of semi-civilisation, no jarring influence would intrude.

Australia—Land of Sunshine—is the chosen country.

Production—LAURENCE HALBERT
Musical Ensembles—MADAME EVELYN GRIEGThe National Broadcasting Orchestra
conducted by E. J. ROBERTS**CHARACTERS:**

PAUL TRENTHAM (a young Sydney Millionaire, and now master of Trentham Mansion, which he inherited from his father).

H. A. S. WALKER (an English tourist, whose initials and his frequent invitation to all and sundry males to partake of the contents of his pocket flask, suggest the nickname—"Have-a-Spot.")

MARY (Collaren's black foster-mother).
TOM MASON, HARRY CLANCY, RONALD WHITE (Mary's nearest neighbors), graziers.
BUNYA (aborigine, overseer on Mary's property).
ERNEST MORLAND (guest of Paul Trentham, since the death of the latter's father).
ANDY TODD (Trentham's chauffeur).
PEARL GRAY (Housemaid).
COLLARENE ("The Sunset Girl").



THURSDAY, JAN. 7 (Continued)

8.32: THE NEWCASTLE CHORAL SOCIETY, conducted by Mrs. J. A. Hannell—

Choruses—The Song of the Vikings, May Day Muller

8.42: KEZIE FRASER, Soprano—

No, No, No Mattoi

The Inquirer Schubert

8.49: ORIGINAL HUMOROUS SKETCHES—

Messes, HAL GILLAM and LANCE GRAHAM.

8.57: KEZIE FRASER and IRWIN PAGE, Duo—

A Night in Venice Lucanoni

9.3: THE MEREWETHER MUNICIPAL BAND—

Wind and Wave Round

9.11: THE NEWCASTLE CHORAL SOCIETY—

Choruses—The Snow Elgar

"The Oars are Washing Lightly."

9.21: IRWIN PAGE, Tenor—

Hark, Hark, the Lark Schubert

If Music be the Food of Love.

The Hurdy Gurdy Man Schubert

9.29: CORNET DUET—

"Ida and Dot."

9.33: HAL GILLAM, Entertainer—

9.43: KEZIE FRASER, Soprano—

Field of Daisies Aspinall

In Your Garden Ewing

9.50: THE NEWCASTLE CHORAL SOCIETY—

Choruses—Strike the Lyre Cooke

A Spring Song Pinsitt

10.0: THE MEREWETHER MUNICIPAL BAND—

Grand Selection, "William Tell" Rossini

10.15: Late Official Weather Forecast.

10.17: Dance Music from the Hotel Australia.

11.30: Close.

2BL SYDNEY, 351 Metres

Opening Session

(8.15 to 11 a.m.)

10.35: THE AUSTRALIAN BROADCASTING COMPANY'S WOMEN'S ASSOCIATION, conducted by Miss Gwen Varley—

"Beautifying Your Home."

"Let Me Help You With Your Reading," by Miss Dorise Hill.

Midday Session

(12 Noon to 2.30 p.m.)

Afternoon Entertainment

(2.30 to 5.45 p.m.)

2.30: JESSICA DRAGONETTE, Soprano (recorded)—

Love Everlasting Friml

2.33: GASPAR CASSADO, Cellist (r.)—

Butterflies Hartv

2.36: BERLIN STATE OPERA HOUSE ORCHESTRA (recorded)—

Schwanda, the Bapjipe Player, Selection Weinberger

2.41: DON COSSACKS CHOIR (r.)—

The Volga Song Arr. Jaroff

3.0: FROM FARMER'S OAK HALL—

3.8: HUBERT EIDSELL, Tenor (r.)—

Because I Miss You So Coates

Two Tired Old Eyes Squire

3.14: FROM FARMER'S OAK HALL—

3.37: JOHN CHARLES THOMAS, Baritone (recorded)—

In the Gloaming Harrison

At Dawning Cadman

3.43: FROM FARMER'S OAK HALL—

3.51: PATTMANN, Organist (r.)—

Indian Love Lyrics Woodford-Flinden

3.55: FROM FARMER'S OAK HALL—

4.0: PETER DAWSON, Baritone (r.)—

Old Comrades Barri

Boys of the Old Brigade Barri

4.23: FROM FARMER'S OAK HALL—

4.38: FROM FARMER'S OAK HALL—

The Dinner Hour

(6.15 to 8 p.m.)

EVENING PROGRAMME

(8.0 to 10.30 p.m.)

(Related to 3AR, Melbourne.)

8.0: THE A.B.C. LIGHT OPERA COMPANY, in a Concert Version of—

"THE SUNSET GIRL."

(See panel overleaf.)

2GB SYDNEY, 316 Metres

Day Sessions as usual.

7.30: Address by Mr. Charlie Taylor.

8.0: Orchestra—Overture

The Student Prince Selection.

8.10: Beth Browning, Soprano—

The Little Gray Dove Bowles

Songs My Mother Taught Me Denzak

8.15: STORVETTE OF INDUSTRY.

8.20: Orchestra—

The Walking Doll Paldini

8.20: Jack Lumsdaine, The Radio Rascal.

8.30: Organ Solo—

8.40: Flute Solo—

Air and Hornpipe

8.45: Vocal Quartet—

Down by the Old Black Road

8.50: Beth Browning, Soprano—

Madrilair

Berceuse Chaminade

9.15: WALDOS SHOE INTERLUDE.

9.15: Orchestra—

Moonlight on the Alator

9.20: Jack Lumsdaine, The Radio Rascal

9.30: Organ Solo—

Amapola

9.35: Tenor Solo—

I Shall Return

9.40: Vocal Quartet—

Souvenirs

Waiting by the Silver Rio Grande.

9.50: Orchestra—

Jack Buttery Selection Puccini

10.0: Instrumental Music

10.45: Slumber Music

11.15: Close down.

2UW SYDNEY, 267 Metres.

Day Sessions as usual.

5.15: CHILDREN'S SESSION conducted by Uncle Jack and Jill.

7.0: Request Quartet.

7.15: "Snapshots of Sports" Session, conducted by Mr. Oscar Lewson

8.0: Broadcast from Mosman Town Hall, an address by the American lecturer, Dr. Gilmore

9.0: Talk on Foreign Affairs by Mr. J. M. Prentice.

10.0: Music

10.30: CLOSE

2UE SYDNEY, 293 Metres.

Day Sessions as usual.

EVENING SESSION

6.0: Autize May and Simple Simon 7.1: Sporting Talk—Mr. Oscar Laid. 7.10: Musical selections 8.1: Overture. "Oberon." 8.10: Studio Programme 10.1: Light Opera Selection. "Tales from the Vienna Woods." 10.10: Music 10.15: Close.

2SM SYDNEY, 236 Metres.

7.30: Breakfast Hour—Light music, viz. march, musical comedy film theme, ballad songs, dance music. 8.30: Close down.

10 a.m.: Women's Session—News of interest to women, book review, theatre review, incidental light music. 11.0: Close down.

5.45: Children's Session—Stories, calls, incidental music. 6.30: News, announcements, music. 7.0: Sports review talk. 7.15: Dinner music. 8.0: Music. 10.30: Close down.

3LO MELBOURNE, 375 Metres

Day session as usual.

AFTERNOON SESSION

2.0: A Woman Sees New York—Women in Business, Mrs. E. M. L. Beveridge

During the afternoon Eric Welch will describe the Mornington Races—Trot Hurdle Race 2 miles; Maiden Plate, 6 furlongs; Mornington Gold Cup, 9 1/4 furlongs; Two-year-old Handicap, 4 1/2 furlongs; Mornington Purse, 5 furlongs; Mornington Plate, 6 furlongs

From 3.0 to 4.30 p.m. the Studio Programme will be provided by—

The Austral Brass Band—

The Mad Major

Overture: Raymond Thomas

Selection: "Wilfred Sanderson's Songs" (arr. Huxley)

Serenata Toselli

Intermezzo: Rose Carliandee Raymond

Selection: Gipsy Love Letter

Novelty: Hot Trombone Filmore

(Soloist, J. Shakes.)

March: Under Freedom's Flag Nowocuteski

Edward Bachcroft, Tenor—

Roses of Picardy Haydn Wood

She is Far from the Land Lambert

Thank God for a Garden Teresa Del Riego

Bonnie Mary of Argyll Nelson

Compton Coultis, Comedian—

Supplies "Radio Relish."

1.30: Close down.

8.43: The Children's Corner.

9.0: GORDY BROOK "Bobby Bluegum"

"Ritch," and "Orace" present Songs from "Punch," by Eleaner Parloen

EVENING SESSION

6.35: At Home and Abroad, by "The Watch-

7.25: For the Man on the Land—"Household

Insect Pests and their Control," Mr. C.

French, Under the auspices of the Department of Agriculture

7.45: The Bookshelf—"The Literary Log-book," Captain Peters

NIGHT SESSION

DANCE MUSIC

PAUL JEACLE AND HIS RADIO DANCE BAND.

Songs by

MONICA MILLER, Soprano

JOHN D. SULLIVAN, Tenor.

JOHN STUART, Comedian.

8.0: PAUL JEACLE AND HIS RADIO DANCE BAND—

Footst.

MONICA MILLER, Soprano—

Tell Me, Gipsy Meud Craste Day

DANCE BAND—

Footst.

JOHN STUART, Comedian—

She's Such a Comfort to Me Tour Noelle

DANCE BAND—

Waltz

JOHN D. SULLIVAN, Tenor—

Love Went a-Riding Frank Bridge

DANCE BAND—

Footst. Blues

MONICA MILLER, Soprano—

Song of the Little Folk Eric Coates

DANCE BAND—

Footst.

JOHN STUART, Comedian—

That Rests Entirely with Me Franklyn

9.0: TOPIC OF THE WEEK

DANCE BAND—

Footst.

JOHN D. SULLIVAN, Tenor—

Neptune Pearl Curran

DANCE BAND—

Footst.

MONICA MILLER, Soprano—

Two Irish Eyes Wellington Rawlings

DANCE BAND—

Footst.

JOHN STUART, Comedian—

Dance Studio. He Led Me up the Garden.

Fred Gibson

10.30: WEATHER, Etc.

10.34: RADIO DANCE BAND.

Melbourne. 11.30: Close down.

3AR MELBOURNE, 492 Metres

MIDDAY SESSION

Day Sessions as usual.

12.1: Community Singing, transmitted from the Melbourne Town Hall. Conductor: Mr. Frank Hatherley.

Educational Session.

3.0: Education in U.S.A.—"Special Schools for Handicapped Children"—Mr. G. A. Osborne, M.A.

3.30: The Larkinsville Gold Rush—"The Finding of the Golden Eagle"—Marie Lescaut.

EVENING SESSION.

7.32: Sporting Results, Acceptances and Barrier Positions for the Epsom Races, Saturday, January 9, 1932.

NIGHT SESSION

8.0: A TRANSMISSION FROM SYDNEY—

THE A.B.C. PLAYERS Present "THE SUNSET GIRL."

LUCY HALL, in the direction of LAURENCE HALLBERT (Relayed from 2BL Sydney). (Details not yet to hand.)

4QG BRISBANE, 395 Metres

Day Sessions as usual.

7.30: THE WORLD'S GREATEST DESERT."

by "OBSERVER."

7.40: SPORTING SECTION

DANCE MUSIC SESSION

8.0: VAUDEVILLE from the MIDDLET THEATRE

EMELIANOFF (The Gypsy Charming).

MAISIE DANE (Soubrette).

JACK BELL AND HIS BOUNCING RUMPTON (Mouth Organist).

DICK PIKE (Basso).

THE MELODY TRIO (Two Maids and a Man).

DAN THOMAS (Dance Impersonator).

MACK (The Eccentric Fiddler).

HENNESSY SISTERS AND MAY (Two Girls and a Boy).

NOTE: At 9.0 p.m. Mr. R. F. Galloway will deliver the fortnightly Aviation Talk arranged in conjunction with the A.B.C. and Aero Club.

10.0: MELB. NEWS BULLETIN

10.5: DANCE MUSIC

11.0: CLOSE.

5CL

ADELAIDE,
411 Metres

- Day Sessions as usual.
10.15: REMINISCENCES FOR SATURDAY'S RACES AT MORPHETTVILLE.
7.20: MR. A. WHITTENBURY—Hints to Poultry Breeders and Fanciers.
7.35: JUNIOR RED CROSS SESSION.
8.0: NIGHT SESSION.
8.0: A PROGRAMME by ADELAIDE COMPETITION WINNERS, including:
1. MALE QUARTETTE—MR. WILLSMORE AND PARTY.
2. CHAMPION SOPRANO SOLO—GLADYS COCKER.
3. OPEN CORNET SOLO—C. J. EMERY.
4. BARITONE SOLO—FRANK MCABE.
5. ENTERTAINER—WINFRED EDWARDS.
6. VIOLINIST—MARION IRID.
7. MONOLOGUIST—KATHLEEN PENNY.
8. MEZZO-SOPRANO—CHRISTINE SMITH.
9. OPEN PIANO SOLO.
10.9: POPULAR SONG HITS.
10.15: NEWS SESSION.
10.25: DANCE MUSIC.
11.0: Close down.

- 10.35: REMINISCENCES OF MUSICAL COMEDY
10.55: Resume of To-morrow's Programme.
11.0: Close.

7ZL

HOBART,
517 Metres

- 1.0: G.P.O. Clock Chimes the Hour.
1.1: LAST MINUTE RACING SELECTIONS FOR TO-DAY'S RACES.
Music interspersed with Racing Descriptions.
8.15: Close Down.
EVENING SESSION.
6.0: G.P.O. Clock Chimes the Hour.
6.1: ALL SPORTING RESULTS TO HAND.
6.15: CHILDREN'S CORNER.
6.45: DINNER MUSIC—"Australio" Reproductions.
7.25: JACK O'HARTZ, Talk—"Bridge".
7.40: Sporting Interlude.
7.45: "DINAH" GREEN SURVEYS THE CRICKET FIELD.
8.0: G.P.O. Clock Chimes the Hour.
CONCERT JEWELS, re-broadcast from 3LO MELBOURNE
11.30: Close Down.

7ZL

HOBART,
517 Metres

- Day sessions as usual.
During the afternoon descriptions will be given of the Geelong Races, repeated from 3LO Melbourne.
7.15: Under the auspices of the Department of Tutorial Classes—A Speaker of the Workers' Educational Association of Tasmania.
7.40: Miss M. Rowlands, Talk "A Joyride Round the World".
NIGHT SESSION
8.0: A Member of the Tasmania Aero Club, Talk "Aviation".
8.10: 7ZL'S COMMUNITY SINGING, transmitted from the Town Hall, Hobart.
10.1: News
11.0: Close down.

WHAT!

AUSTRALIAN CONDENSERS

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Saturday's Programme Continued

- 8.15: RELAYED FROM MELBOURNE—The A.B.C. Cricket Commentator's Review of today's Test Match.
8.30: FROM BRENNAN PARK, the Metropolitan Handicap. Results of first and second events, and Running Commentary of third event.
8.33: PHYLLIS GILLETT, Mezzo Soprano—With Courtyl Grace Phillips
8.36: A.B.C. LIGHT ORCHESTRA—Morton Chu Chin Shoy Selection
8.46: FROM BRENNAN PARK, Running Commentary of fourth event.
8.53: PHYLLIS GILLETT, Mezzo Soprano—Do Not Go My Love Hargeman
8.56: NAT HANLEY, Comedian—Doh! Ray! Me!
9.2: A.B.C. LIGHT ORCHESTRA—Flotow Stradella Overture Frette
9.12: PHYLLIS GILLETT, Mezzo Soprano—Caroli
9.15: A.B.C. LIGHT ORCHESTRA—Sanderson Sincente
9.18: FROM BRENNAN PARK, Running Commentary of fifth event.
9.25: NAT HANLEY, Comedian—Opera in Uproar
9.31: A.B.C. LIGHT ORCHESTRA—Thurban Van Riser
9.41: PHYLLIS GILLETT, Mezzo Soprano—O Thank Me Not Maltison
9.46: CARO mio Bambino Garsner
9.47: A.B.C. LIGHT ORCHESTRA—Ranpt Fantez
9.53: FROM BRENNAN PARK, Running Commentary of sixth event.
10.0: NAT HANLEY, Comedian—Rubenstein
10.5: A.B.C. LIGHT ORCHESTRA—Verdi Excerpts from La Traviata
10.15: CHAS. JOLLY AND KAYE CONNOR—Laughing Suzanne and the Sousaphone Man
10.22: FROM BRENNAN PARK, Running Commentary of seventh event.
10.29: A.B.C. LIGHT ORCHESTRA—Kotler
10.30: Stumps Drawn Scenes of the Third Test Match.



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The WIRELESS WEEKLY RADIO INFORMATION SERVICE

ENTHUSIAST, of Parramatta, is keen to build a set, but he ends off his letter with the following paragraph:—"The main thing that worries me is that I will not be able to know what the parts are after I have bought them. How can I tell a condenser from a choke?"

Answer: Sometimes we marvel at the way in which novices manage to follow out our articles, but they certainly do all right, and judging from reports received the average novice even at the first attempt usually succeeds in getting better results than he would obtain with any factory-built set. Possibly it is because the parts are only of the best quality, and possibly it is because the designs are right up-to-the-minute, whereas factory-built sets are probably designed twelve months before they are purchased. Your worry about identifying the parts can be set at rest after a glance through this issue, as we show photographs of the parts, together with an explanation of how they appear in the circuit. Furthermore, when you purchase your kit of parts from the dealer he will be only too pleased to mark the symbol from the circuit and wiring diagrams on to each component. For example when he pulls the 1 mfd. fixed condenser from the drawer he will write on it "C3," or whatever the case may be. When you refer to the wiring and circuit diagrams you will find this component always referred to by this symbol. A little brainwork may be required, but this is why the hobby is so popular. It gives both mental and physical exercise, and when the job is finished you have something really worth while to show for the time and money expended.

BEGINNER (Marrickville) writes: "I have just purchased a set from a furniture warehouse for £13/10/-. It gives fair reception of some stations, but others are jumbled up together, and no matter how I set the controls I cannot get 2UE, 2GB, or 2UW without interference from 2KY. There is also a pretty solid and continuous hum which is most annoying. At first I thought the tone was very mellow, but now it seems to grate on my nerves, as it is too flat, the music consisting more of thumping and beating than genuine music. Please let me know how to fix up the set, as a friend has a similar-looking set, but it gives far better results."

Answer: Your letter is typical of dozens received, but we are quite unable to help you. The effects noticed are in every case due to the poor design or the use of inefficient components, and there is no easy way of fix-

BEGINNERS' QUESTIONS ANSWERED

ing the troubles. A real radio set in the true sense of the word cannot be purchased for under £20, and it is most unlikely that the agents who sold you the set will be able to improve upon its present performance. However, we strongly advise you to get in touch with them rather than attempt to interfere with the set yourself.

R.T.P. (Bexley) writes: "I have just finished erecting a crystal set, and now want to erect the aerial. Please tell me how long to make it and how high should it be?"
Answer: With the crystal set you will need a fairly large aerial. Your best plan is to string up the longest and highest aerial you can readily manage. Then get the set in operation. Later you can juggle about with various lengths and choose one which will give you plenty of volume, yet no interference between stations. Considerable experimenting will be well repaid with improved results. If you get interference from any particular station run the aerial at right angles to the direction from which the interfering signals are coming. This will give less efficiency on the interfering signals, and possibly give improved results from the weak signals from the other stations, thereby tending to balance them up.

OPTIMIST, of Hornsby, wants to know what sort of set to buy. "Please tell me what set you think I should buy. I do not know anything about radio, but hope that you can tell me the best brand and model that can be bought for under £15."

Answer: We regret that we cannot recommend any particular brand of set. The first reason is because we do not know of any best; in nearly every case they have their good and bad points. Similarly by reason of the varying musical tastes of listeners it is not even safe for us to say what constitutes good tone. We suggest that you decide for yourself about a set after personally hearing several of the well-known brands. Don't touch any set of doubtful reputation, but stick to the recognised brands. Deal from a radio dealer who knows what he is talking about. Insist that it be installed by a competent man, and finally don't expect too much for your money. If you want something truly satisfactory in every respect you should be prepared to pay about twice the sum mentioned.

Selectivity (Oatley).—The details of wave-traps appeared in the issue of December 25. Have handed the rest of your query to the general office to have the address turned up and the letter forwarded.

D.K. (Forest Lodge).—Headphones are slightly better for picking up far-distant stations on a battery set, as all extraneous noises are excluded, and the head-phones themselves are slightly more sensitive. Any type will serve, but the higher the resistance marked on them the better.

C.M. (Balmain).—The circuit was quite O.K. with the limitations mentioned in the article dealing with it. There is no need to have any bias with the valve when used as a power grid detector, but as it is a one-valve set reaction is quite essential, and we can readily understand that you would only get one station weakly without it. We are also rather dubious about your audio transformer when used as a step-down input transformer for the head-phones. R2 will be used to be a heavy duty wire wound resistor capable of dissipating considerable energy. Are you quite sure that you have not confused the connections to the auxiliary grid and the cathode? Would also make sure that the auxiliary grid terminal of the socket is not shorting to earth, as any trouble here would result in the resistor being overloaded.

J.R. (Nynan).—Dealing with battery sets, the cost of running is roughly in proportion to the number of valves, but there are many other factors such as the type of valves used. All valve manufacturers issue charts showing the exact consumption of their valves, both as regards A and B. Knowing the values used, it is easy to add up the total consumption of the set. The old type American valves, such as the 2B1A used in a terrific amount of power, compared to the latest American types. A set using two of the old type valves sets the standard for a minimum amount of set using the newer valves. Carbons give the same performance as accumulators, with the advantage that they do not require recharging at frequent intervals, and the disadvantage that they are expensive to buy.

Booster (Corralim).—Full instructions for fitting extra stages of p.f. amplification for broadcast sets were given in the issue of May 14, 1930. Few readers manage to make much of the job of adding screen-grid valves, and we are reluctant to recommend any attempt at the job. Needless to add, it is quite beyond the scope to give full instructions, circuits, etc., in the space available in these columns, and for the moment we have too many pressing articles on hand for the general articles.

W.G. (Glenapp).—Apparently the volume control resistance is faulty, and you should refer to the article on this subject under guarantee. The coils are obviously poorly matched, and also have the wrong number of turns to suit the tuning condenser. If these are factory-made coils, would also suggest their return. You could fit reaction in the normal way, and if you use plenty of turns on the reaction coil the 23-plate midgey condenser would be suitable. You will not get recent range until you get the coils properly matched, and when they are matched the trimmer will have considerable effect.

SEEKERS OF INFORMATION

Readers are requested to limit the number of their questions as far as possible. Special circuits cannot be supplied in every case, nor can information be given over the telephone or by letter. Those readers desiring information on subjects beyond the scope of information service are invited to make enquiries by the particular phrase or article covering the subject on which information is lacking. Readers are requested to accompany enquiries in the form of a stamped envelope, and to indicate that they are a bona-fide reader.

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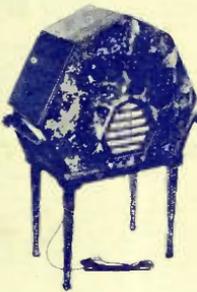
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		B403		
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