

THE RADIO RECORD

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New Salon Orchestra for IYA



THE IYA Salon Orchestra, which listeners have been looking forward to with keen anticipation for some time, has now materialised and an excellent initial combination of five performers has been engaged, under the conductorship of Mrs. Dorothy Singer. This orchestra made its first appearance on the air on Tuesday last in a very acceptable programme.

Mrs. Dorothy Singer.

MRS. Dorothy Singer, who is conducting at the piano, studied the violin with Fritz Hart, head of the Melbourne Conservatorium at the time, and in company with Miss Ina Bosworth (leader of the Salon Orchestra) acted as violiniste to Fritz Hart's production, "The Waltz Dream," produced with J. C. Williamsons. It is interesting to note that Mrs. Singer and Miss Bosworth now co-operate together professionally for the first time since the performance of the "Waltz Dream." Mrs. Singer has been connected with the Williamson organisation for many years. She conducted the National and Lyric Theatre orchestras, and at present deputy leader of both the Bohemian and Chora Society orchestras. During the absence of Miss Edith White-law in England, Mrs. Singer acted as leader to these two combinations. In addition, Mrs. Singer conducted the Sistine Choir orchestra through its recent tour in the Dominion and also acted as obligato violiniste to the choir. Mrs. Singer is an accomplished performer on both

violin and piano, and has had considerable experience in conducting.

Miss Ina Bosworth (Violin lead).

ONE of the Dominion's most brilliant violinistes, has been abroad for some ten years, during which time she studied with the late John Saunders (leader of London Symphony and Royal Albert Hall orchestras), Editha Knocker and Dr. Van Loen, Leipzig. She has been associated with leading London and Continental artists, including Charlton Keith, who plays for Kreisler, O'Connor Morris, Max Pirani, Leslie Heward, May Mukle, Plunket Greene, Schuster and Kolberg of the Philharmonic Orchestra, Copenhagen. She was chosen to do the Bach Memorial Concert for John Saunders with the Queen's Hall orchestra. Miss Bosworth has given recitals throughout England, Scotland and Ireland, including the Aeolian and Wigmore Halls and the Coliseum. She has been associated in Italy with Dr. Van Loen and assisted the doctor in his work with Italian instruments. Miss Bosworth is well known throughout the Dominion as a member of the present Auckland Trio, and solo violinist at IYA.

Miss Molly Wright.

MISS Molly Wright studied the 'cello under Carl Fuchs, famous for his 'cello

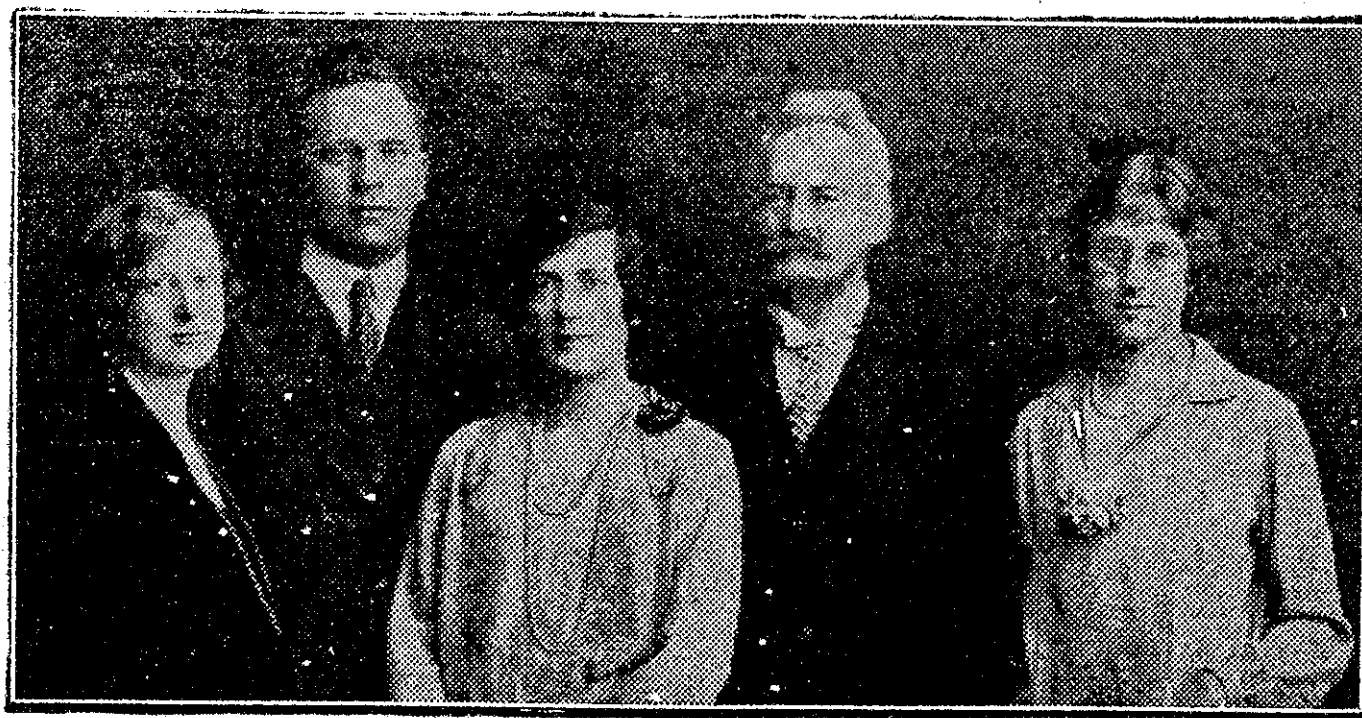
method, and later under Walter Hatton, of the Royal Manchester College of Music, and completed further study under Dr. Brodski. Has played under several famous conductors, notably Sir Hamilton Harty, in addition to filling obligato roles for numerous famous artists. Has given recitals throughout England, including one at the Manchester Free Trades Hall. Has acted in the capacity of solo 'cellist for three years to the St. Ann's Municipal orchestra. A member of the present Auckland Trio at IYA.

Mr. Phil Mohr.

A CORNET player known to bandsmen throughout the Dominion. Has conducted the following bands: Invercargill City, Invercargill Garrison, Timaru Garrison and Auckland 1st Battalion. Has played professionally in Italian and French operas; acted as adjudicator to several band contests, including Winton (Southland), and adjudicated solo cornets at the last contest held in Auckland. Studied under the late Mr. Tendall, Mus. Bach. Oxon, who was late organist at the Christchurch Cathedral.

Mr. Victor Bedford.

COMMENCED his tuition under Mr. A. A. Dunn, a well-known local flautist, and subsequently left for America, where he continued study in musical appreciation. Was engaged as soloist to the Coalinga (California) Municipal Band, and played in that capacity for two years before accepting a position as conductor and choir-master to the Municipal Choir (Coalinga), and later acted as choir-master at the Episcopal Church, Fresno, Cal. Locally has appeared with most of the local theatre orchestras, including Lyric, Tivoli, Strand, and at the Regent



Mrs. Dorothy Singer, Mr. Victor Bedford, Miss Ina Bosworth, Mr. Phil Mohr and Miss Molly Wright. —S. P. Andrew, Photo.

Radio Round the World

WITH an audience of thirty million, Mr. Herbert Hoover, Republican candidate for the Presidency of the United States, delivered an address outlining his political viewpoint.

IN view of the fact that most of the complaints against broadcasting are the outcome of inefficient receiving sets a proposal for the adoption of hall-marks for sets is being considered by the Australian Post and Telegraph Department.

AT any time now station JB, located at Johannesburg, will come on the air with a power of 10,000 watts. JB will transmit on a wave of 443 metres, very close to 2FC, but with a difference of over nine hours it may be possible to pick up the South African broadcasts in the small hours of the morning. A month or two ago much local interest would have been taken in this station.

THE Heeney-Tunney fight was of world-wide interest. As known to radio listeners it was put on the air by 2XAF, which was itself heard all over the world. In England, Daventry (5XX) rebroadcast the American station with good results.

NEARLY 500 radio valves comprise an important part of the supplies carried by the Byrd Antarctic Expedition. The exact number is 483, of which 96 are for transmitting and 387 for receiving. Such a quantity is being taken to make communication certain. However, should the supply become low, it is planned to rebuild receivers and transmitters to accommodate a smaller number of valves.

THE blind have been well catered for by the French Radio Corporation, who have co-operated with the American Braille press in the production of wiring diagrams and instructions in braille. The frameworks of sets have also been produced, with tuning dials with raised characters.

THE Christchurch amateur station, 3ZC, is now broadcasting daily on 250 metres from 10 to 11 a.m., from noon to 1 p.m. daily, and on Tuesday evenings till 10.15 p.m. On the third Tuesday of each month the station is on the air with dance music till 11.15 p.m.

GREAT interest is centred on the forthcoming Broadcasting Commission to investigate the Canadian position. The personnel has not been decided yet, but it is understood they are to consider the national systems of England and France with a view to their adoption in Canada.

IN order to broadcast the chimes of the Dunedin Town Hall clock, the microphone in use at 4YA Studio is taken to the front door while the clock is chiming. Passing cars, noisy children and all the many other noises of the street do not seem to affect the pick-up for it comes through clearly and distinctly.

IT has been stated that the increase in short-wave stations of countries outside America during March was 25 per cent., while the American increase was only 2 per cent. It must be remembered that the number of American short-wavers previously established was greater than in any other country.

3LO (MELBOURNE) starts broadcasting at 7.15 a.m. and continues till 11.40 p.m., during which time it broadcasts on an average no less than eighty-nine items, of which almost half are musical (orchestras, singers, instrumental soloists, etc.). Nevertheless they have room for weather, time signals, news, and many other features.

"SACRIFICE unimagined instructions on washing motor-cars for more good poetry and drama. History, too, a knowledge of which is essential for successful democratic government. I looked for almost in vain." In this strain a British licensee writes to the radio paper. His argument is logical and worthy of serious consideration.

EVIDENTLY neither the cold nor the heat affects the "Radio Bug," for both transmitters and receivers are found in all parts of the globe. Finland has now joined the radio circle, and with no mean qualifications. A new 35 kilowatt broadcasting station, operating on 1525 metres, has been placed in operation in Lahti.

CONSIDERABLE interest has been taken by listeners in every part of the Commonwealth and in New Zealand, in the recent debates from 2FC Studio by the Sydney School of Arts Debating Society. That this feature of broadcasting is proving popular is evidenced by the large number of appreciative letters received by the studio and by the club.

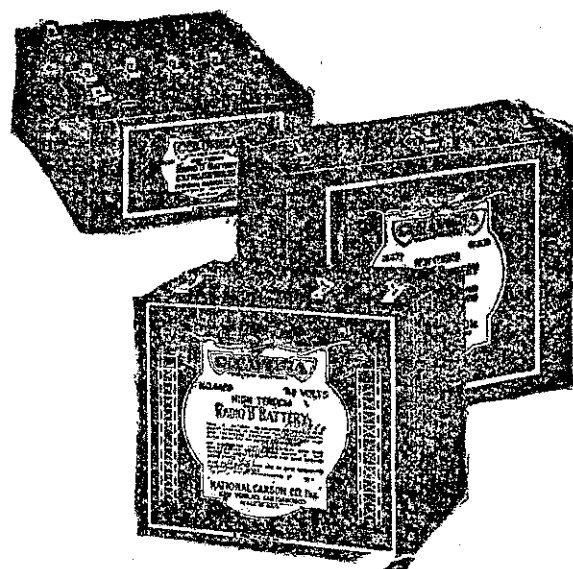
THERE is indication that the coming National Radio Exhibition (Olympia) which opens this month will be the biggest wireless show ever held. A good deal of apparatus to be exhibited will not have been seen before, while it will be noticed that in sets considerable advances in simplicity and control and in artistic outward appearance have been made.

"THE Electrical Review" (England) makes this comment regarding the Baird International Television Company, Ltd., which has been oversubscribed:—"With all respect to the talented inventor and to the distinguished men whose names appear as members of the company, we must repeat that television up to the present has taken the shape of promise rather than performance, and that its prospects of success appear to us to partake of the nature of vision in the sense of unreality rather than that of actual accomplishment."

RADIO retailers in the United States are advocating the installation of receiving sets beside the desks of executives in order that news of commercial, industrial, and political import the world over may be made readily available. It is explained that by the co-operation and assistance of the broadcasting stations a highly efficient system of information could be organised, which might well be of benefit to the business men of the country.

NEW ZEALAND listeners have little to complain about as far as classical and operatic music is concerned. In England a very large portion of the music is classic—Handel, Verdi, Gounod, Mozart, Dvorak, Mendelssohn, figure largely in almost every programme. And they are asked for, as evidenced by these two letters to "Radio Times":—"Nearly all my friends listen only to symphony or chamber concerts." "Why not more chamber music? For the real lover of music will listen to it and appreciate it the more, as first-class music is so hard to get. Every town, however small, has its so-called jazz band." The writer has struck a true note—jazz can be heard everywhere, but artists only can satisfactorily render good music.

OCEAN and Nauru Islands are linked with each other, and with the British Phosphate Commission's tender-steamers Nauru Chief by a remarkably efficient wireless telephone service. A high-powered wireless plant works under British control at Nauru, but mere Morse communication with the outside world is insufficient for the commercial operations at Ocean and Nauru, which lie 160 miles apart. Each island has its own wireless telephone plant, a half-kilowatt installation for two-way conversation, and daily the managers and other officials call one another up over this 160 miles to discuss all details regarding output, loading, and other matters affecting the commission's work. On board the Nauru Chief, the supply ship which carries officials, native labour, and stores to the two islands, is a similar half-kilowatt Marconi set, and when within a 700-mile range this vessel is in constant daylight conversation with Nauru and Ocean. The wavelength used is 720 metres, clear of all interference from ship traffic; and at times the stations are heard by amateurs in Australia and New Zealand who specially tune in for them.



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Four "Flying Uncles" Speak from 2YA.

Kingford Smith

T. W. McWilliams

J. H. McWilliams

H. A. Litchfield

Signatures of the famous aviators and "uncles," now recorded in the visiting books of 2YA and 3YA.

—“Weekly Press.”

NEWs was circulated among the little people who come along to 2YA regularly that four new uncles (the airmen) were to be initiated on Monday evening (September 17). Excitement ran high, and all came armed with autograph books to capture the valued signatures of the first men to cross the Tasman by air.

But these little folk (and their mothers) were not the only ones to come along. So many old and young wanted to enter the studio that the outside doors had to be locked. Aunt Gwen and Uncle Jeff conducted the session. Incidentally, a great deal of trouble had been gone to in order to procure a spray of Australian bottle brush to honour the flyers.

At about half-past six a buzz went through the assembled kiddies—the airmen were coming up the stairs. No sooner had they come within earshot than one and all struck up “Smithy,” with such vigour that many who listened at the other end acclaimed the rendering the best they have heard.

INTRODUCED to the microphone. Uncle Smithy, as the intrepid leader styled himself, told all radioland how he would like to see them, and added that there was one young lady out at the races on Saturday to whom he gave a great big kiss. Uncle Smithy then told a humorous flying story, and expressed regret at not being able to take the Southern Cross to Wellington.

“However,” he added, “it will not be long before New Zealand will have plenty of large aerodromes. All those men in Parliament who govern the country are interested in aeroplanes, and I’m sure it will not be long until you have plenty of aerodromes in New Zealand. At least, it will be before you grow up at any rate. Good-night, kiddies. I’m sorry I can’t kiss you all good-night.”

BUT Smithy, keen as are his eyes, did not recognise the bottle-brush. Naturally enough when Aunt

Gwen chaffed Uncle Smithy about it, Uncle Charlie, who was now before the microphone, said that he had recognised it, but that it was smaller than the Australian flower. He then told all radioland how afraid he was of the microphone, but was willing to back up his chief. “Whatever Smithy has

told you is right.” “We have a radio fan in our family,” he concluded; “he’s just seven years old, and if he is listening in, I’ll say ‘Good-night, John.’” Radioland wonders if young John heard. Probably he did, for Mrs. Ulm heard the aviator speaking at the welcome to Tom Heeney.

UNCLE LITCH, as Mr. Litchfield was styled, then came before the in-offensive looking microphone.

“Hello, Kiddies. How are you? I’m navigator of the Southern Cross. Uncle Mac and I are in the cabin. We are more comfortable than Uncle Smithy and Uncle Charlie. We’ve got quite a lot of room. We can stand up and walk about and we’ve got a window in either side of the cabin.” He added that he was sorry that the children could not see the Southern Cross, and wished them all good-night.

Mr. T. W. McWilliams, Uncle Mack, then came forward and addressed all the thousands of listening children, young and old. Uncle Mack did not have much to say, but made a promise that all radioland greeted with a cheer. He was going to speak over the air on his return from Australia. He was going to tell a story, but on second thoughts decided it would not quite fall within the category of bed-time stories.

THE end of the speeches was a sign for the autograph books to come out, and for the next five minutes the aviators were lost among the twenty little ones present. All four gave their signatures without hesitation, and each little one present felt a glow of pride on looking down the four honoured names in his book. What happened during this mix-up is hard to relate, but one very proud young lady was overheard to say, “He kissed me.”

THE airmen were restricted to time. They had just left the R.S.A. and had not yet dined, so bidding everyone good-night, they left the studio amidst “For They are Jolly Good Fellows.”

On the ground floor they were taken by Mr. Davies to sign the visitors’ book—a book kept for the signatures of the most distinguished visitors. Again all four signed willingly and then departed from 2YA, and the twenty happiest children in Wellington.

Tasman Flyers

Proposed Radio Fund.

THE proposal announced last week of raising a fund for presentation to the Tasman flyers is a most excellent one and should appeal to every listener. But as no indication was given as to any method of carrying out the idea, may I suggest that it might be advisable to organise it on the following lines:—

1. That the fund be called the Tasman Flyers Radio Presentation Fund.
2. That the fund be confined to New Zealand radio license-holders.
3. That the subscription be one shilling per license-holder.
4. That the appeal be made through both the four New Zealand radio stations and the columns of the “Radio Record.”

I need not say that the subscription would not be limited to one shilling—

this would be left to the discretion of the individual license-holders. I suppose that the aggregate number of licenses now current is in the vicinity of 40,000. Assuming that each license-holder subscribed not less than one shilling the amount raised would approximate two thousand pounds, which would be not only a handsome but adequate amount for presentation to these gallant and intrepid airmen. I would further suggest that whatever amount is raised it should be given to the flyers in equal proportions.—56210 (Wellington).

THE managing director of Amplion (Australasia), Ltd., Mr. William Blogg, passed through Auckland on September 24, en route to America. It is the intention of Amplion (Australasia), Ltd., to appoint agents in New Zealand for handling Amplion products. From America Mr. Blogg will travel to England to inspect the works of the Graham Amplion, Ltd., at Slough.

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Characteristics of Valves--Valuable Lecture for Listeners

THE purpose of my series of lectures from this station (said Mr. Dawson) is to explain in a simple, non-technical and I hope palatable manner, some very important considerations in the correct choice of valves and associated apparatus used in your receiving set, and to draw aside the veil of mystery which to many surround that real brain of the set, the valve.

Please have by you the sketch marked Fig. 1, on page 8 of the "Radio Record" of September 14, for as a preparatory study we will to-night consider the construction and basic action of the ordinary three electrode valve.

That familiar silvery-lined glass bulb contains in a high degree of vacuum three essential elements or electrodes as they are called, the filament, the plate, and the grid, each of which connects to a pin or pins in the base of the valve, and each of which has its associated circuit named after the electrodes, the filament circuit, the plate circuit, and the grid circuit.

The filament is very similar to that contained in an ordinary electric lamp. Its purpose is, however, not to emit light, but electrons, which we may regard as being very minute particles of negative electricity. When the filament is heated by turning on the receiver switch and causing a current from the A battery to pass through it, particles of negative electricity may be expelled from the surface of the heated filament. The number of electrons which it is possible to expel depends on factors relating to total emission. For the present it will suffice to regard the filament as a source of electrons which are particles of negative electricity.

THE filament circuit commences at the negative pole of the A battery up the negative leg of the filament, down the positive limb to the positive of the A battery, and through the battery itself to the original starting point.

Surrounding the filament of some little distance from it is the "plate" or "anode," consisting of a thin sheet of metal, usually of nickel, tungsten, or molybdenum. The purpose of this plate is to attract to it the electrons emitted by the filament and to enable it to do so it is given a positive electrical charge by connecting to it the positive

Speaking from 2YA on Saturday, September 15, Mr. W. M. Dawson (technical engineer, Phillips Lamps, N.Z., Ltd.) inaugurated a series of lectures on aspects of radio that will be of definite instructional value to listeners. The series will be continued at fortnightly intervals. The addresses will follow the news sessions and precede the evening programmes.

terminal of the B battery as shown in figure 1.

In this diagram you will be able to pick out the elements of the valve (F for filament, G for grid, and P for plate). You will also notice some small crosses or plus signs on the plate; they indicate a positive charge, also near the filament you will see small minus signs inside circles; they represent negative electrons.

NOW it is a well known electrical principle that like electrical charges repel one another, and that unlike charges attract. So that as the plate is positive it will attract the negative electrons which will travel across the intervening space between filament and plate returning via the telephones and B battery to the filament which originally emitted them. This then constitutes the plate circuit, and the purpose of the plate is to attract the electrons emitted by the filament.

The third element of the valve is the grid. It surrounds the filament closely, that is, between the filament and the plate. The grid consists of a spiral cage of fine wires of nickel or molybdenum. As the grid is placed between filament and plate the electrons in their travel through space must on their way to the plate pass between the turns of wire forming the grid, and the grid is so placed that it may effectively control the flow of electrons from filament to plate.

If we place a positive charge on the grid there will be an added attraction drawing the electrons towards the plate, some will flow to the filament via the grid, but the main effect will be to increase the flow from filament to plate.

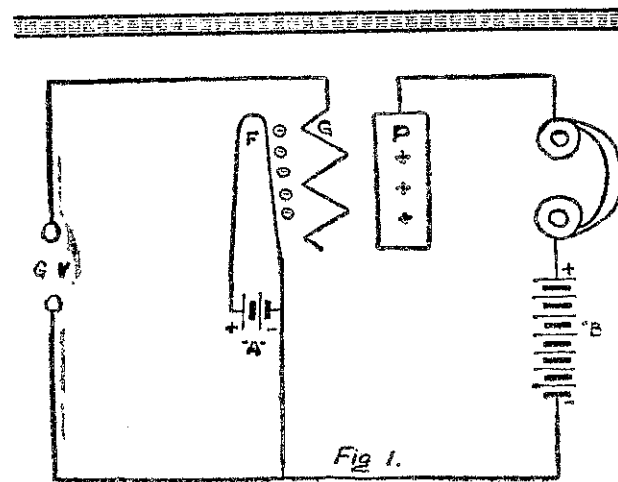
Conversely, if we place a negative charge on the grid the negative grid has the effect of repelling the negative electrons and many are driven back to the filament instead of reaching the plate, so that the nature and amount of charge on the grid controls the flow of electrons to the plate.

THE grid circuit commences at the negative end of the filament, goes across through space to the grid down to the terminals marked G.V., through whatever coil or transformer winding is connected to them and detuning again to the negative end of the filament.

Now the valve manufacturer generally wraps round each individual valve a data sheet giving certain information on the working of that type of valve.

The table printed below figure 1 is just such a data sheet, except that actual valves have been withheld. The first on the list is filament voltage. This determines the number of cells required in the A battery valves maybe

obtained to work from 2, 4, or 6-volt batteries, the figure given by the data sheet refers to the voltage actually impressed across the filament, for example, certain valves consume a quarter of an ampere of current at 5 volts. In this case the filament current is supplied from a 6-volt battery, the excess voltage, in this case 1 volt, being dissipated or "dropped" in the rheostat which may in your set be marked "sen-



This illustration has reference to the characteristics of valves, and will enable the lecture to be followed more closely. The factors of valves are set out below. This information should be held available for future lectures:—

Filament voltage	Vf
Filament current	If
Anode voltage	Va
Total emission	is
Amplification factor	g
Mutual conductance (Slope)	S
Internal resistance	Ri
Negative grid bias	Vg
Normal anode current	Cag
Largest diameter	d
Length	l

sitivity," "volume," or "battery." Some valves are made to operate directly from the battery without the necessity of using a rheostat. As each cell in your A battery gives approximately 2 volts it will be easy to determine how many cells are required to work a given series of valves.

In general it may be fairly stated that valves operating from 4 to 6-volt batteries give superior results to those operating from 2-volt batteries.

THE next term on the list is filament current. This factor decides the capacity or size of each cell in the A battery.

Modern receiving valves vary in their filament current appetite between a quarter and one-sixteenth of an ampere. Expressed as decimals these are, of course, .25 and .06 ampere. Naturally the smaller the filament consumption the smaller the permissible size of

the A battery or the longer a given battery will last on one charge.

The former means a saving in the initial cost of the battery and the latter a saving of upkeep cost and considerable fatigue where the user does not possess a battery charger and requires to take the battery to a service station to be charged.

A heavy filament current does not in any way imply better results, in fact, as a result of scientific research the filament current required for a valve has declined in successive steps from 1 ampere to $\frac{1}{2}$ ampere to $\frac{1}{4}$, $\frac{1}{8}$, and now 1-16 ampere, and the filament of the last-named type is much more efficient than that of the old 1 ampere type.

THE third factor we are going to deal with is total emission, as it also has to do with the filament. This factor is a measure of the total number of electrons which may be emitted from a filament at normal temperature.

The older types of valves, called bright emitters, operated at a dazzling white heat; with them the number of electrons that could be emitted increased rapidly with filament temperature increase right up to that sad moment when the filament melted or burnt out, as it was expressed—with sundry other expressions generally more forcible than polite.

With modern dull emitter valves the normal operating temperature of the filament is much lower and if the temperature is steadily increased a point is reached long before the filament melts, beyond which no increase in electron emission results. This maximum electron flow is termed the total emission. It is measured in milliamperes, that is, in thousandths of an ampere. A valve should have a high total emission in order that it may have a reasonably long useful life and this is made possible in modern valves by the use of certain rare metals such as thorium alloyed with the tungsten of the filament. By this means the electron emitting ability of the filament is increased some 16 times.

THE measure of efficiency of the filament may be expressed in milliamperes, emitted per watt of filament power and this may be found by multiplying together the filament voltage and amperage and dividing this product into the total emission in milliamperes.

My next talk will deal with characteristic curves, how to read and analyse them and the meaning and importance of such terms as amplification factor, internal resistance slope, etc. This talk will take place from 2YA on the evening of Saturday, September 29.

HARVARD, America's most famous University, has a broadcasting station of its own to enable students to gain practical experience of the engineering problems involved in broadcasting.

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Two Epics of Radio and Aerial Navigation

THE success of the Southern Cross and the achievement of her radio in keeping in contact with the distant shores recalls the tragic epics of the past.

The radio equipment carried on the recent flight was a duplicate of that used on the ill-fated Dallas Spirit, with whose equipment radio history was subsequently made.

ABOUT twelve months ago, four 'planes set out from America, in a race to Honolulu. Nine had entered but four only had taken off successfully. Two only reached the goal. Of these four 'planes the winner only carried radio equipment.

Subsequent to the mysterious disappearance of the two planes, the Dallas Spirit, one of the five that had failed to get away, took off on a flight to Honolulu over a zig-zag course, searching for the lost flyers. As this involved a greater distance than laid out for the contest flights, a maximum load of gasoline was taken aboard, and a course laid out which would take them over as much as possible of the region where the lost flyers might be found. The 33-metre transmitter was removed from one of the damaged 'planes and installed in the Dallas Spirit. Both the aviators were expert operators, and thoroughly familiar with radio telegraphy.

The circuit (identical, of course, with that of the Southern Cross) is the well-known tuned-grid-plate circuit, and one frequently used in various types of transmitters.

The transmitter was of the fixed tuning type adjusted to 33.1 metres, and the grid tuning condenser adjusted permanently.

THE 'plane left Oakland air port at 2 p.m., and its signals were immediately picked up. Reporters took down the log as fast as it was received.

The keys were kept closed on the 'plane when no messages were to be transmitted, so that the listeners heard a continuous 240-cycle note—this was the hum of the transmitter's generator. This note did not vary in intensity or wavelength during the entire flight, except when the tail spins ended the flight in tragedy. As evening came and the 'plane reached a distance of 500 miles from the shore, the signals continued to remain constantly strong at all times. Reports of their reception came in from Italy, the South Atlantic, and from all districts of the U.S.A.

In New York, the entire transmission was picked up by the "New York Times" station, so that the news was released to the Press as fast as it was transmitted from the 'plane. A complete log covering six hours ended with a climax which is seared across the memory of those who listened.

WHEN the tail spins came the whine of the generator rose to above 500 cycles, indicating that the 'plane was going at a rate of over 200 miles an hour. Throughout both tail spins the generator functioned perfectly, the voltage regulators preventing the valve from being overloaded, and the transmitter wave remained steady.

The fact that the operator (Eichwaldt) remained at the key sending out dots and dashes of his last message while the 'plane was hurling downward at a sickening speed is an everlasting

tribute to his courage and presence of mind, even in the face of certain death. Those who listened on shore will never forget the howling and screeching of the note when the 'plane went into the tail spins and KGCA was no more, after a life of six and a half hours.

The Aotea-roa.

AT this time when the triumphs of the Southern Cross is on everyone's lips, our thoughts wing back to that valiant January endeavour, when the evening skies were scanned for the airmen who never came.

Exactly eight months before the victorious Southern Cross achieved its great victory and blazed a fresh trail the first air drama of the Tasman was staged.

BEFORE dawn on January 10, the Ryan monoplane skimmed lightly from the Richmond aerodrome, and, like a bird, rose and without hesitation set out on her long journey.

The first flickers of the rising sun greeted the 'plane flying strongly for her objective. The day without a morrow had broken on the intrepid airmen.

THE Aotea-roa was equipped with a radio equipment not to be compared with that of her successor. The circuit was simple, and was set to emit only automatic signals every quarter of an hour. This signal was a whine as that caused by a howling valve.

As the 'plane headed for the homeland of her pilots, the signals grew fainter, until at 11.20 a.m., when about 500 miles from the Australian coast, the signals faded out and listeners in both countries waited on the tip-toe of expectation.

But as time went and neither reliable signal nor sign came, apprehension spread. Far into the night hope ran high, but as the dawn approached, and no sign, fears were entertained and became alarming as time dragged on—then the grim truth was realised. Either the Tasman, or the unexplored bush country, had claimed its ransom.

NOW two wreaths float out on that watery waste, grimly reminiscent of two gallant New Zealanders who sacrificed all to bring honour to their country.

Effect in England. 4YA and the Flight.

Radio Altering Lives of People. Radio Society's Tribute.

"WIRELESS is altering the lives of the people of England to an enormous extent," said the Rev. E. C. Crosse, M.A., headmaster of Christ's College, who returned from a trip to England recently.

"On the wireless," continued Mr. Crosse, "you can listen to everybody, the Prime Minister, the Prince of Wales, and operatic prima donnas. It is adding tremendous interest to the people's lives."

There was, he continued, a wireless programme of some sort nearly all the day. One could listen-in to either London or Daventry, which always provided good programmes, or to any number of smaller stations, of which more were coming into being every day. It was a great boon to hospital patients and other people who were unable to go out.

"I heard the Grand National described in great detail by a man who knew every horse," said Mr. Crosse, "and it was almost as exciting as seeing the race."

There was a movement, said Mr. Crosse, to get the speeches in Parliament broadcast, but it was rather

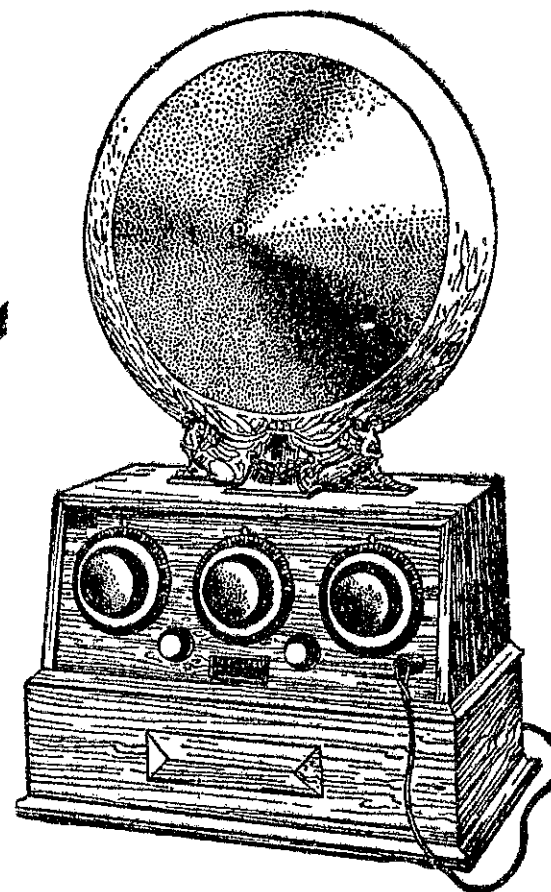
MR. D. G. MITCHELL, honorary secretary to the Otago Radio Association, forwards the following letter to the station manager of 4YA:—

"Dear Sir,—The committee of the Otago Radio Association (Inc.) desire to express their appreciation of the manner in which you broadcast the news of the trans-Tasman flight from start to finish. They offer you their hearty congratulations on your rebroadcast of 3YA, Christchurch, on the morning of Tuesday, September 11. The reception was perfect, even from a crystal receiver's point of view. Wishing you the best of luck on any other future occasion."

IT has been reported by a leading English daily paper that there are 1200 different types of valves on the market.

strenuously turned down. Every house almost had a set which was turned on for half an hour or so in the evening. Mr. Crosse did not think that wireless was in any way damaging the evening newspapers.

High
or
Low
by
the
Flick
of a
Switch



Employs
No
Trouble-
some
Plug-
in
Coils

The "COURIER" Four

Yes—all troublesome plug-in coils eliminated on the "Courier"; simply press a switch and your "Courier" set is changed over in a second from broadcast wavelength to low wave reception. Above is illustrated the marvellous 4-valve "Courier"—well built from the finest parts obtainable and guaranteed by the makers.

£27/10/-

A "Courier" owner writes—

Buys the marvellous 4-valve "Courier" sold complete with Accumulator A, dry B and C Batteries, Phones, Aerial, Valves and 15-inch diameter O'Neill Cone Speaker.

"I've tried several makes, but my 'Courier' brings in all the local and Australian stations with greater volume and clearer tone."—W. WHITE, Takapuna.

If your local dealer cannot supply you with the "Courier" set that you want, write to us, and we will see that you are supplied.

The
Courier
"Brings tidings from afar."

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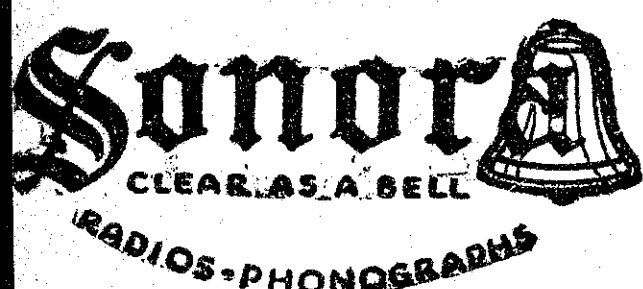
Published Weekly. Subscription Post Free in advance, 10s. per annum; booked 12s. 6d.

WELLINGTON, SEPTEMBER 28, 1928.

EDITORIAL NOTES.

THE increase recorded in the number of licensed listeners to the end of August is gratifying, and is, we think, certain to be maintained and exceeded throughout the month of September. Beyond doubt the service rendered by broadcasting in the past month has been exceptional, and sufficient to show that, given the opportunities in the supply of public functions, the stations are ready to take full advantage hereof. Through radio, listeners—even crystal listeners—have been put in touch with a definite number of major events, and the result is to be seen in a steady accretion of strength. We sincerely hope that the figures for the end of September will top the 40,000 mark. This is the figure which was set as a minimum requirement for the standard of service which the Broadcasting Company has been rendering for a long time past. We think listeners should appreciate the fact that, with a less income than was figured on for the standard of service set, the company has maintained and even improved the service, and not curtailed it or required adjusted financial arrangements as might reasonably have been done. It is satisfactory that it has been possible to do this. All that is now required is for steady and consistent quality service to be maintained and further progress will be possible. Listeners themselves can contribute to the expansion of the service by steadily building outside interest.

WE must congratulate the 1YA Musical Committee on the discussion and decision reached regarding an evil that has been creeping into programmes for some little time. This is the habit of some artists of failing to render the item arranged for. This inevitably leads to disappointment, for it is certain that every item announced to be given will be eagerly awaited by some. In many cases special arrangements may have been made in connection with such an item—friends invited to hear it or a party organised by whom it would be appreciated. Disappointment in such cases when, without apology or explanation, the artist has substituted another number—usually a more hackneyed one—is inevitable. While in some cases legitimate excuses may be available there is no doubt that in many instances the laziness or unpreparedness of the artist concerned is responsible. The committee did well to draw attention to this matter, and we endorse the recommendation that the drastic course should be taken of eliminating such delinquents from the programme in the event of their inability to perform the item contracted for. We have frequently had complaints from readers on this matter, and action such as this would be a salutary corrective.



Call and hear the latest model SONORA. Unequalled for quality of tone. Buy a SONORA and you will really enjoy Radio!

Arrange for a demonstration TO-DAY

F.J. PINNY Ltd. 58 Willis Street. WELLINGTON.

Radio Will Follow the Southern Cross on Her Return Journey.

TWO more important broadcasts will take place in connection with the "Southern Cross."

- (1) Departure from Christchurch for Blenheim, set down for September 28.
- (2) Departure from Blenheim and flight to Australia, arranged as for September 30, weather permitting.

As is now well known, the final take-off of the "Southern Cross" on her return journey to Australia will eventuate at Blenheim, and will be a very historic occasion, equally as noteworthy for New Zealand as was the arrival of the first 'plane from overseas. A great crowd is expected to congregate at the aerodrome for the occasion. Special excursion trips will be run between Wellington and Picton.

WHILE the broadcast of the departure from Blenheim will be the more important event, the departure of the "Southern Cross" from Christchurch will be a red letter day in that city. A tremendous crowd is certain to be present to say au revoir to the four airmen and to see the last of the first aeroplane to cross the Tasman Sea. The departure from Sockburn will, therefore, be handled by 3YA.

The eyes of the whole of New Zealand will, however, turn to Blenheim, and every receiving set in New Zealand will be in use that day listening to the description of what will be a national event—the departure of the first aeroplane to go overseas from New Zealand.

FROM then on until the "Southern Cross" has landed in Australia the New Zealand stations will be on the air broadcasting for the benefit of the interested and anxious New Zealand public all available news of how the "Southern Cross" is faring in her flight.

Boom In Popularity.

What Will Next License Figures Be?

THE Broadcasting Company has received many appreciative letters during the course of its operations, but it is doubtful if in any given period it has received more than during the past month. Broadcasting has lately loomed very large in the public eye because of certain important happenings, notably the trans-Tasman flight, but many other events have also attracted attention.

During the past month the studio programmes have been above the average, and there have been numerous outstanding features.

The stations have also indulged in much rebroadcasting, and have thought nothing of departing from their usual schedule of hours for this purpose. These rebroadcasts have made a great appeal to crystal-set users.

The great boom in the popularity of broadcasting of late should be demonstrated in another way, quite apart from appreciative letters from listeners—namely, by an increase in the number of receiving licenses.

It will be very interesting to see what the figures for September 30 will reveal. The figures for the last three months are:—

June 30	35,824			
July 31	37,238	(increase for month, 1414)		
Aug. 31	38,835	(" " " 1597)		
Sept. 30	?	(" " " ?)		

As many new listeners will need to acquire certain knowledge concerning the manipulation of their sets, etc., as well as keep in touch with the features of forthcoming programmes, a sample copy of "The Radio Record" will be sent free to any new listener on request to P.O. Box 1032, Wellington.

OFFICIAL DETAILS.

The Secretary of the Post Office advises that the undermentioned summary represents the number of radio licenses issued on August 31, 1928:—

	Receiving.	Trans- mitting.	Dealers'.	Broad- casting.	Experi- mental.
Auckland	12,769	50	377	2	1
Canterbury ..	7,417	29	262	1	—
Otago	2,505	14	150	3	—
Wellington ..	14,647	46	559	3	—
	37,338	139	1348	9	1

Total: 38,835.

Wireless Lessons in English Schools.**Report of Kent Education Committee.**

THE day when the equipment of all rural elementary schools will include a wireless receiver is brought a step nearer by the publication under the auspices of the British Broadcasting Corporation of the Kent Education Committee's report on an investigation undertaken during 1927 to ascertain the value of educational broadcasting in schools. Educationists throughout the country have followed the Kent experiment with keen interest. Those education authorities who have been waiting for guidance before adopting broadcasting as a normal adjunct to the school curriculum will find in this report definite conclusions as regards its utility from an unbiased and authoritative source.

For the purpose of the inquiry, to the cost of which a sum of £300 was contributed by the Carnegie Trustees, wireless receiving sets were installed in 62 elementary schools of all types, large and small, in town and country, in Kent. The inquiry was launched in January, 1927, and throughout the year children of both sexes listened

regularly to the broadcast lectures with the co-operation of their teachers.

Upon the evidence of teachers obtained by means of questionnaires, the report concludes that the broadcast lesson imparted a knowledge of facts, stimulated interest in ways which could be definitely observed, created impressions as durable as those produced by ordinary lessons, did not encourage inattention, were particularly stimulating to clever children, supplied views and information which the teachers themselves could not have supplied, gave fresh ideas for lessons and interested parents in some of the work that the children did in school.

The suggestion that the loudspeaker can in any sense replace the teacher is firmly refuted, and it is reported that successful broadcast lessons depend upon close co-operation between the wireless lecturer and the teacher. A concerted plan of action must be worked out by the wireless lecturer and put into effect both in the studio and in the classroom. The report also disproves the theory that broadcasting encourages inactivity on the part of the pupil. It is found that some subjects lend themselves more readily than others to treatment at the microphone. For example, the investigators found that music was suitable, by reason of the opportunities that it afforded for illustration; French, so that the voice of a Frenchman might be heard; geography, so that travellers could speak personally of their experiences; and history, because a specialist having first-hand knowledge of the subject could supply a vivid background to history text-books, much as the traveller provides a vivid background to the Atlas.

On the technical side it is reported that a certain type of small valve receiver is suitable for use in the classroom, and that consistently clear reception can be obtained where arrangements are made for the regular overhauling of the set and charging of the batteries.

There can be no doubt that wireless has its place in our schools. The smaller country school with its two or three teachers has much to gain from the introduction of a new voice, a new vocabulary and a fresh range of experience and the broadcasting of national events must bring a new civic consciousness into the classroom. This much is evident and the report, which is the result of an impartial and scientific investigation, indicates the place which wireless should occupy in the school curriculum.

Dr. E. Salter Davies, Director of Education for Kent, says in a foreword to the report:—

"Every Monday afternoon at half-past two the Director-General of the British Broadcasting Corporation, after the manner of the well-known French Minister of Education, can take out his watch and say: 'At this moment 70,000 children are taking a wireless history lesson; music on Tuesday, English on Wednesday, and so on throughout the week.' Two years ago he would not have claimed 20,000 pupils. Two years hence he may be dealing with 200,000. In ten years, who can say how many boys and girls will have come under his influence?"

2YA Does Not Fade.**Clear Reception in Australia.**

An interesting letter conveying testimony that 2YA's transmission is not responsible for local fading experienced in some parts of the Dominion, comes from Australia. Writing from Harbord, New South Wales, a correspondent to headquarters of the "R.B.C." says:—

"A splendid feature I wish to specially congratulate you on, that there is no fading with your station. I switch you on and leave the set, and you keep the same volume without touching the controls. Trusting you keep up your good work, I beg to remain,—G.C."

One of the many appreciative letters received reads as follows. It comes from a listener at Cambridge, Wai-kato:—

"May I be allowed to congratulate you on the programme broadcast from the King George Theatre, Lower Hutt, last evening. The reception on my instrument, which is a five-valve electric model, was almost perfect, static was singularly scarce, and the fading was almost negligible.

"We hear quite a lot about the quality of programmes submitted to us in New Zealand, but I am well satisfied that the Wellington station particularly puts on as good a programme as any Australian station, and while you are prepared to give us such quality performances as the one last night, I am sure no one has need to complain.

"May I congratulate your orchestra on the choice of pieces and also the execution of same. Also may I add a word of praise for the Broadcasting Company, who have provided us with so much this last week or two. The Eucharistic Congress in Australia, the home-coming of Tom Heeney, the flight of the Southern Cross and its subsequent following functions, have all been highly interesting, and shows that the New Zealand Broadcasting Company are alive to all that is going.

"Wishing you all success for the future."

Sunburnt**Curious Effect of Long Duty on 2YA Operators.**

ONE would hardly expect that an all-night vigil would result in a sunburnt complexion. The reverse is usually the case. But it happened so with the 2YA operators who were on duty during the trans-Tasman flight.

The two operators were in the radio room for a long spell, during which time the set was running. The effects of sunburning were first noticed when one of the operators washed his face next morning. He then looked at his companion and saw that his face was noticeably reddish brown.

There was no doubt about it—the two operators were well sunburnt.

By the way, has anyone ever seen a bald-headed radio operator?

Sporting Fixtures.

ONE of the final broadcasts for the Rugby football season will be that on Saturday, September 29, when 4YA will describe the match Otago v. South Canterbury.

A UNIQUE ceremony was recently broadcast from the Warsaw (Poland) station. A large number of clergymen, bishops, ministers, prominent people and pilgrims, gathered at a tiny provincial town, on the occasion of the reintroduction of the image of the Holy Virgin into the local basilica. The image has a fascinating story, being connected with an early Pope from whom it passed to a pious Polish magnate. It was installed in the basilica in question in 1627. On the annexation of Poland to Russia, it was removed and hidden, to be unearthed and reinstalled a few weeks ago. The ceremony faithfully broadcast was of national interest to the Poles as it marked the supremacy of Catholicism once again.

INSTEAD of emptying the churches, wireless, in London, is said to be having the opposite effect.

Get your new batteries now, and save money.



Startling Prices for "RELIABLE"

(British Made)
RADIO BATTERIES

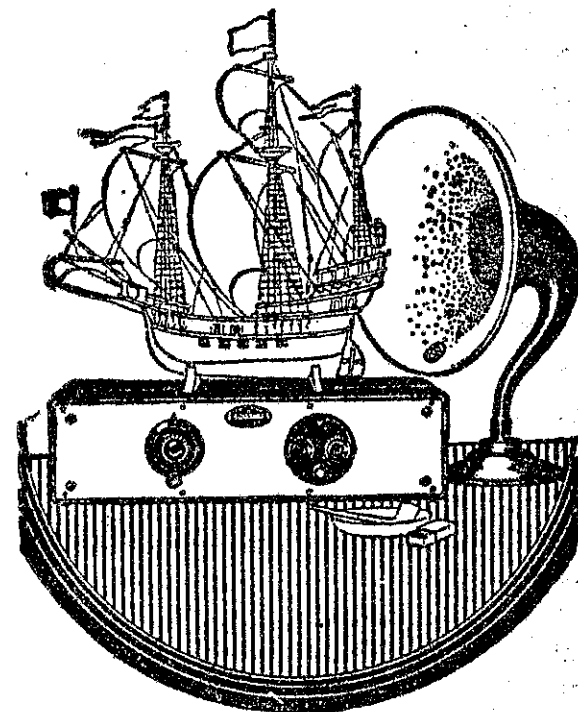
DIRECT SHIPMENT.—Fresh Stocks just arrived. Tested and Guaranteed Full Voltage before despatch. Limited stocks, so order quickly. Remember!

22½ Volts	7/6	45 Volts heavy duty	18/6
45 Volts Standard Size	14/-	No. 6--1½ Volts (Lots of 3)	5/6
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Freight or postage paid anywhere in N.Z. Post Order and Remittance TO-DAY to—

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WELLINGTON.
New Zealand

Wellington Society**Meeting of Executive.**

Mr. Byron Brown, president, occupied the chair at a meeting of the executive of the Amateur Radio Society of Wellington, on Tuesday evening, September 18. There were present: Messrs. W. H. Taylor (hon. secretary), W. J. Roche, W. A. Glover, I. M. Levy, and Dr. Robertson. An apology for unavoidable absence was received from Mr. F. W. Sellens.

Various members of the executive mentioned their own experiences, and of others, that reception in Wellington of 2YA, Wellington, was frequently unsatisfactory. It was stated that gramophone items generally came in almost perfectly, but the studio items were frequently marred by blasting and distortion on the lower notes. The relays, however, were, on the whole, good. The matter was referred to Dr. Robertson, as official listener for the Broadcasting Company, to report it to the headquarters of the company.

Mr. J. Johnson, vice-president of the New Zealand Association of Radio Transmitters, No. 2 district, waited upon the executive to submit a proposal on behalf of that body to co-operate with the society in combating interference from power-line leakages, howling valves, loose aerial connections, bad plumbing in respect to water-pipes to which receiving sets are "earthed," and amateur transmission. Mr. Johnson stated that the Radio Transmitters had agreed to investigate and diagnose all complaints regarding these forms of interference. A list of transmitters, who would undertake this work, and were competent to do so, would be submitted to the society, which could advise members and others that these transmitters would respond to any requests for advice in diagnosing the trouble experienced from interference. Mr. Johnson was assured by the meeting that the proposal would receive every consideration from the executive of the society, and his association would be advised, later, of the decision. He was requested to convey the thanks of the executive to his association for their generous offer.

Auckland Notes

(By Listener.)

THE debate on Saturday night, which is to be relayed from the Auckland University by 1YA, will provide an acceptable novelty for local listeners, and will show the possibilities of a new field in radio entertainment from which much is expected. Where a subject allows the speakers to play upon either the risible or pathetic emotions of an audience, the transmission of this debate by radio cannot but have a whole-hearted attraction for listeners. In this respect a university college can co-operate to a big extent with broadcasting in the entertainment and instruction of listeners.

AGAIN broadcasting has played a splendid role in acquainting the public with the doings of our present national heroes—the flyers of the Tasman and of the much more difficult Pacific. All of Auckland wished to hear the speeches at Wednesday's reception to Kingsford Smith and his party, and a very large proportion of city dwellers chose the easiest and most comfortable way of doing so. They tuned-in to 1YA. As for country folk who had not the time to journey to the

executive of the society, and his association would be advised, later, of the decision. He was requested to convey the thanks of the executive to his association for their generous offer.

The executive went into the proposal brought forward by Mr. Johnson, and after due consideration it was decided to withhold a decision until fresh aspects of the matter had been investigated.

A vote of appreciation of the excellent broadcasting and relaying accomplished by the Broadcasting Company in connection with the trans-Tasman flight and the visits of Squadron Leader Kingsford Smith and his companions was carried unanimously.

Town Hall, they did likewise, and were well rewarded. From a vantage point outside the building Mr. Culford Bell detailed the scene of enthusiasm among the waiting throng, and listeners heard all details of the arrival and departure of the airmen. Stray scraps of conversation and the raucous cries of those lads selling early editions added a touch of reality to the account. From the hall itself came every word of the speeches, and much more than that. The spirit which prevailed among the packed throng of welcomers came through in no doubtful manner. Those at their phones and loudspeakers could vision the whole gathering. Radio demonstrated that on an occasion such as this it was an invaluable asset. Thousands other than set owners evidently thought so too, judging by the manner in which they invited themselves round to the residences of more fortunate friends. It was a great hour for 1YA.

OUR local orchestra came on the air for the first time on Tuesday. Numerically it is a small body in comparison with the Wellington one, but it is efficient and enthusiastic, and its first presentations were of just the type for which listeners have been longing. There is no doubt that it will win public appreciation to a far greater degree than the trio did before it. Mrs. Singer and her fellow-artists deserve the congratulations of all local listeners, and they are getting them, too.

A "REVIVAL" is a common procedure in the theatrical world, and where the play is a good one, its second presentation is always as popular as the first. With a favourite show one hearing is not enough for the real listener. He can enjoy better on the second occasion. Madame Ainsley's concert party was well advised to "mike" a second performance of "Rose Marie." Shoals of requests had come in for a repetition, and they were acceded to, with the result that there were few sets off 336 metres after 9.30 last Tuesday.

FOR a few minutes on Tuesday evening the writer tuned in to 2YA, which of late has been coming in with splendid volume and clarity, quite unmarred by fading. At the time a vocalist from the Hutt Choral Society's concert was singing, and his renditions roused to enthusiasm the small coterie of listeners gathered round the set. The vocalist, I think, was Mr. Harison Cook. We should like to hear more from him, and hope that at some early occasion, when he is in Auckland, he will try the microphone at 1YA.

THE Auckland Amateur Operatic Society is fully alive to the advertising medium for its performances which a relay of items presents. As a result listeners are eagerly awaiting the broadcast on Saturday evening, when the tuneful melodies of the "Belle of New York" will revive old memories of Charles Carter, Albert Whelan, and May Beatty.

THE studio production of excerpts from "Les Cloches de Corneville," adjourned from a previous date, will now take place on Tuesday, October 2. There will be a fine supporting miscellaneous programme to which the studio orchestra will contribute.

1YA Church Committee.

The fifth meeting of the 1YA Church Service Committee was held at the 1YA Studio on Monday, September 10, at 2 p.m.

An application was received from the Unitarian Church for a further evening broadcast during the present year, which was declined.

The Broadcasting Company forwarded copies of correspondence which had passed between the company and the Baptist Tabernacle and St. Matthew's Church, in relation to the transfer of particular services. After considerable discussion it was decided that no rearrangement of the church service rota as originally drawn up would be made unless with the consent of the committee representatives of both churches desiring such rearrangement, and then only by a special meeting of the committee. It was felt that although it might be in the interest of two particular churches to exchange dates for broadcasting, country and other listeners anticipating the broadcast of a particular service should be considered, and it was further felt that by altering such services listeners would be disappointed.

The allocation of further broadcast dates from December 30, 1928, to March 31, 1929, was dealt with and it was decided to carry on the rota for these months as originally drawn up for the balance of the present year.

On the motion of the Rev. H. M. Smyth, it was decided to request the co-operation of the Church Committees in other centres to endeavour to arrive at a synchronisation of services, and it was further decided to ask the Broadcasting Company to place this matter before the respective committees at Wellington and Christchurch at their next meeting.

The committee decided to meet again on November 12, 1928.

TWO Danish radio papers recently inaugurated a joint regular picture transmission from the short-wave station 7RL. Wireless pictures will be transmitted from there twice weekly on a wavelength of 42.12 metres.

SHIELD GRID CONNECTING WIRE.

LEAD COVERED HOOK WIRE.
Essential for the best operation with Shield Grid Valves.
2/6 per 10 feet length.

RADIO HOUSE,
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FOR SALE.

8FT. Exponential Horn Speaker, only £5. Horn alone £2; get real music. Philips Eliminator, 150 volts., guaranteed condition, £6.

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Name

Address

HARTLE & GRAY

British Radio Supplies,
CUSTOMS STREET, AUCKLAND.

Australians Appreciate 2YA Programmes and Transmissions

RECENT mails from Australia have been heavy, for it would seem that Australian listeners have been tuning in a great deal to the New Zealand stations. Numerous correspondents in all the States have written regarding the trans-Tasman flight, but the following extracts from letters have a general application and will serve to indicate the favourable view which Australian listeners take of the New Zealand programmes and transmissions. The references are principally to 2YA.

Randwick, Sydney.—“Might I be permitted to offer my congratulations on your splendid programme of this (Saturday) evening. Not only was the standard of your offerings much higher than any offered by any of the Australian stations, but your signal strength, and the quality of your transmission were such that I was able to work 2YA on a home-made three-valve set, and the above address is not a mile from 2BL.”

volume, being sufficient to rattle the ‘cans.’ Fading is not very noticeable; perhaps this is due to the fact that the waves travel over sea instead of land. The carrier does not wander. I almost think that modulation could be carried a bit more as there is practically no distortion. A friend of mine can pull in 2YA enough to deafen a person on a five-valver. He reports that he gets slight fading.”

Coolamon, New South Wales.—“I feel that I really must write and tell you of the wonderful reception I got from your station last night, on the occasion of the broadcast from Sydney of the Eucharistic Congress. I tuned in to 2BL and the reception was so poor that I gave it up as a bad job. (2BL is our worst station here.) And I was going to tune in 2FC when in 2YA came with unbelievable volume, and as clear and steady as could be, much better than 2BL. I often tune you in a bit after 7 p.m. (our time) and enjoy your transmission very much. Coolamon is situated just 325

Brisbane.—“Just a report of transmission for the benefit of you and your

miles inland in New South Wales, and engineers. 2YA comes in with fair it was quite uncanny for us to think that the broadcast was going to New Zealand and then right back again.”

Bellerive, Tasmania.—“We have noticed that in vocal numbers from New Zealand the words of songs are much more clearly heard than from Australian stations, and are wondering if it is better enunciation or if the extra distance which the sound has to travel is the cause. Instrumental music comes through quite equal to the best mainland stations and generally your programmes are received well. I can congratulate you on the quality of your programmes, which are generally well balanced and good.”

West Footscray, Victoria.—“I am just writing this note to you congratulating you on the excellence of the transmission of your station. I receive you regularly at full loud-speaker strength on a 4-valve Browning-Drake receiver, which I think is good considering that I am within one mile of 3LO, our local station. Several who have heard my set would not believe

it till they had heard the announcer. As I am writing this the weather information is being given out and a statement that the Southern Cross would not leave to-night, and now the ‘Lost Chord.’ Fading as a rule is very slight and then of short duration. Your modulation is excellent, very little distortion considering the distance, much less than some of our Australian stations. The other night I had a native of New Zealand here listening in and he was delighted when he heard the Wellington clock chime 10 o’clock.”

Sandy Bay, Tasmania.—“Perhaps it will interest you, 1YA, to know that your relay of 2FC on August 30, 1928, was received by me with wonderful clearness. As a matter of fact, my reception through your station was much better than I could get direct from 2FC owing to the fact that 7ZL, Hobart, interferes with me. I heard the ‘Big Ben’ time signal and soon after Cardinal Cerretti delivered his message to Australia. Before closing allow me to congratulate your company on the good quality of their programmes.”

The Lightning Risk.

Earthed Aerial Safeguard.

IN Wellington city and suburbs and, indeed, in many other parts of New Zealand, lightning is of exceedingly rare occurrence and listeners never worry over danger of their aerials being struck by lightning.

The lightning hazard has been over-emphasised by certain nervous listeners and is entirely a misconception. Protected properly, aerials are not the least bit dangerous but, to a certain degree, a protection to surrounding objects.

Earthing Prevents Striking.

The purpose of earthing an aerial system is not to lead lightning to the ground, if it were to strike, but to prevent it from striking.

The theory involved is readily understood when it is known that lightning will seldom strike a grounded object which is at zero potential.

An unearthed outdoor aerial is dangerous, due to its ability to pick up a charge and inability to dispose of it through the ground. For example, suppose a cloud charged positively were to pass in the vicinity of the ungrounded aerial. Naturally, it being unearthed, it would tend to absorb a certain amount of positive charge. If a negatively charged cloud should pass in the vicinity of the positively charged aerial there would be a potential difference between the two and a natural attraction.

Similar to Lightning Rod.

The grounded aerial, however, would remain at zero potential regardless of the polarity of the cloud passing in the vicinity, and would offer no attraction to the lightning bolt.

The Aerial.

BEFORE numbers of valves were generally used, every possible device to amplify signals was employed. The aerial and the earth received special attention. A lengthy high aerial was a factor of some importance; but in these days of multiple valves and electrical devices, this important factor has received little consideration.

The position of the aerial is of considerable importance, and even if operating a crystal set it is a good rule to see that it is placed at least six feet above surrounding buildings and trees.

The ability of an aerial to collect energy depends directly on its height. Thus, for a crystal receiver, which should have as much energy from the aerial as possible, no pains should be spared to make it as high as possible and as far above and away from trees and buildings as the resources of the listener will permit.

If a valve set is used an excessively long aerial is often an embarrassment rather than a help. There are two main reasons for this.

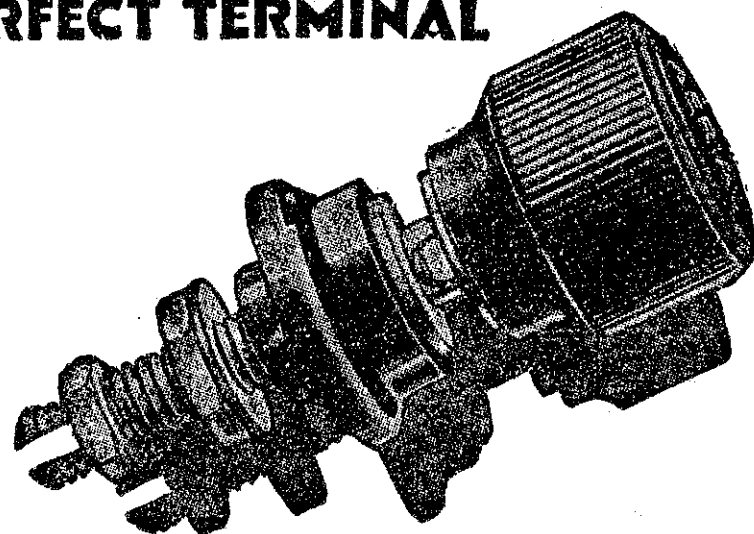
(1) A large aerial will collect a great deal of static and reception will be marred. This effect is not so pronounced on a crystal receiver.

(2) It tends to broaden tuning and a weak station is difficult to pick up without interference, while a powerful one is working. This is of little importance where a crystal set is used when one station only is brought in.

From the foregoing it is readily seen that the properly earthed aerial system offers no attraction to the lightning discharges, but functions similarly to the lightning rod. Being grounded, it tends to detract charges of static electricity from surrounding objects. This characteristic prevents the possibility of striking.

THE PERFECT TERMINAL

Patent applied for.



For perfect design, finish and workmanship, Belling-Lee Terminals are unequalled. Chosen by all the leading wireless journals, and by manufacturers of sets and battery eliminators. Made with 20 different engravings.

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Obtainable from all Radio Dealers.

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TERMINALS**

Disconnecting Batteries.

HERE is a little story with a moral: Two youthful radio enthusiasts, entering the shop of a well-known radio expert, asked for five valves. As the dealer had supplied their set, he knew they were not constructors, and asked if they had had a mishap. "Oh, no! the valves just went out. Father is sure they are done, they have been giving service for six months now."

The dealer was doubtful, and cross-questioned the purchasers, but they were quite confident the valves had just burnt out. So a modest £4 was paid for the five new valves—the boys went away thinking of the enjoyment they were to share that night.

They had been advised to have their receiver tested before inserting the valves, but, disregarding, they put in their valves and turned on the switch.

A flash lit the cabinet—£4 "gone west." A lesson bought is a lesson taught—this time the set was taken to be tested—a by-pass condenser had been burnt out, and had caused a short. That was all, but at what a cost it was discovered. But what was the reason?

An "expert" had told them to disconnect their B batteries in order to prevent leakage through the valves when the set was not in use. This they did, but somehow the leads became confused.

If the set is provided with a switch it will cut out both batteries. If the rheostat is turned off the result is the same.

A New B Battery.

REFERENCE has been made to the value of testing the cells of the B battery for crackling. The difficulty has been that most blocks jump from the negative to 16½ or 22½ volts, and one cell defective ruins the block. A new block, obtainable from Messrs. Lawrence and Hansen, has appeared. It is prepared specially to allow of the meeting of this difficulty. The battery can be very simply taken apart and each cell tested—a defective cell can be replaced or bridged over.

Closing Down.

WHAT would be the effect of endeavouring to stop a car by jamming on all four-wheel brakes without first turning off the benzine? Imagine,

then, the effect of switching out your set when it is going "t top." Valves injured, transformer windings burnt out—a host of troubles arise from lack of this precaution. By turning off the controls marked "volume," "rheostat," the set is gradually steadied down, just as a properly-treated motor-car.

Volume Control.

VOLUME control, especially when a multivalve set is used on the local station, may to the beginner present serious difficulties. Loud music is usually distorted, and if this is tolerated one's ear is abused, and radio condemned. Of the methods of reducing volume, the simplest, perhaps, is to disconnect the aerial. This will be found most effective in all but with a shielded set. Here the shielding prevents the coils receiving the waves.

Disconnecting the earth may be effective, but is liable to cause distortion.

Use of a Crystal.

ANOTHER very satisfactory method of controlling volume is to employ a crystal (permanent is most satisfactory) instead of the radio frequency (H.F.) valves and the detector. For anyone who knows something of a set, such a device could be easily fitted. This could be switched in at will.

The effect then would be that of a two or three-valve amplifier with a crystal. Splendid results have been accomplished by this simple device, but for the novice disconnecting the aerial is recommended.

A Corner for Beginners

—By Observer—

Insulators.

AN owner, who had for some time operated his set satisfactorily, removed from his place of residence. Although he came nearer the station he found on setting up his set that his volume on all stations had decreased considerably. The difficulty was discussed by many—none could offer an explanation, till a relative—an expert—came to his aid. Briefly looking to the set, he satisfied himself that nothing was amiss, but on going out of doors the trouble was obvious. The aerial and the staywire passed through the same hole in the insulators, while the lead-in passed through the other. A few moments rectified the mistake.

An insulator is provided with two openings, one for the stay wire, the other for the aerial. Care should be taken that they do not connect—that is the reason of an insulator.

In erecting an aerial it should be noted that the stay wire passes through the opening farthest away from its point of attachment to mast. Similarly the aerial should pass through the opening nearest the mast. This allows the aerial and stay wire to pull into the centre of the insulator, instead of in the opposite direction. This prevents the insulator from snapping.

Weighting the Aerial.

THOSE who erect their aerials in windy places (e.g., Wellingtonians) will do well to arrange that the aerial wire is weighted so that it may give in a heavy gale but not unduly sway.

This can be best effected by passing the aerial stay wire through a pulley and down the mast, weighting the end by several pounds (a sash weight). Care must be taken to ensure that this is well insulated to prevent contact with the aerial. A glass insulator is probably the safest, though the ordinary porcelain ones are quite satisfactory.

Ascending the Mast.

THE Fijian who scales tall smooth trunked trees by the aid of a rope passed round himself and the tree has set an example to radio owners.

Just recently someone, evidently inspired by the dusky savage, was seen ascending his mast by this means, but he used some of the refinements of civilisation. A bag was slung over his shoulder containing short lengths of timber, nail and a hammer. With these a ladder was being constructed "en route," but the added precaution of a rope was being taken.

Watch Guy Ropes.

ROPES do not make ideal stays, but where employed should be constantly watched, as one rough night may bring the mast down through the guys breaking. This usually happens when an extra special programme is on the air.

Cases of this happen quite often and are decidedly annoying.

Silent Night.

IN a certain Wellington home the wireless is the feature of the day—or night. Only a simple receiver is used—its limit being 2YA. Failure causes disappointment from the youngster who wants to hear the bedtime stories to the head, for whom the news (especially the sporting) is of paramount importance.

The set had for some time been functioning well, but just occasionally the crystal had given trouble.

But one day it wouldn't go! The family radio man was not due home for some time, so the younger female members tried their hands. The crystal was taken to pieces, brushed, put together again, the aerial and earth reversed, likewise the speaker terminals. One or two battery connections were altered—but still no sound.

In desperation they awaited their radio man. At last his footstep—now all would be right.

Amidst the chorus he learned that the set would not go. On opening the cabinet he saw the reason. A few minutes put the connections right and adjusted the worn crystal, hoping at least for weak reception, for the crystal was badly damaged, but still no sound. Batteries were tested, the aerial examined and the valve tested—all O.K. What a puzzle—then a brilliant suggestion: What was the day? Wednesday.

Crackling in Reception.

QUITE frequently static is blamed for this annoyance, but it may be caused by any of the following:—(1) Loose B battery connection. (2) Dirty connections. (3) Exhausted cells in the B battery. One defective cell in a block of 50 volts may cause considerable annoyance. (4) Exhauster C battery.

It is advisable on purchasing a set to learn which is which among the batteries, and where they are connected. Armed with such knowledge the owner can do a great deal of his own trouble tracking

Testing Batteries.

FOR good reception the testing of batteries is a necessity. A voltmeter is almost an essential, but in many cases a torch bulb will do the job even better than the voltmeter. Where a B battery is tapped at frequent intervals and provided with a wander plug, the 3½-volt bulb is an efficient means of tracking down a faulty cell, e.g., one that is causing crackling. Batteries tapped as indicated are usually provided with taps every three or four volts from the negative.

To test such a block it is necessary to bind a piece of wire (fuse wire is excellent) to the screw portion of the bulb base, and to place the bottom of the bulb in contact with one of the taps and connect the wire with the adjacent one. If it lights brightly and remains bright the cells in that locality are in good order. If, on the other hand, the lamp lights die away, it can be presumed that a cell lying between the two taps is defective. These should be permanently bridged (connected with wire), and it will be found that the block will again work faithfully.

Disaster to the lamp will be the result of testing more than two adjacent taps at once.

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The People's Railways for the People's Goods.

Another Reason for the Racing Ban

AT the annual meeting of the Wellington Racing Club, held on September 17, the vice-president, Mr. I. G. Duncan, in the course of his report to the meeting, referred to the ban on broadcast descriptions.

He gave the "main reasons" which weighed with the club's delegates in supporting the ban. His line of argument was somewhat subtle, but quite unconvincing, for people who remember the reasons given by the conferences will now want to know what really are the reasons for the ban.

IT is worth while publishing an extract from Mr. Duncan's statement. The excerpt is as follows:—

"It was felt that owing to the almost complete absence of a leisured class in New Zealand, only a small percentage of listeners-in are in a position to spend a day enjoying the broadcasting of the races from the course. Of this section the vast majority could only listen-in at the expense of their duties and avocations, thus reducing their productive capacity causing friction with their employers and economic loss to the country. In fact, I venture to predict that if the broadcasting of races during the progress of the racing becomes a general practice it will not be long before Parliament, in the interests of the community, will step in and put a stop to the broadcasting of all sporting events until after working hours. But apart from these results, any or all of which would be very damaging to racing, the great bulk of listeners-in would be denied the opportunity of hearing the races broadcast. In the interests of the subscribers to the Broadcasting Company themselves, therefore, it will be seen that the decision of the Racing Conference is a wise one."

MR. DUNCAN does not say a word about bookmakers and illegal betting, about which so much was said by the conferences. Instead, attention is directed to the danger of interfering with the business life of the community. How deep is the concern felt for the business community? The racing authorities do their best to arouse interest in racing, irrespective of whether the public can attend a race meeting and whether the day is a holiday or not. Every means possible—advertisements in the daily papers, the sale of programmes in the streets, posters, special trains and car services—is used to arouse the public, and all are welcomed. Broadcasting alone is criticised and condemned for inciting non-racegoers. As was said concerning the previous arguments advanced by the racing authorities, this argument seems like hypocritical nonsense, especially when read in conjunction with the plea that the ban is in the interests of listeners themselves!

It will be interesting to see what are the next reasons advanced by the racing authorities—perhaps they will yet give their real reasons. So far the reasons given for the "ban" have been:

- (1) The "ban" was imposed to curb illegal betting as promoted by broadcasting, but not of course by the same news posted up outside newspaper offices or published in the Press.
- (2) The privilege of broadcasting should be paid for, although full facilities are given all the members of the Press without charge.
- (3) It is really better for the sick not to have broadcasts in the afternoon when they might have visitors—let 'em wait till the evening.

tors—let 'em wait till the evening.

- (4) Broadcasting races encourages people to leave off work to listen, and that is bad for the country. No harm, of course, is done by people leaving off work to attend the races!—it is only the description that is harmful. If the Conference had not banned broadcasting, Parliament would have had to step in to stop the economic disaster!

What will be the next reason advanced?

Racing and Radio.

AS a radio enthusiast first, a sportsman second, and an economic student third, I feel I must reply to Mr. Ian Duncan's explanation regarding the prohibition of the microphone on the racecourse. Whilst I confess I cannot quite understand the reference to a "leisured class" I am quite convinced that the percentage of listeners who appreciate a description of racing events is far in excess of the number Mr. Duncan would have us believe. Further, if listening to a description of races diminishes production and causes an economic loss to the country, how much more so does racing itself? From an economic and productive standpoint racing is the biggest drawback to the country's prosperity. It serves as the means of a gamble, and would not be tolerated by any Government were it not for the taxes derived from same.

To revert back to the productive standpoint, I venture to say that if the broadcasting of racing events is a menace to the productive capacity of New Zealand the attendance at race meetings is ten times more so. Further, if

Parliament were to put a stop to the broadcasting of all sporting events during working hours, in the interests of the community, it must, to be consistent, put a stop to the holding of all sporting events until after working hours.

Mr. Duncan, in his last paragraph says: "These, then, are the reasons which actuated the club's delegates in supporting the resolution of the conference," to which I reply, "This is a weaker excuse than the former one which demanded payment for the privilege." The real reason lays in the desire to obtain facilities for the telegraphing of moneys to the racecourses and if ever that facility is granted, the racing authorities will be only too anxious to have a description of all races broadcast in order that the public might know at the earliest possible moment if their wagers have been successful, and so that they may have time to again play up their winning on the totalisator. The productiveness of the country does not count at all with the racing clubs when a meeting is being held.—Consistent (Wellington).



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AN Australian expert says: "With the possible exception of microphones of the capacity type, no device produced in the last three years has contributed more to the improvement of the quality of broadcast music than the new dynamic cone loud speakers, which first made their appearance more than a year ago in certain electrically operated gramophones and have since been adapted for ordinary broadcast reception. Eliminating alike most of the faults of the horn speaker and earlier forms of cone speakers, the dynamic cone is capable of giving reproduction of a quality which cannot be equalled by any other producing device, and unless some further striking development in wireless reproduction occurs there can be no doubt that this speaker is likely to be in a few years one of the most widely used of all reproducing instruments."

THE Siberian expedition of the American Museum of Natural History, now working in polar waters, is keeping in touch with civilisation through the Vancouver broadcast station CNRV.

A MONUMENT has just been erected on the church spire near Potsdam, which bore the first German aerial, erected by Slaby in 1897.

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Notes and Comments

By "Switch"

AN old-time "pro" operator tells me that he believes that the cause of some of the Australian stations gradually going off in volume is the natural deterioration of the transmitting valves. He recalls that some stations burst into wonderful strength for a few weeks and then gradually drop back in volume. The transmitting valves in the Australian stations get a good thrashing during long hours, day and night, and it is only to be expected that they will diminish in efficiency before long. "The only thing to be said about it," remarks the old-timer, "is that the valves should be pensioned off at an earlier stage than at present." This suggests the idea that not a few complaints regarding the falling-off in reception by up-country listeners in New Zealand are due to deterioration of their valves. Radio valves, even of the best make, begin to drop in efficiency after about 1000 hours' actual use. "Switch" tested some valves a few days ago which had been

worked for approximately 1800 hours according to the owner's computation. The test showed an emission of only 20 per cent. (one was only 8 per cent.) in the case of the majority of the valves. These valves were promptly placed on the "retired" list, and a new set restored reception to its former efficiency.

SOME strange ideas regarding valves pervade the minds of some beginners. A new listener, the other day, asked me whether valves which had been on the dealer's shelves for some months were likely to have deteriorated! He obtained the notion from a published statement that dry batteries are subject to deterioration through being kept too long in a deal-

er's stock, which is, of course, quite true in respect to dry batteries.

THE next "big" thing in broadcasting will be in connection with the return flight to Australia of the Southern Cross. As it is to be a daylight affair New Zealand listeners will not be able to get the running report from the Australian broadcast stations until nightfall. This will be when the flyers are nearing their destination.

The description of the arrival of the Southern Cross in Australia, broadcast by either 2BL or 2FC, Sydney, should prove thoroughly interesting to New Zealand listeners, and if conditions are favourable a rebroadcast by 2YA, Wellington, would please many hundreds of crystal set and one-valve set owners.

IT would be exceedingly fortunate if Amalgamated Wireless can contrive to broadcast all reports of the flight from their short-wave station, 2ME, Sydney. The short-wave transmission would probably provide good reception in New Zealand throughout the day. The return flight of the Southern Cross, too, promises to prove more exciting than the flight to New Zealand, owing to the prevailing westerly winds at this time of the year, which mean head winds to the flyers.

THE Sunday afternoon broadcasts by 2YA, Wellington, are immensely popular during these drab days, and one hears nothing but praise of the type of records selected. There is excellent variety—vocal and instrumental, and a considerable proportion of listeners are glad to be rid of the eternal jazz and fox-trot stuff for one session anyhow.

INTERFERENCE from electrical leakages from power lines is still being experienced intermittently in the Wellington suburbs though the trouble is not so bad as during the midwinter. Some nights, at all events, the interference is serious enough to blot out all DX reception while it is raging.

THE up-to-date electro-dynamic loud-speaker requires to have one of its coils energised by either a six-volt "A" battery or from the electric mains. A Wellington listener obtained success by energising the coil of his electro-dynamic speaker by means of a small battery charger without any other gadgets. No hum was audible from the loud-speaker, although the electric supply came direct from the mains through the battery charger to the speaker.

DURING the recent Tasman flight the patients in those wards of the Wellington Hospital which are equipped with the broadcast listening installation had a royal time listening to the reports from 2YA, Wellington. The various relays by 2YA in connection with the visit of the flyers and Tom Heeney fairly delighted the patients in the Hospital.

NOW the Auckland people are emulating Wellington folks by inaugurating a fund to equip the Auckland Hospital with a broadcast receiving installation for the patients. The matter

is being taken up enthusiastically by the public in the northern city. Good progress is being made in Wellington in raising the necessary £700 to equip those wards in the hospital in which the installation has not yet been fitted.

A PROFITABLE method of raising money for the extension of the Wellington Hospital broadcast receiving installation is adopted at the Winter Show, now being held at Newtown. A huge block of coal is on view and the public are paying threepence for each estimate of the weight of the coal. The person who estimates nearest to the exact weight of the block of coal will be awarded it as the prize. All hours during the show the estimates are pouring in, many people buying not less than four chances. It is a worthy object, and good luck to the scheme.

A GUERNSEY (Channel Islands) amateur claims to receive 3LO (Melbourne) regularly on short waves. At 8 p.m. on Sunday evening he hears 3LO announcing that the time is 6 a.m. Monday, and he then listens to 3LO giving, orally, the news received in Morse from Rugby. This note was published in a Guernsey paper, got across to 3LO, was republished in their own organ, which was received in England.

IT is important that the liquid in a wet "B" battery should not be spilt on the case, or a conductive path will be formed which may result in leakage of electricity. Perfect insulation is essential with H.T. accumulators, as any leakage, however small, constitutes a continuous discharge, so that even if the current is microscopically small the results can be quite comparatively serious in a few weeks. Wet "B" batteries require very careful charging at the correct rate, and should not be entrusted to a "handyman" whose experience of charging is limited to the larger and more robust motor-car or "A" battery type of accumulator.

COLOURED prisoners in the Ohio (U.S.A.) state penitentiary, as well as others have their sets. Several negroes who migrated north when they thought they could secure work and big wages, have their sets, and invariably tune in Atlanta, Memphis, Chattanooga, Birmingham and other southern stations. Some prisoners prefer KWKH at Shreveport, La. That is the station whose owner is always in a fighting mood and ready to jump anybody, anywhere, any time. The prisoners say: "We love a fighter and that guy Henderson is sure a champ." Whenever we can get Shreveport, we never worry about what we are missing." Warden Thomas does not object to the men having their radio sets. He will tell you that they improve the morale of the men. "When they are listening in on their radio sets," said the Warden, "they are not hatching plots to escape or make trouble. And the worst punishment I can inflict upon an unruly prisoner is to take away his radio set."

"MARITANA," "Samson and Delilah," "Ivanhoe," "Le Roi la Dit," "Flying Dutchman," and "Jongleur de Notre Dame," are among the operas to be broadcast from the B.B.C. during the next twelve months.

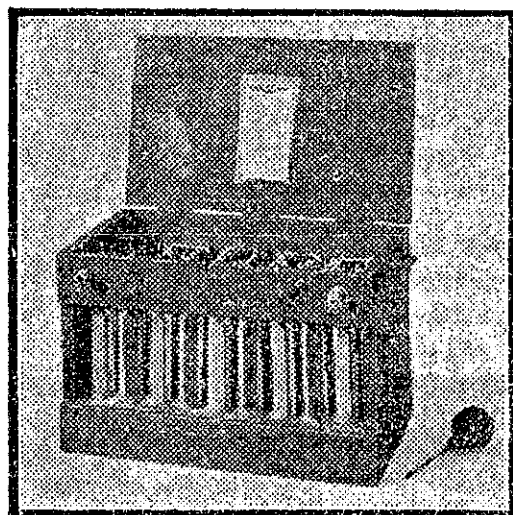
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The Woman's Point of View

By "Verity"

Annotations of Annabel

Books

The Art of Dressing.

DEAREST:

With Evangeline—looking her brightest best in cunningly-built suit of black cloth, and severe tan jumper blouse of sublime style, high-collared and immaculate—I visited the Wellington Winter Show. In passing, 'tis not hard to predict the popularity this season, for the business girl, of the plain coat and skirt of good quality and cut. Sensible, suitable, and smart, one welcomes its return to favour.

THOUGH guiltless of brag, yet am I second to none in appreciation of the Dominion's prowess in production and manufacture. Industry and enterprise are illustrated wisely and well in many wonderful exhibits to be seen in the new Show Building, whither daily and nightly hasten a happy band of pilgrims questing the fun of the fair.

EVANGELINE is building a cottage—an anti-matrimonial one, be it said, as she scorns the way of a man with a maid—a fascinating equivalent to the once existent "but and a ben." Just three rooms in a small, quiet street, boasting most modern bath-room, quaint cupboard and shelves, with labour-saving inventions that shun laborious days. Nearing completion, furniture is, literally, on the tapis; and Evangeline wrestles with the problem with customary competence, excellent taste, and the not despicable funds at her command.

SO that she was moved to admiration of an exhibit exploiting the loveliness of our native woods, heart of kauri and New Zealand birch, cleverly treated, polished, and fashioned into bedroom furniture of the most beguiling. Clever designing was obvious in this suite, which included the most fascinating of dressing-tables, glass-topped, of elegant fashioning—long triple mirror a miracle of convenience and elegance, with no visible framing, but mysteriously screwed into three sheets of gleaming, lovely utility, of infinite appeal to the female of the species. Fain would I acquire it before it is borne off to its long home by someone backed by the power of the almighty dollar.

WE lingered also at striking exhibit of a well-known manufacturer, surely the last word of comfort in chesterfield and chair, and extraordinarily dignified in skilful upholstery of gold and black brocade. Hartpen floor covering was of putty hue, discreetly limited in decoration, with lampshades of the right rich glow; modish cushions seductively inviting

in golden satin; while the walls boasted excellent prints of rooms in Buckingham Palace, imparting aristocratic atmosphere to a delightful scheme of colour and comfort.

DENTAL, Nursing, Tourist and other exhibitions of Governmental activities are extremely cleverly organised and displayed; and much admired was an attractive oasis setting forth the delights of the mountains as holiday resort; complete with skis, big boots to climb, alpenstocks, a lovely lady in dashing, non-utilitarian sporting kit, and a photograph of the Hermitage, from which one turned with a sudden sigh of longing for remembered evening glow on Mount Cook, blue loveliness of some sweet, small lake amidst the hills of our desire, and cosmopolitan camaraderie of mountaineers and others who await return of the travellers with ower true tales.

WE noticed that good causes of Red Cross and Free Ambulance found capable exposition, as, bearing leaflets by the score, regretfully we looked our last on the intriguing throng. In slow passage towards the exit, we added to our store another word in season, in the shape of a recipe-book of wit and originality, extolling the Merit of Mustard; which also is the laudable purpose of an amusing stall, yclept the Mustard Club, where, by way of decoy ducks, are exhibited presentments of the best-beloveds of respective political parties. There, right debonair, smiles the Prime Minister, with, as body-guard, salubrious Mr. Sidey, reminiscent of long summer days; while the second from the left, shedding all malice and unkindness, is a prominent Labourite who broadly beams upon an admiring world. They are all devotees, one gathers, of that condition without which British beef loses its savour; a fiery but innocuous taste, and one in which I entirely concur.

PARTISAN of measures, not men, one realises with detachment that titanic struggle of Olympians is at hand, the thrills and throes of divergent parties already making themselves felt; all rendered the more interesting by reappearance of our own Sir Joseph in the role of leader, refulgent glow of Liberal limelight upon his manly brow. Meantime there is much speculation and many dark doubts; but the end of the matter cannot be guessed till the numbers go up; and anyhow everyone can't win in the political game, or any other, as we all know to our cost.

Your

ANNABEL LEE.

DAUGHTERS OF INDIA.

"LO, the poor Indian" has been the theme for many writers in recent years. Comparatively lately Mr. E. M. Forster, in his brilliant "Passage to India," achieved extraordinarily lucid delineation of the creeds and castes of this elusive people; while we are still aware of the storm of protest that greeted the revelations of American Miss Mayo, who, with courage of conviction, raised the curtain of ignorance and indifference in her uncompromising portrayal of the cruelty and horror of the gorgeous and gruesome land.

In "Daughters of India" Miss Wilson has undertaken a "large order," in the vernacular of the man in the street; for it would appear a superhuman task truthfully to describe but one small facet of the conglomerate life of teeming millions of that Dark Land, with its menace and magnificence, its pomp and pageant, festering corruption and tortuous travellings of the soul.

Full of interest is this story of an American woman missionary, aided in her good work by a few white colleagues and a handful of saintly, selfless native recruits; who endeavour to make contact with and help in some small measure the poor, the halt and the blind, by bringing a modicum of physical and spiritual hope and healing into the lives of the corrupt, the down-trodden and despised. A groping, bewildering crusade at its best; for they are kittle cattle to handle, queer fish, these Indians of all kinds and conditions; the whole effort calculated to bring despair to all save the stoutest-hearted spreader of the Gospel of Christ.

"How could He come to a land like this?" in bitter discouragement cries a noble old native woman worker in the spiritual vineyard. "Could He come as a Hindu, so that the Moslems would despise Him? Or as a native Christian, so that they both would spit on Him? Or a Jew, so that the three would crucify Him? Or an Englishman, so that everybody could revile Him altogether?"

Of intriguing simplicity of narration, we get an impression from Miss Wilson's book of an unexaggerated statement of fact, and attention is enchaind by what is apparently a plain tale of day-by-day existence in a foreign country, the insistent quest of the Grail, and a striving to plant in barren ground some flowering seed of truth and beauty. Elusive beyond Western understanding is the sliding, slipping mind of the dark and hopeless Indian outcast, possessing no glimmer of equity or straight dealing; suspicious, dirty, the scum of the earth, yet here and there with some saving quality of generous grace.

THE business of dressing well and cleverly is worth while from all points of view. It saves women from many a minor sin. It teaches them to know themselves, to spend their money more wisely than they would if they dressed in ignorance, to avoid all slackness, sloth, self-indulgence, those ugly little sins of middle age.

The moment a woman begins to lose interest in her appearance she should pull herself together by remembering that she is a part of the stage scene of life, and has her little part to play. In youth a little carelessness in dress may be admitted; in maturity and declining years, no.

The middle-aged woman has to bring all her wits to bear on that question of clothes if she would remain pleasing to the eye, as, indeed, it is her duty to do. It can be done, and no one helps more towards making it easy than the clever dress designers, who know from experience that it is not only a pretty face and youth which carry clothes well, but experience in life and its lessons, and character formed by the use of brains and heart.

The Real Sex Problem.

*Should women have careers?
Why not, the pretty dears?
Could we endure their tears
Did we refuse them?
Nay, they must all be free,
Though of frivolity,
Aye, and inconstancy,
Cynics accuse them.*

*Some our best sellers are,
Fame as a movie star;
Or at the (legal) Bar
Nobody grudges.
And when the years have rolled
On for a bit, I'm told,
We may at length behold
Feminine Judges.*

*Yet each material care
Makes it more hard to share
Triumphs by land or air
Still with their brothers.
Yes, there's one fact to face
Since in a little space
There'll be no human race
If we've no mothers.*

"For ways that are dark and tricks that are vain," as Bret Harte once said of an equally wily nation, one looks to the Dark Land of India; but, whatever the personal point of view, we pay homage to the Christ-like spirit of those who walk in poverty for sweet Charity's sake, although it may be we close the book with an unregenerate sigh of satisfaction that our individual lot is cast in a more pleasant place.—R.U.R.

Features of Next Week's Programmes

1YA Features

THE concert by the Auckland Municipal Band on Wednesday evening will be broadcast by 1YA, following which there will be a brief studio concert. The contributing artists will be Miss C. Ormiston and Mr. S. Pritchard. There will also be some choice gramophone records, which will include items by M. J. Gunsky, a famous whispering tenor.

"The Song of the Bow," which will be sung by Mr. D. Black on Thursday evening, is an old marching song of the English archers who fought in the French war at the time of Cressy and Poitiers. Another of Mr. Black's songs will be "Turn Ye to Me."

A fantasy in one act, "Hearts to Mend," will be performed by Mrs. Zoe Bartley-Baxter and her party of players on Thursday evening. This item will occupy some twenty minutes, and should be one of the most outstanding features of the evening.

THE vocal portion of Thursday's musical programme is in the hands of the Clarion Quartet—Miss Alma McGruer, Miss B. Smyth, Mr. J. Simpson, and Mr. D. Black—a very popular combination. Instrumental items will be contributed by the Auckland Trio and by electrically reproduced records. Included among the latter will be "London and Daventry Calling," a band novelty by the Savoy Orpheans.

"A Pack of Cards" and a humorous sketch, "The Collaborateurs," will be given by Mr. J. F. Montague on Friday evening.

A SPLENDID programme has been arranged for Friday evening, the vocalists who are contributing to the musical portion of the programme being the St. Andrew's Quartet. On this night, too, the orchestra is appearing again. There will also be a number of gramophone records.

TO the week-end programme arranged for Saturday evening, Mr. Fred Barker will contribute a number of elocutionary items in which humour will predominate. The vocalists will be Mr. L. Kernot (bass) and Mr. H. Warburton (baritone). Instrumental music will be supplied by the Auckland Trio, and by some electrically reproduced gramophone records, these latter comprising Hawaiian music, items by Wuritzer organ, and orchestral novelties. A dance music session will follow till 11 p.m.

Items from 2YA

A FURTHER radio programme from the Ariel Singers for next Monday includes more of that type of popular and classical number usually presented by these performers. "Sol-veig's Songs" (Grieg) and "Softly Awakes My Heart" (from Saint Saen's "Samson and Delilah"), two charming old madrigals by Thomas Morley, Charles Willeby's "Fortune

Hunter," and more of the "Hebridean Folksongs" arranged by Mrs. Kennedy Fraser, go to make up an excellent evening's vocal entertainment. Mr. Stanley A. Warwick will be heard in popular elocutionary numbers; Mr. Ernest Short will contribute acceptably to the vocal side of the programme; and Miss Judith Giesen will entertain with pianoforte selections.

THAT capable combination, the Orpheus Quartet, have provided an attractive vocal programme for Octo-



MISS HILDA HUTT.

Soprano of the Dulcet Quartet, of 3YA.

ber 2. Miss Lily Mackie will sing two solos, "Sunshine and Rain" and "Hard Times," with harmonised chorus. The tenor solo, for which, of course, Mr. Arthur Coe will be responsible, will be "Like Stars Above," while Mrs. Alice Harris will be heard in "Lullaby," by Brahms. The baritone solos will be "Sylvia" and "The Carpet." A concerted number from "Merrie England" ("Long Live Elizabeth") will also be given. Mr. Doug. Stark, who appears to possess an inexhaustible fund of Scottish humour, will be heard again. A feature of the evening will be the half-hour Columbia gramophone recital, presenting gems of the latest releases.

A WEALTH of beautiful solo items are to be presented by the Apollo Singers on October 5. Miss H. Chudley's fine contralto voice will be heard in three numbers, "To Music," "Caro Mio," and "Swan Song," a trio of pleasing variety for a voice of such quality and wide range. "E'en the Bravest Heart," a well-known operatic song from "Faust," and "The Snowy Breasted Pearl," by J. Robinson, a melodious Irish song, will afford Mr. S. E. Rodger full scope for his well-trained baritone voice; while Mr. E. W. Robbins should certainly be heard to advantage in the tenor numbers "All Hail Thou Dwell-

ing," a fine, well-known song from "Faust," and "Onaway, Awake Beloved." Supplementing the Apollo Singers will be Miss Amy Eaton, late of Wanganui, whose delightful soprano voice has captivated the hearts of listeners. Mr. Barton Ginger is to contribute specially-selected recitations, and Miss Catherine Moncrieff, L.A.B., is scheduled for pianoforte selections.

ON Saturday, October 6, the Melodie Four will provide the major portion of the vocal items at 2YA. The concerted items to be presented are "The Dear Little Shamrock," a harmonious arrangement of the well-known Irish song; "Peter the Cat," a little bit of nonsense telling of the exploits and paradoxical behaviour of a household pet; and "Riding on a Dream Train." The last-mentioned is a four-part arrangement of a modern light song, and contains quite a lot of original effects. The solo items chosen are of a varied nature, and include "The Longshoreman," "An Evening Song," "Sleepy Hollow Tune," "A String of Pearls," and "I Know of Two Bright Eyes." There should be much in this programme to please listeners-in of all tastes. The humorous element will be provided by Mr. George Titchener.

At 7.40 p.m. Dr. I. L. G. Sutherland, of Victoria University, representing the N.Z.E.A., will deliver a lecture on "Laughter."

Melodie Four on Sunday.

FOR some time past listeners to 2YA on Saturday nights have enjoyed the programmes presented by the Melodie Four, and on Sunday, September 30, this combination of singers will be heard at 2YA, when it will present items of more or less sacred nature. Several fine concerted numbers have been selected as well as suitable solo items, which should prove popular. With the Melodie Four will be associated Mr. Norman Izett, at the piano; Miss Gwen Shepherd, in elocutionary numbers; and Miss Lilla Hill and Mr. W. Smallbone, a talented 'cello duo.

3YA Features

ON Sunday afternoon a portion of 3YA's session will consist of an organ recital by Mr. T. Vernon Griffiths, M.A., Mus.Bac., Cantab., organist at St. Michael's Anglican Church. In the evening the service from this church will be broadcast. The preacher will be the Rev. Chas. Perry.

Derry's Military Band, under the baton of Mr. J. Scott, the new conductor, will appear again on Monday evening. Among the many popular pieces to be played will be Scott's and Irish airs. Two marches will be included and "Ramona" will be played.



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MAKING his first appearance in radio on Monday evening will be Mr. Simon MacDonald, a well-known reciter, especially of Scottish compositions. One of his items will be "Donald MacLeod," by an anonymous writer, first published by Charles Dickens when he was editor of the magazine "All the Year Round." "Why Doherty Died," the work of the Australian writer, Spencer, will be Mr. MacDonald's second item.

Popular vocalists will sing for 3YA on Monday. Miss Hilda Hutt will be heard in "The Blackbird's Song," Miss Mary Taylor in "Danny Boy," Mr. T. G. Rogers in "Myfanwy," and Mr. J. Francis Jones in "'Neath the Rolling Tide," as well as in other solos and duets.

"The Nightingale of Lincoln's Inn" and "The Toreador" will be sung by Mr. A. G. Thompson on Wednesday during the course of the miscellaneous programme to be presented that evening. Miss Nellie Lowe will sing "Fair House of Joy" and "Annie Laurie" (the latter being Liza Lehmann's setting).

Two other popular singers on Wednesday evening will be Mrs. G. L. Bull (mezzo-soprano), and Mr. Geo. Fawcett (tenor). To one of Mrs. Bull's solos Miss Irene Morris will play a violin obbligato.

Mr. Harry Instone, humorous reciter, has another of his own compositions for Wednesday evening. He has entitled it "The Blunderer." Other of his pieces will be "Antonio Beppo" (in Italian dialect), and "The Groom's Story," by Conan Doyle.

Quite a number of specially chosen gramophone records will be electrically reproduced during Wednesday evening's entertainment.

THE entertainment to be presented on Thursday evening will be of a miscellaneous character. The vocalists will be Madame Gower-Burns, Mrs. Ann Harper, Mr. Harold Prescott, and Mr. Clive Hindle. The vocal items will comprise solos, duets, and quartets. Recitations will be given by Miss Mavis Ritchie.

Included among the records to be electrically reproduced on Thursday evening will be "The Death of Don Quixote," as sung by Chaliapin, Massenet, the composer, has treated in a very graphic manner the death of the famous visionary who never took seriously anything else in life.

"**THE** Little Sunbonnet," a pretty song cycle by Lohr, will be sung by the Melodious Four on Friday evening. Supporting the song cycle will be a miscellaneous programme of a very entertaining nature. Elocutionary items to be given by Mr. J. J. Flewellyn will be "The New Food" (by Stephen Leacock), and "The Scene-Shifters' Story."

The gramophone records to be broadcast on Friday evening will include "London and Daventry Calling."

On Saturday evening 3YA will rebroadcast the whole evening's programme at 2YA.

4YA Items

AN entertaining studio concert will be presented by 4YA on Tuesday evening. Miss Wyn McPeak (con-



MRS. G. L. BULL, Mezzo-Soprano, who is singing at 3YA on Wednesday evening. She has been very successful in competitions.

tralto) will be heard in Johnson's "Farewell to Summer" and other numbers. Mr. R. B. McDonald (baritone) will sing "The Adjutant" and "Harlequin." The popular bass, Mr. E. G. Bond, will sing "Shipmates o' Mine" and "Friend." Elocutionary numbers will be rendered by Miss Nancy Ayson. Instrumental music will be provided by Mr. R. B. Hall (trombone), Miss Eva Judd (violin) and Mr. Maurice Bleakly (flute).

Pastor W. D. More will entertain with the second of his series of popular ghost stories on Tuesday evening. "Ghosts that Haunt Famous Palaces" will be the subject of this address.

A MERRY and bright programme will be heard from 4YA on Wednesday night. Miss Jacqueline Burke will sing some popular fox-trot songs. Songs at the piano to be given by Miss Eileen Cooper will include "When We've Company at Our House" and "House Hunting." Mr. Buster Brown, the Scottish comedian, will sing "When I Get Back to Bonnie Scotland," "The Bounding Bouncer" (both by Harry Lauder) and "Bonnie Mary o' Glen-garry" (by Scott). Mr. Billy Gay will feature some of the latest popular hits: "She's Just What the Doctor Ordered," "My Blue Ridge Mountain Home" and "Moonbeam, Kiss Her for

Me." Novelty piano solos will be rendered by Mr. T. V. Anson and marimba solos of the popular hit type will be given by Mr. Hugh Dalziel. Messrs. Maitland and Tyrie, exponents of the Hawaiian guitar, will render duets. Miss Anita Winkel and Major F. H. Lampen will again be at the microphone in some of their inimitable humorous sketches.

Miss Dorothy Skinner (contralto) and Mr. Neil Black (bass) will be the soloists for the studio portion of Friday's programme. Some instrumental music will be provided by Mrs. Ernest Drake (studio-pianiste), Mr. Chas. E. Gibbons (flautist) and Mr. D. J. Robertson (cornetist). From 9 p.m. until 10 p.m. the usual weekly dance broadcast will take place.

A high class programme will be presented on Saturday evening. Miss Agnes Guy (mezzo-soprano) will sing three modern ballads, Miss Irene Hornblow, L.R.A.M. (contralto) will sing classical songs, two of them being from the pen of Schubert. Mr. Arthur Lungley (baritone) will contribute the "Irish Emigrant" and "Eileen Alanah." The old favourite, "Asleep in the Deep," is among the numbers chosen by Mr. J. Ferguson (bass). Instrumental music will be played by Mr. Harold Riddle (violinist), Mr. P. J. Palmer ('cellist) and Mrs. Ernest Drake (studio pianiste), and each one of these will contribute instrumental solos. Elocutionary items will be given by Miss Molly Gallagher, F.T.C.I.

Four Thousand Names

THERE was great excitement in one little heart in Whangarei, when Ethel Andrews, Raumanga Road, Whangarei, found that hers was the 4000th name to be put in the Radio Family's large Birthday book at 1YA. The Bayfield Choir gave Ethel three rousing cheers and sang "For She's a Jolly Good Fellow," so it will probably be a long time before Ethel forgets her eleventh birthday.

A New South Wales correspondent, after referring to various items broadcast from 2YA one evening, says: The orchestra is at present playing "Maid of the East," and is equal in clarity to any of our inter-State stations, other than this State. I hope to hear many more 2YA programmes.

Giant Speaker.

THE question of radio music for theatres is one which has been before theatre managers for some time and has recently been solved by an American who has introduced a huge balsa wood loud-speaker. This monster, measuring 6ft. by 9ft., operates in a New York Theatre, where it successfully dispenses with an orchestra which was costing £175 a week to maintain.

The power amplifier in the circuit attached to this speaker, has a single stage of audio frequency equipped with two 250-watt transmitter valves. The plate circuit is supplied with current of a potential of 1500 volts.

The speaker can be placed in the orchestra pit or can be mounted on a special drop curtain. It can be operated by being tuned in to wireless signals, or from a gramophone pick-up.

A BLENHHEIM listener writes: "Allow us to congratulate you on the excellent broadcast from 2MB, Sydney. We enjoyed the novelty very much indeed, and though conditions did not permit full continuity it was nevertheless very noteworthy. It may interest you to know that I operated eight pairs of 'phones from an ordinary crystal at full 'phone strength, and I consider that 20 pairs could have been operated at good 'phone strength from your relay when at its full power. When you come to consider it, this is remarkable."

Too Well Named

The following is a copy of a letter received by Uncle George:—Dear Uncle George,—Perhaps you will remember I asked you for two names for my fantail pigeons, and you gave me "Fleet" and "Flit." Well, I have told you already about losing them, now I have two white rabbits and hope you will give me names for them but please give names that will keep them here. I don't want them to go away.—Your loving niece, Edna Bull.

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Full Programmes for Next

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Sunday, September 30

1YA, AUCKLAND (333 METRES)—SUNDAY, SEPTEMBER 30.

- 3 p.m.: Afternoon session—selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Selected studio items.
 4.30: Close down.
 6.0: Children's song service conducted by Uncle Leo, assisted by Cousins from the Mount Albert Baptist Sunday School.
 6.55: Relay of service from Unitarian Church—Preacher: Rev. Albert Thornhill.
 8.30: Relay of Auckland Municipal Band Concert—Conductor: Mr. Christopher Smith, "Military Band Selections."
 9.30: God Save the King.

2YA, WELLINGTON (420 METRES)—SUNDAY, SEPTEMBER 30.

- 3 p.m.: Afternoon session—selected studio items.
 4.30: Close down.
 6.0: Children's Sunday Service conducted by Uncle Ernest, assisted by Brooklyn Methodist Sunday School choir.
 7.0: Relay of evening service from St. Andrew's Presbyterian Church—Preacher, Rev. R. J. Howie, B.A.; organist and choirmaster, Mr. Frank Thomas.
 8.15 (approx.): Studio concert—Overture—"Egmont" (Beethoven); vocal quartet—Melodie Four, "Integer Vitae" (Fleming); tenor solo—Mr. Sam Duncan "Consider the Lilies" (Gaul); cello duo—Miss Lilla Hill and Mr. W. Smallbone, "Nocturne" (La Boccetta); musical monologue—Miss Gwen Shepherd, "The Lesson of the Water Mill" (Andrews); bass solo—Mr. W. W. Marshall, "King of the Vasty Deep" (Withers); pianoforte solos—Mr. Norman Izett, (a) "Impromptu in A Flat" (Chopin), (b) "Prelude" (Debussy); vocal quartet—Melodie Four, "Hark, Hark, My Soul"; string quartet—"Andante Cantabile," quartet in D (Tschalkowsky); baritone solo—Mr. R. S. Allwright, "The Lord is My Light" (Allitsen); organ solos—(a) "Marche Pontificale" (Widor), (b) "Prayer and Cradle Song" (Guilmant); tenor solo—Mr. Frank Bryant, "Be Thou Faithful Unto Death" (from "St. Paul") (Mendelssohn); musical monologue—Miss Gwen Shepherd, "What is a Gentleman?" (Andrews); vocal quartet—Melodie Four, "The Long Day Closes" (Sullivan); band selection—"The Shamrock" (arrgd. Myddleton); close down.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, SEPTEMBER 30.

- 3 p.m.: Studio recital of electrically-reproduced gramophone records.
 3.30: Organ recital by Mr. T. Vernon Griffiths, M.A., Mus. Bac., on the organ of St. Michael's Anglican Church.
 3.45: Studio recital of gramophone records.
 4.0: Continuation of organ recital by Mr. Vernon Griffiths.
 4.15: Studio recital.
 4.30: Close down.
 5.30: Children's song service conducted by Uncle David, with special records chosen for the children's hour—duet, "I Waited for the Lord"; solo, "O For the Wing of a Dove"; hymns, "Abide With Me," "Nearer My God to Thee," and "O God Our Help in Ages Past."
 6.30: Studio recital.
 7.0: Relay of evening service from St. Michael's and All Angels' Anglican Church—Preacher, Rev. Chas. Perry; organist and choirmaster, Mr. T. Vernon Griffiths, M.A., Mus. Bac.
 8.15 (approx.): Studio recital.
 9.30: God Save the King.

4YA DUNEDIN (463 METRES), SUNDAY, SEPTEMBER 30.

- 5.30: Children's song service, conducted by Big Brother Bill, assisted by scholars from Dundas Street Methodist Sunday School.
 6.30: Relay of service from the Methodist Central Mission—Preacher, Rev. W. Walker. Organist, Mr. Chas. A. Martin.
 8.0: Studio concert.
 9.15: Close down.

Monday, October 1

1YA, AUCKLAND (333 METRES)—MONDAY, OCTOBER 1.

SILENT DAY.

2YA, WELLINGTON (420 METRES)—MONDAY, OCTOBER 1.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sporting results to hand.
 5.0: Close down.
 6.0: Children's hour.
 7.0: News session, market reports, and sports results.
 7.25: Lecturette—Miss M. S. Christmas, "Dogs, and How to Show Them."
 7.40: Lecturette—Mr. R. Lindsay Robb (Imperial Chemical Industries, London), "Making the Most of our Grass Lands."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—The Orchestra, "Marche Militaire" (Schubert).
 8.5: Vocal chorus—Chorus and London Symphony Orchestra, "A Breath of Our Inspiration," from "The Merry-makers" (Elgar). H.M.V. record, D1349.
 8.9: Elocution—Mr. A. Stanley Warwick, "The Salesman" (Thomas).
 8.15: Pianoforte solos—Miss Judith Giesen, (a) "G Minor Ballade" (Chopin); (b) "F Minor Prelude" (Pachulski).
 8.23: Soprano solos—Miss Jeanette Briggs, L.A.B., (a) "A Fairy's Love Song," from "Songs of the Hebrides" (arr. Kennedy-Fraser); (b) "Solveig's Song" (Grieg).
 8.30: Instrumental—The Orchestra, "Coppelia Ballet" (Delibes); (a) "Slavonic Theme with Variations"; (b) "Festival Dance and Waltz of the Hours"; (c) "Nocturno"; (d) "Automaton Music and Waltz."
 8.46: Baritone solos—Mr. Ernest Short, (a) "The Pauper's Drive" (Homer); (b) "Friends Again" (Lyall Phillips); (c) "When Song is Sweet" (Sans-Souci).
 8.56: Instrumental—The Orchestra, repeat number.
 9.2: Weather report and announcements.
 9.3: Vocal chorus—Chorus and London Symphony Orchestra, "We Are the Musicians," from "The Musicians" (Elgar). H.M.V. record, D1349.
 9.7: Instrumental—The Orchestra, (a) "Prize Song" (Wagner); (b) "Valse Caprice" (Rubenstein).
 9.15: Mezzo-contralto solo—Miss Ngairi Coster, "Softly Awakes My Heart" (Saint-Saens).
 9.19: Tenor solo—Mr. Roy Hill, "An Island Shieling Song," from "Songs of the Hebrides" (arr. Kennedy-Fraser).
 9.23: Elocution—Mr. A. Stanley Warwick, (a) "A Lament" (Gordon); (b) "The Duet" (Wilcox).
 9.29: Song cycle—The Orchestra, "In a Persian Garden" (Lehmann).
 9.39: Bass solo—Mr. J. M. Caldwell, "The Fortune Hunter" (Willoughby).
 9.43: Organ solo—Edwin H. Lemare, "Aloha Oe" (Lilukalano), Zonophone record, EE93.

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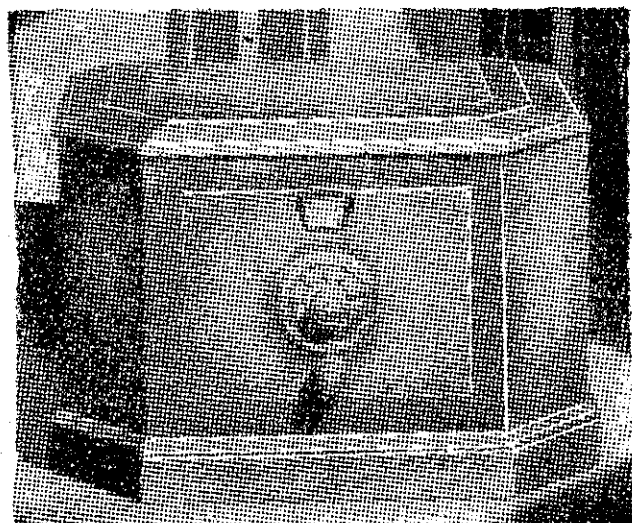
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- 9.47: Madrigals—Ariel Singers, (a) "April is in My Mistress's Face" (Morley); (b) "Now is the Month of Maying" (Morley).
9.54: Instrumental—The Orchestra. "Hungarian Rhapsody" (Liszt).
10.0: God Save the King.

3YA, CHRISTCHURCH (306 METRES)—MONDAY, OCTOBER 1.

- 3 p.m.: Afternoon session—Selected studio items.
6.0: Children's session
7.15: News session.
7.30: Talk on "Books." by Mr. E. J. Bell.
8.0: Chimes.
Studio concert by Derry's Military Band, under the conductorship of Mr. J. Scott, assisted by 3YA artists.
8.1: March—Band, "Independencia" (Hall).
Minuet—Band, "Minuet in G" (Beethoven).
8.11: Baritone solo—Mr. J. Francis Jones, "Neath the Rolling Tide" (Jude).
Soprano solo—Miss Hilda Hutt, "The Blackbird's Song" (Scott).
8.19: Selection—Band, "Reminiscences of Ireland" (Godfrey).
8.30: Whispering tenor, with violin, 'cello, and piano—M. J. Gunsby, "Consolation" (Gunsby-Kahn), Zonophone record, EE22.
8.33: Scottish recital—Mr. Simon MacDonald, "Donald McLeod," from "All the Year Round" (Anon).
8.38: Contralto solos—Miss Mary Taylor, (a) "The Coming of a Dream" (Knight); (b) "Danny Boy" (Weatherley).
8.44: Tenor solo—Mr. T. G. Rogers, "Myfanwy" (Davies).
8.48: Patrol—Band, "The Wee MacGregor" (Amers).
Idyll—Band, "Blumengefluster" (Blou).
8.58: Weather forecast.
9.0: Overture.
9.10: Soprano and tenor duet—Harmony Duo, "O Lovely Night" (Ronald).
Baritone solos—Mr. J. Francis Jones, (a) "The Last Muster" (Pontet); (b) "Dawn" (Somerset).
9.21: Whispering tenor, with violin, 'cello, and piano—M. J. Gunsby, "Take This Rose" (Gunsby-Kahn), Zonophone record, No. EE22.
9.25: Humoresque—Band, "Lightning Switch" (Alford).
9.33: Contralto solo—Miss Mary Taylor, "A Song of Thanksgiving" (Alitsen).
9.37: Australian sketch—Mr. Simon MacDonald, "Why Doherty Died," from "Budgerees Ballads" (Spencer).
9.42: Orchestral—Balalaika Orchestra, "Song of the Volga Boatmen" (Russian folk-song), H.M.V. record, EA48.
9.46: Tenor solo—Mr. T. G. Rogers, "The Dream" (Rubenstein).
9.54: Waltz—Band, "Ramona" (Wayne).
March—Band, "The Last Stand" (Myddleton).
God Save the King.

4YA, DUNEDIN (463 METRES), MONDAY, OCTOBER 1.

SILENT DAY.

Tuesday, October 2

1YA, AUCKLAND (333 METRES)—TUESDAY, OCTOBER 2.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.8: Further studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's hour—Uncle George.
7.15: News and market reports.
7.30: Book review
8.0: Chimes.
8.1: Overture The Orchestra, "Chal Romano" (Gipsy Lad), (Ketelby).
8.9: Baritone solo—Mr. W. Brough, "The Stock-rider's Song" (James).
8.13: Pipe organ, piano, and trombone, and harp—Shilkret's Rhythm Melodists, "When You're With Somebody Else" (Gilbert), H.M.V. record, EA 336.
8.17: Mezzo-soprano solo—Miss I. Rogers, "Pale Moon" (Logan).
8.20: Waltz—Royal Opera Orchestra, "Eugénie Onegin" (Tchaikowsky), H.M.V. record, C1281.
8.24: Tenor solo—Mr. A. Ripley, "Country Folk" (Brahe).
8.28: Song suite—The Orchestra, "Pagoda of Flowers" (Woodforde Finden).
8.36: Soprano solo—Miss M. Fair, "Kerry Dance" (Molloy).
8.40: Grand organ and cornet—R. Arnold Grier, "The Lost Chord" (Sullivan), Zonophone record, A309.
8.44: Baritone solo—Mr. Gibson-Blackie, "I Pitched My Lonely Caravan" (Coates).

- 8.47: Orchestral—Royal Albert Hall Orchestra, "Pomp and Circumstance" (Elgar), H.M.V. record D1102.
8.51: Lecture—Mr. A. B. Chappell, M.A., "Talk on Old New Zealand—Settlement of Wellington."
9.6: Weather forecast.
9.7: Wurlitzer organ—Reginald Foort, "By the Blue Hawaiian Waters" (Ketelby), H.M.V. record, C1459.
9.11: Violin solo—Miss J. Bosworth, (a) "Andante—Symphony Espagnole" (Lalo); (b) orchestra, "La Paloma" (Yradier).
9.19: Presentation of excerpts from "Les Cloches de Corneville" (Planquette), produced under the direction of Madame Irene Ainsley.

Cast:

- | | |
|------------------|--------------------|
| Germaine | Miss Marjorie Fair |
| Serpolette | Miss Irene Rogers |
| Jean | Mr. Arthur Ripley |
| Marquis | Mr. Walter Brough |
- Germaine—"I May Be Princess."
Jean—"On Billows Rocking."
Jean and Germaine—"Twas but an Impulse."
Germaine and chorus—"Legend of the Bells."
Marquis—"With Joy in My Heart."
Ensemble—"Such Conduct is Quite Sad."
Chorus of Servants.
Germaine and Marquis—"Tis She! Oh, Happy Fate."
Germaine and chorus—"The Cider Song."
Jean—"Waltz Song."
Germaine and Marquis—"My Lord, My Lord!"
Finale.
9.52: Selection—The Orchestra, "Popular Melodies" (Sullivan).
10.0: God Save the King.

2YA, WELLINGTON (420 METRES)—TUESDAY, OCTOBER 2.

- 3 p.m.: Chimes of the G.P.O. clock.
3.1: Selected gramophone items.
4.30 and 4.55: Sporting results to hand.
5.0: Close down.
6.0: Children's hour—Big Brother Jack.
7.0: News session, market reports, and sports results.
7.40: Lecturette by representative of the Agricultural Department, "For the Man on the Land."
8.0: Chimes of the G.P.O. clock.
8.1: March—The Orchestra, "Entry of the Gladiators" (Fucik).
8.5: Light opera company, "Gems from Countess Maritza" (Smith Kalman), H.M.V. record EB11.
8.9: Quartet—The Orpheus Quartet, "Long Live Elizabeth" (German).
8.13: Tenor solo—Mr. Arthur Coe, "Like Stars Above" (Squire).
8.17: Instrumental—Kirilloff's Balalaika Orchestra, "Shining Moon" (Russian folk song), H.M.V. record, EA48.
8.21: Humour—Mr. Doug. Stark, "The Gladiator" (Hylton).
8.28: Baritone solos—Mr. Len. Barnes, (a) "Sylvia" (Speaks); (b) "The Carpet" (Sanderson).
8.36: Instrumental—The Orchestra, repeat item.
8.44: Soprano solo—Mrs. Alice Harris, "Lullaby" (Brahms).
8.47: Contralto solo and quartet—Miss Lily Mackie and Orpheus Quartet, "Hard Times" (traditional).
8.51: Song suite—The Orchestra, "Haydn Wood's Songs."
9.1: Novelty—Savoy Orpheans, "London and Daventry Calling," H.M.V. record, C1251.
9.5: Weather report and announcements.
9.6: Light opera company, "Gems from the Blue Mazurka" (Lehar), H.M.V. record, EB11.

That Smile of
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- 9.10: Pianoforte solo—Miss Catherine Moncrieff, "Scherzo in C Sharp Minor" (Chopin).
 9.18: Humour—Mr. Doug. Stark, "Musical Speeches" (Cecil).
 9.25: Contralto solo—Miss Lily Mackie, "Sunshine and Rain" (Blumenthal).
 9.29: Instrumental—The Orchestra, (a) "In a Persian Market" (Ketelby); (b) "Weeping Willow Lane" (Johnson).
 9.39: Brunswick gramophone recital:
 Fox-trots—The Varsity Four, (a) "Snowflakes," record 3918; (b) "Rag Doll."
 Song with guitar and piano accompaniment—Nick Lucas, (a) "Sunshine"; (b) "I Still Love You," record 3850.
 Instrumental—Minneapolis Symphony Orchestra, (a) "Waiata Poi" (Hill); (b) "Melodrama," from "Piccolino" (Guiraud), record 15117.
 Waltzes, with vocal choruses—Regent Club Orchestra, (a) "Together"; (b) "When Love Comes Stealing," record 3824.
 Song, with orchestral accompaniment—Harry Richman, (a) "Laugh, Clown, Laugh"; (b) "I Just Roll Along," record 3889.
 Fox-trots—The Colonial Club Orchestra, (a) "Beautiful"; (b) "I'll Think of You," record 3838.
 Tenor solo, with orchestral accompaniment—Frank Munn, (a) "That Wonderful Mother of Mine"; (b) "Dear Little Mother o' Mine," record 3881.
 God Save the King.

3YA, CHRISTCHURCH (306 METRES)—TUESDAY, OCTOBER 2.

SILENT DAY.

4YA, DUNEDIN (463 METRES)—TUESDAY, OCTOBER 2.

- 3 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.0: An art needlework talk by Miss Marguerite Puechegud, under the auspices of the King Edward Technical College.
 4.15: Selected gramophone items.
 4.25: Sporting results.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's hour, conducted by Big Brother Bill.
 7.15: News and reports session.
 8.0: Town Hall chimes.
 8.1: Orchestral selections—Philadelphia Symphony Orchestra, (a) "Dance of Death" (Saint-Saens); (b) "Dance Macabre, Op. 40," H.M.V. record D1121.
 8.9: Baritone solos—Mr. R. B. Macdonald, (a) "The Adjutant" (Fisher); (b) "Harlequin" (Sanderson).
 8.15: Violin solo—Miss Eva Judd, "Thais-Meditation" (Massenet).
 8.19: Contralto solo—Miss Wyn McPeak, "Farewell to Summer" (Johnson).
 8.22: Grand organ and cornet solo—R. Arnold, "Softly Awakes My Heart," from "Samson and Delilah" (Saint-Saens), Zonophone record A309.
 8.26: Recitals—Miss Nancy Ayson, (a) "Pa's Harmonium" (Anon.); (b) "Foolish Questions" (Anon.).
 8.34: Tenor solos—Mr. Chas. Edwards, (a) "Values" (Vanderpool); (b) "She is Far from the Land" (Lambert).
 8.41: Trombone solo—Mr. R. B. Hall, "O Summer Night" (Donizetti).
 8.46: Humorous address—Pastor Will D. More, "Ghosts that Haunt Famous Houses."
 9.6: Weather forecast and announcements.
 9.8: Orchestral selection—Paul Whiteman and his Orchestra, "Rhapsody in Blue" (Gershwin, arr. Grofe), H.M.V. record, CK395.
 9.12: Bass solo—Mr. E. G. Bond, "Shipmates o' Mine" (Sanderson).
 9.15: Flute solos—Mr. Maurice Bleakly, (a) "Humoresque" (Hahocker); (b) "Anderlouse" (Pessard).
 9.22: Tenor and baritone duet—Messrs. C. Edward and R. B. Macdonald, selected.
 9.25: Violin solos—Miss Eva Judd, (a) "Shepherd's Dance" (German); (b) "Tempo di Minuetto" (arr. Kreisler).
 9.32: Contralto solos—Miss Wyn McPeak, (a) "Still as the Night" (Bohm); (b) "I'm Longing for the Spring" (Morris).
 9.37: Recital—Miss Nancy Ayson, "How to Write a Musical Monologue."

- 9.41: Bass solo—Theodor Chaliapin, "Death of Don Quixote" (Massene H.M.V. record, DB1096).
 9.49: Tenor solo—Mr. Chas. Edwards, "When Shadows Gather" (Marshall).
 9.52: Trombone solos—Mr. R. B. Hall, (a) "Lend Me Your Aid" (Gounod); (b) "Liebestraume" (Liszt).
 10.0: Bass solos—Mr. E. G. Bond, (a) "A Requiem" (Horne); (b) "Frieda" (Davies).
 10.6: Flute solo—Mr. Maurice Bleakly "Distant Voices" (Lemmone).
 10.11: God Save the King.

Wednesday, October 3

1YA, AUCKLAND (333 METRES)—WEDNESDAY, OCTOBER 3.

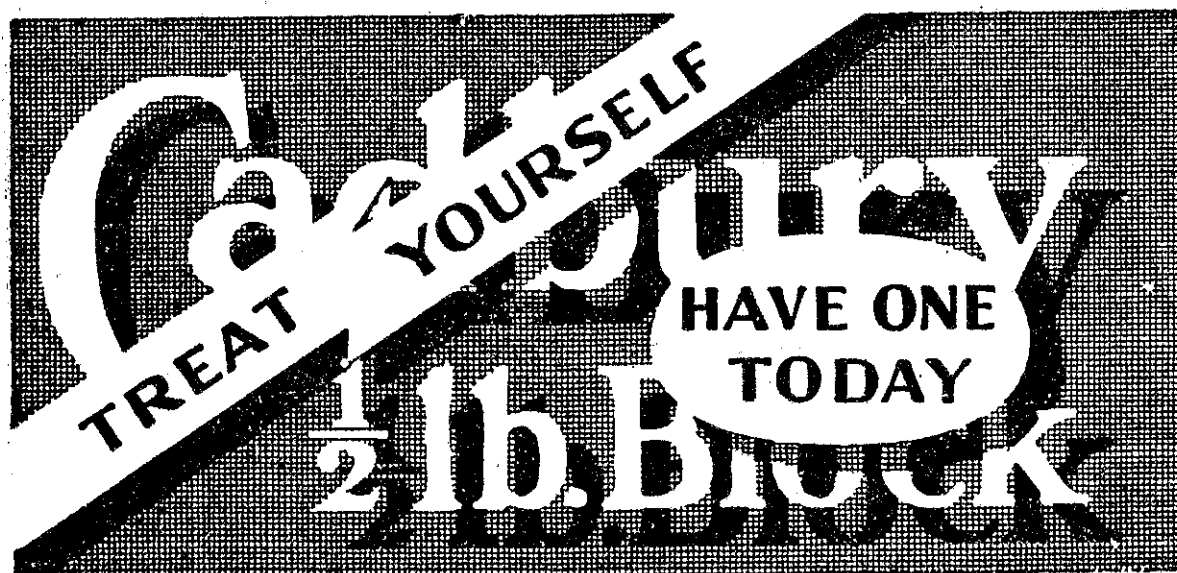
- 3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the announcer.
 4.8: Selected studio items.
 4.25: Sporting results.
 4.30: Close down.
 6.0: Children's hour, conducted by Uncle Tom.
 7.0: Close down.
 7.15: Lecturette—Gargoyle, "Motor-car Maintenance."
 7.30: News and market reports.
 7.45: Close down.
 8.0: Chimes.
 8.1: Relay of Auckland Municipal Band, from the Town Hall, under Bandmaster C. Smith, "Military Band" selection, to be followed by items from the studio:
 Baritone solos—Mr. S. Pritchard, (a) "Sea Fever" (Ireland); (b) "Song of the Clock" (Burchell).
 Soprano solo—Miss C. Ormiston, "To the Forest" (Tchaikowsky).
 Whispering Tenor, with violin, 'cello, and piano—M. J. Gunsby, "Consolation," Zonophone record, No. EE22 (comp. Gunsby, Kahn, Bories, de Rance).
 Orchestral selection—Kirilloff's Balalaika Orchestra, "Song of the Volga Boatmen" (Russian folk song), H.M.V. record, EA48.
 Baritone solo—Mr. S. Pritchard, "The Lord Is My Light" (Allitsen).
 Soprano solos—Miss C. Ormiston, (a) "Have You Seen but a White Lily Grow?" (Lehmann); (b) "Butterfly Wings" (Phillips).
 Whispering tenor—M. J. Gunsby, "Take this Rose," Zonophone record, No. EE22 (comprising Gunsby, Bories, Kahn, de Rance).
 10.0: God Save the King.

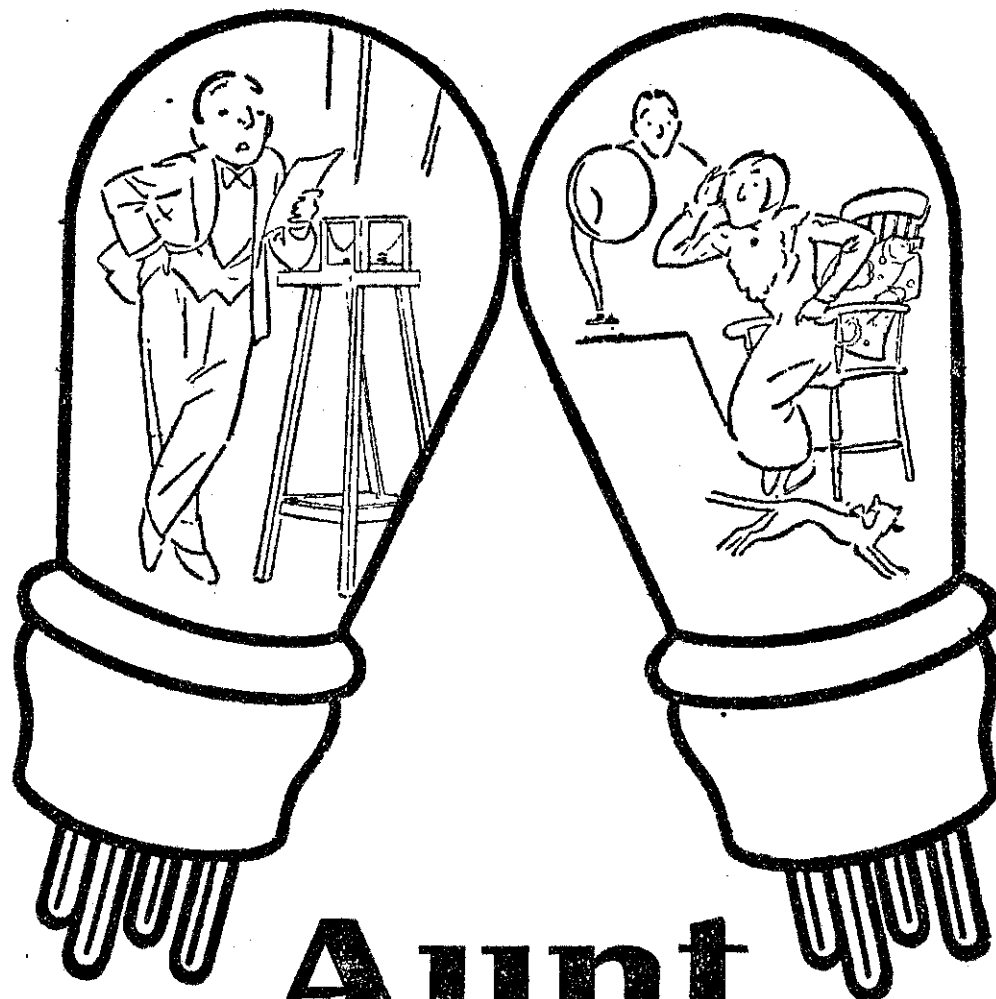
2YA, WELLINGTON (420 METRES)—WEDNESDAY, OCTOBER 3.

SILENT DAY.

3YA, CHRISTCHURCH (306 METRES)—WEDNESDAY, OCTOBER 3.

- 3 p.m.: Afternoon session—Selected studio items.
 6.0: Children's hour.
 7.15: Addington stock market reports.
 7.30: News session.
 8.0: Chimes.
 Relay from Strand Theatre String Quartet, under the conductorship of Mr. Harry Elwood.
 8.10: Baritone solo—Mr. A. G. Thompson, "The Nightingale of Lincoln's Inn" (Oliver).
 8.14: Grand organ and cornet solo—R. Arnold Grier, "The Lost Chord," Zonophone record, A309.
 8.18: Mezzo-soprano solos—Mrs. G. L. Bull, (a) "Waiata Maori" (Hill); (b) "I Know a Lovely Garden" (d'Hardelot).
 8.24: Instrumental trio—Christchurch Broadcasting Trio, "Allegretto and Moderato" (Gurlitt).
 8.32: Tenor solos—Mr. George Fawcett, (a) "The Glow-worm" (Eisdell); (b) "The Worm."
 8.36: Pianoforte solos—Miss Aileen Warren, (a) "Nocturne in Eb" (Chopin); (b) "Polka de la Reine" (Raff).
 8.43: Contralto solo—Miss Nellie Lowe, "Fair House of Joy" (Quilter).
 8.47: Pipe organ, piano, trombone, and harp—Shilkrit's Rhythm Melodists, "When You're With Somebody Else" (Gilbert-Baer), H.M.V. record EA336.
 8.51: Humorous recital—Mr. H. Instone, "The Groom's Story" (Conan Doyle).
 8.56: Orchestral—Royal Opera Orchestra, "Eugin Onegin Waltz" (Tchaikowsky), H.M.V. record, C1281.
 9.0: Weather forecast.
 9.2: Overture—New Light Symphony Orchestra, "Merry Wives of Windsor" (Nicolai), H.M.V., C1260.
 9.10: Baritone solo—Mr. A. G. Thompson, "Song of the Toreador," from "Carmen" (Bizet).
 9.14: Instrumental trio—Christchurch Broadcasting Trio, (a) "Serenade Les Millions d'Alequin" (Drigo); (b) "Bolero" (Arbos).
 9.22: Mezzo-soprano solo—Mrs. G. L. Bull, "A Summer Night," with violin obbligato by Miss Irene Morris (Thomas).
 9.26: Wurlitzer organ solo—Reginald Foort, "By the Blue Hawaiian Waters" (Ketelby), H.M.V., C1459.
 9.30: Tenor solos—Mr. George Fawcett, (a) "Late in the Night" (Cornelius); (b) "To the Night" (Franz).
 9.35: Orchestral—Royal Albert Hall Orchestra, "Pomp and Circumstance" (Elgar), H.M.V., D1102.
 9.39: Contralto solo—Miss Nellie Lowe, "Annie Laurie" (Lehmann).
 9.43: Humorous recitals—Mr. H. Instone, (a) "The Blunderer"; (b) "Antonio Beppo."





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WELLINGTON

9.49: Contralto and baritone duet—The Dulcet Duo, "Sincerity" (Clarke).
 9.53: Orchestral novelty—New Light Symphony Orchestra, "A Hunt in the Black Forest" (Volker), H.M.V., C1308.
 God Save the King.

4YA, DUNEDIN (463 METRES)—WEDNESDAY, OCTOBER 3.

7 p.m.: Town Hall chimes.
 7.1: Request gramophone concert.
 7.40: News session—Burnside stock sales report.
 8.0: Town Hall chimes.
 8.1: Orchestral selection—Victor Symphony Orchestra, "Dance of the Hours" (Ponchiello), Zonophone record, EF12.
 8.9: Jazz piano solo—Mr. T. V. Anson, selected.
 8.14: Popular song-hit—Miss Jacqueline Burke, "Ooh, Maybe It's You" (Berlin).
 8.17: Marimba solos—Mr. Hugh Dalziel, (a) "There's a Little White House" (Rose); (b) "Down Hawaii Way" (Heagney).
 8.23: Humorous Scotch songs—Mr. Buster Brown, (a) "When I Get Back to Bonnie Scotland" (Lauder); (b) "Bonnie Mary o' Glengarry" (Scott).
 8.30: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen, selected.
 8.35: Orchestral overture under the direction of Monsieur Henri de Rose (Mus.Bac.), relayed from the Octagon Theatre.
 8.45: Humorous song at the piano—Miss Eileen Cooper, "House Hunting" (Cecil).
 8.48: Novelty—Savoy Orpheans Band, "London and Daventry Calling" (in two parts), H.M.V. record, C1251.
 8.56: Hawaiian guitar duet—Messrs. Maitland and Tyrie, "Sweet Hawaiian Girl of Mine."
 8.59: Popular song-hits—Mr. Billy Gay, (a) "She's Just What the Doctor Ordered" (Rose); (b) "My Blue Ridge Mountain Home" (Robinson).
 9.5: Weather forecast and announcements.
 9.7: Xylophone solo—Sam. Herman, "Al Fresco," Zonophone record, EE53.
 9.11: Jazz piano solos—Mr. T. V. Anson, selected.
 9.16: Popular song-hits—Miss Jacqueline Burke, (a) "Southern Skies" (McLeod); (b) "Close in Your Arms" (Chamberlain).
 9.23: Marimba solo—Mr. Hugh Dalziel, "Tea Time, To-morrow" (Long).
 9.25: Humorous Scotch song—Mr. Buster Brown, "The Bounding Bounder" (Lauder).
 9.29: Balalaika orchestral selection—Kirilloff's Balalaika Orchestra, "Shining Moon" (Russian folk song), H.M.V. record, EA48.
 9.33: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen, selected.
 9.43: Humorous songs at the piano—Miss Eileen Cooper, (a) "When We're Having Company at Our House"; (b) "Ritchmetie."
 9.48: Hawaiian guitar duet—Messrs. Maitland and Tyrie, (a) "Dream Kisses"; (b) "Honolulu Rag."
 9.56: Popular song-hit—Mr. Billy Gay, "Moonbeam, Kiss Her for Me" (Woods).
 10.0: God Save the King.

Thursday, October 4

1YA, AUCKLAND (333 METRES)—THURSDAY, OCTOBER 4.

3 p.m.: Afternoon session—Selected studio items.
 3.30: Lecturette—Representative of Auckland Gas Company, "Gas Cooking."
 3.45: Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Selected studio items.
 4.25: Sporting results.
 4.30: Close down.
 6.0: Children's session conducted by Peter Pan.
 7.0: Close down.
 7.15: News and reports session.
 7.45: Close down.
 8.0: Chimes
 8.1: Orchestral selection—Victor Symphony Orchestra, "Dance of the Hours" (Ponchiello) (Zono. Record EF12).
 8.9: Vocal quartet—The Clarion Quartet, (a) Opening Chorus, (b) "Miss Brown" (Runyon).
 8.15: Instrumental trio—Auckland Trio, "First Movement Trio No. 10" (Haydn).
 8.25: Contralto solo—Miss B. Smyth, "Three Green Bonnets" (D'Hardelot).
 8.29: Band novelty—Savoy Orpheans Band, "London and Daventry Calling" (H.M.V. C1251, Pt. 1).
 8.33: Bass solo—Mr. D. Black, "Song of the Bow" (Aylward).
 8.37: Violin solo—Miss Ina Bosworth (selected).
 8.42: Vocal duet—Miss A. McGruer and Mr. J. Simpson, "The Day is Done" (Lohr).
 8.46: A fantasy in one act—Mrs. Zoe Bartley-Baxter and Company, "Hearts to Mend" (Overstreet).
 9.16: Evening weather forecast.
 9.18: Vocal quartet—Clarion Quartet, "First Day of Spring" (Mendelssohn).
 9.22: Xylophone solo—Sam Herman, "Al Fresco" (Zono. Record EE53).
 9.25: Tenor solos—Mr. J. Simpson, (a) "Sylvelin" (Sinding); (b) "I Be Hopin' You Remember" (Clarke).
 9.32: Instrumental trio—Auckland Trio, "Two Old French Dances" (Bombie).
 9.40: Vocal duet—Miss B. Smith and Mr. D. Black, "Turn Ye to Me" (arr. Newton).
 9.44: Band novelty—Savoy Orpheans Band, "London and Daventry Calling" (H.M.V. Record C1251, Part 2).
 9.48: Soprano solo—Miss Alma McGruer, "Chanson Hindoo" (Korsakov).
 9.52: Orchestral selection—Kirilloff's Balalaika Orchestra, "Shining Moon," Russian folksong (H.M.V. Record EA48).
 9.56: Vocal quartet—Clarion Quartet, "Even Song" (Leslie).
 10.0: God Save the King.

2YA, WELLINGTON (420 METRES)—THURSDAY, OCTOBER 4.

3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55 p.m. Sporting results to hand.
 5.0: Close down.
 6.0: Children's hour—Aunt Gwen.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Miss Margaret O'Connor, "Modern Dancing."
 8.0: Chimes of the G.P.O. clock.
 Studio concert by the Wellington City Salvation Army Band (conductor, Mr. B. J. Dutton), assisted by 2YA artists.
 8.1: March and selection—The Band, (a) "The Conflict" (arr. Coles); (b) "Songs of Britain" (arr. Marshall).
 8.17: Tenor solos—Mr. Charles Williams, selected.
 8.24: Quartet—The Lyric Quartet, "Spin, Spin" (Jungst).
 8.28: Brass quartet—Bandsmen N. Goffin, C. Jones, D. Geddes, and H. Goffin, "Crown Diamonds" (Auber).
 8.36: Bass solos—Mr. W. Binet Brown, (a) "Sea Fever" (Coningsby Clarke); (b) "Tally Ho" (Leoni).
 8.42: Humour—Mrs. M. A. Thomas, "The Telegram" (Clarence Rooke).
 8.47: Quartet—The Lyric Quartet, (a) "Doctor Foster" (Hughes); (b) "Humpty Dumpty" (Hughes).
 8.52: Hymns—The Band, (a) "Isle of Beauty"; (b) "Ellers."
 8.57: Whispering tenor, with 'cello and piano—Mr. M. J. Gunsky, "Consolation" (Zonophone Record EE22).
 9.1: Weather report and announcements.
 9.2: Lecturette—Mr. Johannes Andersen, "Native Birds."
 9.14: Selection—The Band, "Gems from 'The Messiah'" (Handel—arr. Hawkes).
 9.25: Duet—Messrs. Chas. Williams and Will Goudie, "Two Gendarmes" (Offenbach).
 9.28: Instrumental—Kirilloff's Balalaika Orchestra, "Song of the Volga Boatmen" (H.M.V. Record EA48).
 9.32: Humour—Mrs. M. A. Thomas, "Mr. Macshaughnassey's Recipe" (Jerome).
 9.34: Baritone solo—Mr. Will Goudie, "Even Bravest Heart" (Gounod).
 9.37: Brass quartet—Bandsmen N. Goffin, C. Jones, D. Geddes, and H. Goffin, "The Gondolier" (Schubert).
 9.41: Whispering tenor with 'cello and piano—Mr. M. J. Gunsky, "Take This Rose" (Zonophone Record, H.M.V. EA222).
 9.49: Quartet—The Lyric Quartet, "The Two Roses" (Werner).
 9.53: March—The Band, "Departed Heroes" (arr. Coles).
 10.0: God Save the King.

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3YA CHRISTCHURCH (306 METRES)—THURSDAY, OCTOBER 4.

- 3 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 6.0: Children's hour—Chuckie and Aunt Pat.
 7.15: News session.
 8.0: Chimes.
 8.1: Overture (rebroadcast from 2YA, Wellington, conditions permitting).
 8.6: Contralto solos—Mrs. Ann Harper, (a) "Daffodils Are Here" (Ronald); (b) "Heart of Spring" (Phillips).
 Tenor solo—Mr. Harold Prescott, "La Serenata" (Tosti).
 8.16: Cello solo—Mr. Harold Beck, "Berceuse" (Jarnefeldt).
 8.20: Soprano and baritone duet—Madame Gower-Burns and Mr. Clive Hindle, "Twilight" (Lehmann).
 8.24: Instrumental trio—Christchurch Broadcasting Trio, "Theme and Variations" (Beethoven).
 8.34: Soprano solo—Madame Gower-Burns, "Spring" (Henshell).
 Baritone solos—Mr. Clive Hindle, (a) "The Lute-Player" (Allitsen); (b) "The Showman" (James).
 8.44: Grand organ and cornet solo—R. Arnold Grier, "Softly Awakes My Heart," from "Samson and Delilah" (Saint-Saens), (Zonophone Record A309).
 8.48: Tenor and contralto duet—Mr. Harold Prescott and Mrs. Ann Harper, "Langley Fair" (Easthope-Martin).
 8.52: Bass solo—Theodor Chaliapin, "Death of Don Quixote" (Massenet) (H.M.V. Record DB1096).
 9.0: Recital—Miss Mavis Ritchie, "Bubbles" (Verinon).
 9.5: Weather forecast.
 9.7: Overture.
 9.12: Contralto solo—Mrs. Ann Harper, "Forest Echoes" (Phillips).
 Tenor solo—Mr. Harold Prescott, "Serenata" (Toselli).
 9.19: Cello solo—Mr. Harold Beck, "Village Song" (Popper).
 9.23: Soprano and contralto duet—Madame Gower-Burns and Mrs. Ann Harper, "Elfin Call" (Glover).
 9.27: Instrumental Trios—Christchurch Broadcasting Trio, (a) "Chant d'Automne" (Tschaikowski); (b) "Spanish Dance No. 2" (Moszkowski).
 9.36: Baritone solo—Mr. Clive Hindle, "A Dream" (Bartlett).
 9.40: Orchestral selection—Paul Whiteman and his Orchestra, "Rhapsody in Blue" (Gershwin) (H.M.V. Record CK395).
 9.44: Soprano solos—Madame Gower-Burns, (a) "Songs My Mother Taught Me" (Dvorak), (b) "May Day" (Walthew).
 9.50: Recital—Miss Mavis Ritchie, "Peg Away" (Hamblin).
 9.55: Tenor and baritone duet—Grand Opera Duo, "Trust Her Not" (Balfe).
 9.59: Orchestra—Philadelphia Symphony Orchestra, "Dance Macabre" (Saint-Saens) (H.M.V. Record D1121).
 10.7: Vocal quartet—Grand Opera Quartet, "Departure" (Mendelssohn).
 God Save the King.

4YA, DUNEDIN (463 METRES)—THURSDAY, OCTOBER 4.

SILENT DAY.

Friday, October 5**IYA, AUCKLAND (333 METRES)—FRIDAY, OCTOBER 5.**

- 3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the announcer.
 4.25: Sporting results.
 4.30: Close down.
 6.0: Children's hour conducted by Nod and Aunt Jean.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: Overture—The Orchestra, "Raymond Overture" (Thomas).
 8.9: Vocal quartet—St. Andrew's Quartet, "Shepherdess and Beau Brocade" ("The Rebel Maid"—Phillips).
 8.13: Grand organ and cornet—R. Arnold Greer, "Softly Awakes My Heart" ("Samson and Delilah") (Zonophone Record A309).
 8.17: Soprano solos—Miss Lola Solomon, (a) "The Woodpigeon" (Lehmann); (b) "The Owl" (Lehmann).
 8.23: Orchestral novelty—Paul Whiteman and his Orchestra, "Rhapsody in Blue, Part 1" (H.M.V. Record C1395).
 8.27: Baritone solo—Mr. A. Colledge, "The Sentry's Song" ("Iolanthe"—Sullivan).
 8.32: Elocutionary item—Mr. J. F. Montague, "Pack of Cards."
 8.39: Contralto solo—Miss P. Gribben, "O Foolish Fay" (Sullivan).
 8.43: Suite Orchestra—"Dance of the Hours" (Ponchielli).
 8.53: Vocal Quartet—St. Andrew's Quartet, "Lead, Kindly Light" (Buck).
 8.57: Evening weather forecast.
 8.59: Bass solo and duet—Theodor Chaliapin, "Death of Don Quixote" (Massenet), (H.M.V. Record DB1096).
 9.7: Orchestral selections—Philadelphia Symphony Orchestra, (a) "Dance of Death" (Saint-Saens), (b) "Dance Macabre," Op. 40 (Saint-Saens), (H.M.V. Record D1121).
 9.15: Vocal duet—Miss L. Solomon and Mr. R. Peter, "You and I" ("Iolanthe"—Sullivan).
 9.20: Humorous sketch—Mr. J. F. Montague, "Collaborators."
 9.28: Entr'acte—The Orchestra, "The Answer" (Lemare, arr. Bellingham).
 Waltz—The Orchestra, "Blue Danube" (Strauss).
 9.38: Tenor solos—Mr. Robert Peter, (a) "Sigh No More, Ladies" (Stevens), (b) "Oft in the Silly Night" (Irish air).

- 9.46: Vocal quartet—St. Andrew's Quartet, "Finale from 'Mikado,'" second act (Sullivan).
 9.51: Orchestral selection—The Orchestra, "Rose Marie" (Friml).
 10.0: God Save the King.

2YA, WELLINGTON (420 METRES)—FRIDAY, OCTOBER 5.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sporting results to hand.
 5.0: Close down.
 6.0: Children's hour—Uncle Ernest.
 7.0: News session, market reports and sports results.
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—The Orchestra, "Polonaise Militaire" (Chopin).
 8.5: Light Opera Orchestra, "The Gondoliers" (Sullivan) (H.M.V. Record D1334).
 Chorus—D'Oyly Carte Opera Company, "List and Learn," from "The Gondoliers" (Sullivan) (H.M.V. Record D1334).
 8.13: Soprano solo—Miss Amy Eaton, "The Bell Song," from "Lakme" (Delibes).
 8.17: Baritone solo—Mr. S. E. Rodger, "Loving Smile of Sister Kind" (Gounod).
 8.21: Selection—The Orchestra, "Reminiscences of Grieg" (Godfrey).
 8.31: Contralto solos—Miss Hilda Chudley, (a) "To Music" (Schubert); (b) "The Swan" (Grieg).
 8.38: Violin solo with orchestral accompaniment—Miss Ava Symons, "The Swan" (Saint-Saens).
 8.43: Elocution—Mr. Barton Ginger, "Mandalay" (Kipling).
 8.50: Instrumental—The Orchestra, repeat item.
 8.56: Tenor solo—Mr. E. W. Robbins, "All Hail, Thou Dwelling" (Gounod).
 9.1: Weather report and announcements.
 9.2: Concerted chorus and London Symphony Orchestra, "Nunc Dimittis" (Brewer) (H.M.V. Record D1347).
 9.6: Soprano solo—Miss Amy Eaton, "Musetta's Song" from "La Boheme" (Puccini).
 9.11: Selection—The Orchestra, "Rose Marie" (Stothart).
 9.21: Baritone solo—Mr. S. E. Rodger, "The Snowy-Breasted Pearl" (Robinson).
 9.26: Grand organ with cornet—Mr. Arnold Grier, "The Lost Chord" (Sullivan) (Zonophone Record A309).
 9.30: Elocution—Mr. Barton Ginger, (a) "If" (Kipling); (b) "Me Too" (Carey-Wallace).
 9.37: Instrumental—The Orchestra, (a) "Serenade" (Widor-Bellingham); (b) "Slavonic Dance" (Dvorak).
 9.46: Contralto solo—Miss Hilda Chudley, "Caro Mio Ben" (Giordani).
 9.51: Wurlitzer organ solo—Reginald Foort, "By the Blue Hawaiian Waters" (Ketelby) (H.M.V. Record C1459).
 9.55: Tenor solo—Mr. E. W. Robbins, "Onaway Awake" (Cowan).
 10.0: Instrumental—The Orchestra, "Danse Bretonne" (Widor).
 10.5: God Save the King.

3YA, CHRISTCHURCH (306 METRES)—FRIDAY, OCTOBER 5.

- 3 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 6.0: Children's hour—Big Brother.
 7.15: News session.
 8.0: Chimes.
 8.1: Overture (rebroadcast of 2YA, Wellington, conditions permitting).
 8.6: Song cycle, "The Little Sunbonnet" (by Hermann Lohr), sung by the Melodious Four, with instrumental accompaniment by the Christchurch Broadcasting Trio).
 Quartet—"The Little Sunbonnet."
 Soprano solo—Miss Frances Hamerton, "Little Print Bonnet."
 Tenor and contralto duet—Mr. Russell Sumner and Miss Belle Renaut, "Where the Violets Grow."
 Bass solo—Mr. T. D. Williams, "Little Molly Mary."
 Quartet—"A Lady Came to Our Town."
 Tenor solo and quartet—Mr. Russell Sumner and Melodious Four, "Somewhere-Town."
 Soprano and bass duet—Miss Frances Hamerton and Mr. T. D. Williams, "The Rose and the Nightingale."
 Contralto solo—Miss Belle Renaut, "If I had a Dolly."
 Quartet—"So Glad of Heart."
 8.26: Band Novelty—Savoy Orpheans, "London and Daventry Calling" (H.M.V. Record C1251).
 8.30: Humour—Mr. J. J. Flewellyn, "The New Food" (Leacock).
 8.35: Soprano solos—Miss Frances Hamerton, (a) "A Summer" (Martin Shaw); (b) "Down by the Sally Gardens" (Martin Shaw).

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- 8.40: Band Novelty—Savoy Orpheans, "London and Daventry Calling" (H.M.V. Record C1251).
- 8.44: Tenor solos—Mr. Russell Sumner, (a) "Ave Maria" (Kahn); (b) "Plague of Love" (Arne).
- 8.51: Weather report and forecast.
- 8.53: Overture.
- 9.3: Contralto solos—Miss Belle Renaut, (a) "Since I Have Loved Thee" (Noel Johnson); (b) "Love in the Meadows" (Noel Johnson).
- 9.9: Balalaika Orchestra—Kirilloff's Balalaika Orchestra, "Shining Moon," Russian folksong (H.M.V. Record EA48).
- 9.12: Humour—Mr. J. J. Flewellyn, "The Sceneshifter's Lament."
- 9.17: Instrumental Trio—Christchurch Broadcasting Trio, "Andante and Turkish Rondo" (Hayden).
- 9.27: Bass solo—Mr. T. D. Williams, "Speed the Plough" (Easthope Martin).
- 9.32: Xylophone solo—Sam Herman, "Al Fresco" (Zonophone Record EE53).
- 9.35: Soprano solo—Miss Frances Hamerton, "The West Wind" (Stewart).
- 9.40: Flute solos—Mr. W. Hay, (a) "Souvenir" (German); (b) "Valse Caprice" (Spain-Dunk).
- 9.49: Bass solo—Mr. T. D. Williams, "A Soldier's Toast" (Dix).
- 9.53: Orchestral—Victor Symphony Orchestra, "Dance of the Hours" (Ponchiello) (Zonophone Record EF12).
God Save the King.

4YA, DUNEDIN (463 METRES)—FRIDAY, OCTOBER 5.

- 3 p.m.: Town Hall chimes.
- 3.1: Selected gramophone items.
- 3.30: Relay of afternoon-tea music from the Savoy.
- 3.45: Gramophone items.
- 4.25: Sporting results.
- 4.30: Close down.
- 6.0: Children's hour conducted by Auntie Sheila and Big Brother Bill.
- 7.15: News and reports session.
- 7.30: Book reviews by Mr. H. Greenwood, of the Dunedin Athenæum.
- 8.0: Town Hall chimes.
- 8.1: Orchestral selection—Kirilloff's Balalaika Orchestra, "Song of the Volga Boatmen," Russian folksong (H.M.V. Record EA48).
- 8.5: Contralto solos—Miss Dorothy Skinner, (a) "Golden Slumbers" (17th Century air); (b) "Drink to Me Only" (traditional).
- 8.10: Cornet solo—Mr. D. J. Robertson, "Wardlenian Polka" (Clement).
- 8.15: Bass solo—Mr. Neil Black, "Melisande in the Wood" (Goetz).
- 8.18: Flute solo—Mr. Chas. Gibbons, "Olivette" (Audran).
- 8.24: Contralto solo—Miss Dorothy Skinner, "Look Up, O Heart" (Del Riego).
- 8.27: Whispering tenor with violin, 'cello, and piano—M. J. Gunsby, (a) "Consolation" (Gunsby, Borice, Kahn, de Rance); (b) "Take This Rose" (Gunsby, Borice, Kahn, de Rance). (Zonophone Record EE22).
- 8.32: Cornet solos—Mr. D. J. Robertson, (a) "Softly Awakes My Heart" (Saint-Saens); (b) "At Break of Day" (Hume).
- 8.42: Bass solos—Mr. Neil Black, (a) "Mountain Lovers" (Squire); (b) "Requiem" (Homer).
- 8.48: Piano solo—Mrs. Ernest Drake, "Nocturne in G" (Chopin).
- 8.50: Flute solo—Mr. Chas. Gibbons, "Selection from 'The Barber of Seville'."
- 8.58: Weather report and announcements.
- 9.1: An hour's dance music relayed from the Savoy (Alf. Carey and his Orchestra).
- 10.0: God Save the King.

Saturday, October 6

1YA, AUCKLAND (333 METRES)—SATURDAY, OCTOBER 6.

- 3 p.m.: Afternoon session—Selected studio items.
- 4.0: Literary selection by the Announcer.
- 4.8: Selected studio items.
- 4.25: Sporting results.
- 4.30: Close down.
- 6.0: Children's hour conducted by Cinderella.
- 7.15: News and market reports and sporting results.
- 8.0: Chimes.
- 8.1: Relay of overture by the Majestic Theatre Orchestra under Mr. Whitford Waugh.
- 8.10: Bass-baritone solo—Mr. Leonard Kernot, "The Bell at Sea" (Adams).
- 8.14: Hawaiian orchestral selection—Hilo Hawaiian Orchestra, (a) "Hawaiian Sunset" (Vandersloot); (b) "Sweet Hawaiian Dreams" (Coleman) (H.M.V. Record B2328).
- 8.22: Humour—Mr. F. W. Barker, (a) "A Story of Chinese Love" (anon); (b) "Don't Use Big Words" (anon); (c) "French Account of Adam's Fall" (anon).
- 8.30: Instrumental trio—Auckland trio, "Last Movement, Trio in B Flat" (Mozart).
- 8.38: Orchestral novelty—Paul Whiteman and his Orchestra, "Rhapsody in Blue," Part 2 (arr. Grofe) (H.M.V. Record C1395).
- 8.42: Pianoforte solo—Mr. Cyril Towsey, selected.
- 8.46: Baritone solos—Mr. H. Warburton, (a) "Sincerity" (Clarke); (b) "The Wolf" (Shield).
- 8.54: Relay of entr'acte from the Majestic Theatre.
- 9.2: Evening weather forecast.
- 9.3: Wurlitzer organ—Reginald Foort, (a) "Leave Me Alone" (Dvorak); (b) "Songs My Mother Taught Me" (Dvorak) (H.M.V. Record C1459).
- 9.7: Bass-baritone solos—Mr. L. Kernot, (a) "Fairings" (Martin); (b) "What a Wonderful World It Would be" (Lohr).
- 9.13: Instrumental Trio—Auckland Trio, "Land of Maple and Beaver" (O'Neill).
- 9.21: Elocutionary items—Mr. F. W. Barker, (a) "The True Gentleman" (anon); (b) "The Girl and the Gloves" (Barry Pain).
- 9.29: Guitars and ukuleles—Honolulu Serenaders, "Mele of Hawaii" (Noble and Philipo) (Zonophone Record EE92).
- 9.32: Baritone solo—Mr. H. Warburton, "Largo Al Factotum" ("Barber of Seville"—Rossini).
- 9.37: Orchestral selection—New Light Symphony Orchestra, "Merry Wives of Windsor" (Nicolai) (H.M.V. Record C1260).
- 9.45: Relay of dance music from the Masonic Hall—The Collegians, under Mr. Edgar Bendall.
- 11.0: God Save the King.

2YA, WELLINGTON (420 METRES)—SATURDAY, OCTOBER 6.

- 3 p.m.: Chimes of the G.P.O. clock, Wellington.
- 3.1: Selected gramophone items.
- 4.30 and 4.55: Sporting results to hand.
- 5.0: Close down.
- 6.0: Children's hour—Uncle Toby and Aunt Gwen.
- 7.0: News session, market reports and sports results.
- 7.40: Lecturette—Dr. I. L. G. Sutherland, of Victoria University, "Laughter."
- 8.0: Chimes of the G.P.O. clock.
- 8.1: Overture—The Orchestra, "Nautical Scenes" (Fletcher).
- 8.9: Quartet—Melodie Four, "The Dear Little Shamrock" (Dicks).
- 8.13: Hawaiian Instrumental—Hilo Hawaiian Orchestra, (a) "Hawaiian Sunset" (Vandersloot); (b) "Sweet Hawaiian Dreams" (Coleman) (H.M.V. Record B2328).
- 8.20: Bass solo—Mr. W. W. Marshall, "The Longshoreman" (Chesham).
- 8.24: Quartet—The Melodie Four, "Peter the Cat" (Eastman).
- 8.28: Selection—The Orchestra, "Merrie England" (German).
- 8.38: Humour—Mr. Geo. Titchener, "The Assurance Man" (Clarkson Rose).
- 8.45: Wurlitzer organ solos—Reginald Foort, (a) "Leave Me Alone" (Dvorak); (b) "Songs My Mother Taught Me" (Dvorak) (H.M.V. Record C1459).
- 8.49: Tenor solo—Mr. Sam Duncan, "An Evening Song" (Blumenthal).
- 8.53: Instrumental—The Orchestra, repeat item.
- 8.59: Weather report and announcements.
- 9.0: Hawaiian Honolulu Serenaders, "Honolulu Stomp" (Pilipo) (Zonophone Record EE92).
- 9.3: Instrumental—The Orchestra, "Musical Jig Saw" (Aston).
- 9.13: Baritone solos—Mr. R. S. Allwright, (a) "Sleepy Hollow Tune" (Kountz); (b) "An Emblem" (Thompson).
- 9.20: Humour—Mr. Geo. Titchener, "Gone Aloft" (Hanley).
- 9.27: Novelty—Paul Whiteman and Concert Orchestra, "Rhapsody in Blue" (Gershwin) (H.M.V. Record C1395).
- 9.31: Tenor solos—Mr. Frank Bryant, (a) "A String of Pearls" (Phillips); (b) "I Know of Two Bright Eyes" (Clutsam).
- 9.38: Instrumental—The Orchestra, (a) "Minuet" (Beethoven); (b) "Tzigane March" (Lacombe).
- 9.46: Quartet—Melodie Four, "Riding on the Dream Train" (Clarke Lewis).
- 9.50: Instrumental—The Orchestra, latest novelties.
- 10.0: Dance programme.
- 11.0: God Save the King.

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3YA, CHRISTCHURCH (306 METRES)—SATURDAY, OCTOBER 6.

6 p.m.: Children's hour.
 7.15: News session.
 7.30: Sports results.
 8.0: Times.
 8.1: Rebroadcast of 2YA Wellington (conditions permitting).
 10.0: Dance programme.
 11.0: God Save the King.

4YA, DUNEDIN (463 METRES)—SATURDAY, OCTOBER 6.

7.15 p.m.: News and reports session.
 7.30: Address under the auspices of the Workers' Educational Association.
 8.0: Town Hall chimes.
 8.1: Orchestral selections relayed from the Strand Theatre, under the direction of Mr. L. D. Austin.
 8.11: Baritone solos—Mr. Arthur Lungley (a) "The Irish Emigrant"; (b) "Eileen Alannah" (Thomas).
 8.18: Violin solo—Mr. H. Riddle, "Cavatina" (Henry).
 8.23: Mezzo-soprano solo—Miss Agnes Guy, "Spring's a Lovable Lady" (Elliot).
 8.26: Hawaiian Orchestra—(a) "Hawaiian Sunset" (Vandersloot); (b) "Sweet Hawaiian Dream" (Arthur Coleman) (H.M.V. Record B2328).
 8.34: Humorous recitals—Miss Molly Gallagher, (a) "Love" (Winter); (b) "The Ballymony Conversazione" (Anon.); (c) "The Renaissance" (Anon.).
 8.44: Bass solos—Mr. J. Ferguson, (a) "Asleep in the Deep" (Petrie); (b) "If I Lost the Stars" (Drummond).
 8.50: Instrumental trio—"Poco Adagio from Trio in G Major" (Haydn).
 8.55: Contralto solo—Miss Irene Horniblow, L.R.A.M., "Only the Desolate" (Tchaikowsky).
 8.59: Orchestral novelty—Paul Whiteman and his Orchestra, "Rhapsody in Blue," Part 2 (Gershwin, arr. Grofe) (H.M.V. Record C1395).
 9.3: 'Cello solo—Mr. P. J. Palmer, "Danse Orientale" (Squire).
 9.9: Weather forecast and announcements.
 9.11: Orchestral selection—New Light Symphony Orchestra, "Merry Wives of Windsor" (Nicolai) (H.M.V. Record C1260).
 9.19: Baritone solo—Mr. Arthur Lungley, "Farewell, but Whenever."
 9.22: Violin solos—Mr. Harold Riddle, (a) "Berceuse" (Sammon); (b) "Gavotte" (Grossi).
 9.28: Mezzo-soprano solos—Miss Agnes Guy, (a) "A Birthday" (Woodman); (b) "Prelude" (Ronald).
 9.34: Piano solo—Mrs. Arnest Drake, "Impromptu in F Minor" (Schubert).
 9.38: Recital—Miss Molly Gallagher, "Swandalaya" (Anon.).
 9.44: Guitars and ukuleles—Honolulu Serenaders, "Mole of Hawaii" (Noble Pilipo) (Zonophone Record EE92).
 9.47: Bass solo—Mr. J. Ferguson, "Invictus" (Huhn).
 9.50: Instrumental trios, (a) "Waltz" (Tchaikowsky); (b) "Melodie."
 10.2: Contralto solos—Miss Irene Horniblow, (a) "The Portrait" (Schubert); (b) "Whither" (Schubert).
 10.8: Wurlitzer organ solos—Reginald Foort, (a) "Leave Me Alone" (Dvorak); (b) "Songs My Mother Taught Me" (Dvorak) (H.M.V. Record C1459).
 10.12: 'Cello solo—Mr. P. J. Palmer, "Le Cygne" (Saint-Saens).
 10.17: God Save the King.

Sunday, October 7**1YA, AUCKLAND (333 METRES)—SUNDAY, OCTOBER 7.**

3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Selected studio items.
 4.30: Close down.
 5.0: Children's session conducted by Uncle Leo.
 6.55: Relay of evening service from St. Matthew's Church (Divine Service). Preacher, Canon C. H. Grant Cowan; organist, Mr. J. L. Philpot.
 8.30: Gramophone lecture-recital by Mr. L. E. Lambert.
 9.30: God Save the King.

2YA, WELLINGTON (420 METRES), SUNDAY, OCTOBER 7.

3 p.m. to 4.30 p.m.: Afternoon concert.
 6.0: Children's song service, conducted by Uncle Ernest.
 7.0: Relay of evening service from Vivian Street Church of Christ. Preacher, Pastor W. G. Carpenter. Choirmaster, Mr. Will Mason. Organist, Miss Iris Mason.
 8.15 (approx.): Studio concert.
 Orchestral selection—"Toccata and Fugue in D Minor" (Bach), Columbia record.
 Soprano solo—Miss Veronica McKenzie, "With My Guitar" (Wright).
 'Cello solo—"Chant Sans Paroles" (Tchaikowsky), Columbia record 9058.
 Baritone solo—Mr. L. M. Assheton Harbord, "The Tempest of the Heart," from "Il Trovatore" (Verdi).
 Elocution—Miss Effie Brice, "The Necklace of Tears."
 Orchestral selection—"Bridal Procession" (Grieg), Columbia record, 02622.
 Contralto solo—Miss Agnes McDavitt, "Beautiful Beatrice" (Mallinson).

Instrumental trio—"Spring Song" (Mendelssohn), Columbia record 0837.
 Tenor solos—Mr. E. Seon-Brown, (a) "Elegie" (Massenet); (b) "Jennesse" (Barry).
 Band selection—"Reminiscences of Tosti," Columbia record 9041.
 Soprano solo—Miss Veronica McKenzie, "April is a Lady" (Phillips).
 Baritone solos—Mr. L. M. Assheton Harbord, (a) "Chorus, Gentlemen" (Lohr); (b) "Dreams of Long Ago" (Caruso).
 Violin solo—"Chanson Hindoue" (Song of India), (Rimsky-Korsakoff), Columbia 01090.
 Elocution—Miss Effie Brice, "A Gentleman of France" (Walsh).
 Cornet duet—"Two Little Finches," Columbia record, 02539.
 Contralto solo—Miss Agnes McDavitt, "As Yet No Light in the Eastern Sky" (Rubenstein).
 Pianoforte solo—"Hungarian Rhapsody," No. 6 (Liszt), H.M.V. record, D1383.
 Tenor solo—Mr. E. Seon-Brown, "Serenata" (Toselli).
 Band selection—"Tom Jones" (German), Columbia record, 02626.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, OCTOBER 7.

3 p.m.: Studio gramophone recital.
 4.30: Close down.
 5.30: Children's song service conducted by Uncle David.
 6.30: Relay of evening service from Knox Presbyterian Church, Bealey Avenue. Preacher, Rev. T. W. Armour; organist and choirmaster, Mr. W. Billington.
 7.45: A recital of music from 3YA studio.
 8.15: Gramophone recital.
 9.30: God Save the King.

4YA, DUNEDIN (463 METRES)—SUNDAY, OCTOBER 7.

5.30 p.m.: Children's song service conducted by Big Brother Bill.
 6.30: Relay of evening service from Knox Church. Preacher, Rev. Tulloch Yuille, M.A., B.D.
 8.0: Relay from His Majesty's Theatre—Concert by the St. Kilda Band under the baton of Mr. James Dixon.
 9.15: God Save the King.



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The Model Programme.

THE "Radio Record" does not profess to be a humorous paper, but the "Mail-bag" does at times provoke much hilarity, especially when it comes to programme matters! The letter of J.K. (Trentham) in your issue of the 7th inst. has given me much more amusement than last week's "Punch"! Let us consider his claims first and then his "model" programme. Thirty years ago he was a member of an orchestra—his musical education apparently stopped when he left—and therefore, presto! he must be able to appreciate good music! Could anything be more certain, definite, or more easily proved! J.K.'s musical taste is probably of equal standard with his humour. We can therefore leave to the discrimination of your readers his delicate remark concerning the "barrow" tone with a case of the studio at 2YA. What humour! The artist in question has a good voice, sings good songs, evidently too good for J.K. of Trentham, on his own admission. Let me briefly consider the "model programme." J.K. has succeeded in choosing some of the most hackneyed, murdered and overworked items in the whole range of music, and probably nearly exhausted the extent of his musical repertoire of titles. "William Tell Overture"—murdered nightly by every third-rate and fourth-rate village orchestra since it was composed. There are others. Violin solo—Mendelssohn's "Spring Song." Not intended as a violin solo at all but perpetrated by young violinists as a "show piece" after they have been learning about three months. J.K. might not be aware that Mendelssohn wrote many more "songs without words" besides the "Spring Song."

Our Mail Bag

Will correspondents please practice brevity, as heavy demands are now made on space. All letters must be signed and address given as proof of genuineness; noms de plume for publication are permitted. Address correspondence Editor, "Radio Record," P.O. Box 1032, Wellington.

'Cello solo—The sloppy "Broken Melody," also perpetrated by young beginners on the piano and the violin! Or "Barcarolle" ("Tales of Hoffman"). How poor Offenbach must squirm in his grave as he hears this pretty melody variously rendered as a soprano and contralto duet, piano solo, solo with instrumental obbligato, 'cello solo, full orchestra, and every other possible combination. Talk about overwork—the poor melody has been mauled and maltreated to such an extent that it has at least earned a rest. I wonder that J.K. omitted the "Prisoner's Song."

Xylophone solo—"Les Clotches de Corneville"—otherwise "Les Cloches de Corneville"—an ancient fourth-rate opera, with even very little decent melody.

Piano solo—"Militaire Marche." Presumably Schubert's "Marche Militaire" is intended. Not a piano solo at all!

Orchestra (repeat item or encore)—Possibly the dear old "Barcarolle" over again in another form. (As I write this it is being massacred as a flute solo in the children's session from 1YA!!)

Orchestra—"Blue Danube Waltz." Hammered out with one finger by every budding infant piano prodigy in every suburban street in the world. The smug satisfaction with which J.K. recognises good music appears to consist solely in a short string of titles familiar to everyone who has hammered, blown or bowed a note of music during the last 35 years! J.K.'s friends may take heart of grace. They are probably better programme directors than he—they could not conceivably be worse. So much space was taken with J.K.'s fatuous model programme that I trust room may be found for this attempt to check its pernicious influence.—B.P.S. (Orewa).

In Radio Land.

I FEEL that I ought to let you know how we appreciate the programmes broadcasted by New Zealand stations, capped off by excellent reception of Kingsford Smith's Tasman flight. I think J. K. Trentham, with his fourteen-item programme, and "Homo" with his King's English, both growlers, and the racing officials, could be done without in radioland.—"Tenderfoot" (Pahiatua).

An Appreciation.

I FEEL I must express our appreciation of the efforts of the R.B.C. during the flight of the Southern Cross across the Tasman. Throughout the night we listened-in, and waited, until the final triumphal landing in Christchurch at 9.23. We cannot praise the announcers enough for the way they handled the situation throughout, putting on bright records and keeping us well posted as to the progress of the Southern Cross. To hear the roaring of the 'plane through the night made it all seem very real indeed to us, and we would not have missed this memorable event for anything. Just as we listened in to the Moncrieff-Hood broadcast, so we stood by again waiting and hoping

for the best, and rejoiced to know this latter flight ended successfully. While I am writing I should like to express my indignation at some of the objectionable letters sent in as regards our announcers. We think they are all just splendid, each different, yet each doing his very best at all times. The best cure for those who complain would be to put them before "Mike" for an hour, and then let them stand back and receive the criticism hurled at themselves likewise. It is quite impossible to please everyone, evidently. We enjoy every item that is broadcast, and I often think it is only people like us who live "out back," who really do know how to appreciate wireless. It means so much to us, that it has almost become a necessity, and though we are living in a wonderful age, we consider wireless the most wonderful invention of all, for it brings to our homes all that which we are denied through living in the country.—Mrs. J. McKenzie (Bay of Plenty).

Rebroadcasting.

CONCERNING the subject of howling much has been said, written, and broadcast on this most annoying type of interference, but why do not the company's engineers look closer at home, presumably they have the best apparatus offering. The recent short-wave broadcasts both from America and Australia were badly distorted at times, and it was plain to any short-wave listener of any experience at all that a great deal of the same was caused by the receiving station, when intense fading was experienced a finer adjustment was almost always attempted with disastrous results. Again on Saturday evening 2ZL and 1YA were rebroadcast; 1YA direct was crystal clear, but from 2YA oscillation was very much in evidence. A check-up over the 'phone with a city resident proved results there to be identical. I suggest that the interference was very close to the receiving station in both cases. On Saturday night I listened to 1YA via 2YA and 3YA. My brother asked what would be the result if Auckland should tune in and rebroadcast 2YA at the same time without any previous announcement. I suggest that the ensuing silence would be a terrible howl. That's Irish.—"Constructive" (Lower Hutt).

Concerning 2YA.

I WOULD like all listeners-in who have complained about the reception from 2YA to be present with me at the moment, 7.30 p.m., September 13. I am using one stage of radio detector, four stages of audio, and an aerial nine feet long, and am getting good loud-speaker strength. I am quite convinced in my own mind that 2YA is in every way perfect. The only explanation I can personally give for the poor reception I receive is that it is due to outside interference. At times I require three stages of radio and a good aerial of 150ft. to receive signals so weak that I cannot distinguish speech from music. At present modulation is absolutely perfect, and I can distinctly

hear the announcer's intake of breath as he is speaking about the flight of Flight-Commander Kingsford Smith from Christchurch to Wellington. 3YA can never under the best conditions approach 2YA as I am receiving it at present, but at 8 p.m. no doubt I will have all my eight valves in commission and will be "standing on the gas."—Herbert Ziele (Napier).

Stepping the Doll Dance.

LAST Saturday night 2YA listeners were treated to the usual combination of good music and merriment for which the Saturday night concerts are becoming rapidly famous. One item, however, marred an otherwise perfect programme—the proverbial fly in the ointment, so to speak. Who the studio pianola expert is, I know not, but whoever was responsible for the manipulation of "The Doll Dance," should have been tarred and feathered. If the artist in question were made to dance in time to his own music, it would probably bring home to him much more forcibly than by mere words the speed at which he rendered the item in question. One artist, in his items, mentioned four-wheel brakes in connection with aeroplanes—it would seem that the same would not go amiss on player pianos. These instruments, when played properly, are capable of rendering some excellent numbers, but in the hands of a Hercules whose main object seems to be speed and noise, they become no more than a mere band-box of musical jargon and cacophony. I have no wish to discourage any budding young piano player artist, but—let's whisper in his pink young ear—"Whoa-a-a—Dobbin!"—A.W.L. (Khandallah).

Mushiness Overcome.

I SHOULD like to know if any short-wave "fans" heard an American station on 26 metres on Saturday evening (15th inst.). I tuned him in about 6 p.m. when he was giving piano-forte selections and coming over R3-4. Rapid fading spoilt intelligibility to a great extent. I heard him announce that it was a test transmission and the call-sign sounded like 2XAW, but I understand this station operates on 15 metres. I am working a three-valve receiver (detector and two audio), and, although it is only about two months since I built it, I have a respectable "log" of 87 telephony stations, 44 of which are on the broadcast band. While I am on the job, I should like to mention what may prove an interesting point. In the afternoons 2YA comes through at good speaker strength and as clear as a bell, running the set at about "half-power." In the evenings I found that by using a low aerial and shortening it until 2YA was reduced to "daylight strength," the quality of the reception from 2YA left nothing to be desired. I was very gratified at this result as 2YA on my main aerial is almost out of the question for his "mush" and "roar." For those who may care to try this idea, the following are the dimensions of my aerials:—

The Radio Depot

165 Manchester St., Christchurch

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RADIO SPECIALIST.

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Still Smiling!

Of course I'm still smiling. Got one of those EMMCO Battery Eliminators for my radio set months ago. Never had the slightest trouble. No battery worry. Get constant silent power all the time. Fit one in yourself.

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ELIMINATORS**

From £10 10s.

N.Z. Distributors:

Abel Smeeton, Auckland; Thomas Ballinger, Wellington; L. B. Scott, Christchurch.



Main aerial: Height, 40ft.; length overall, 100ft.

Short aerial: Height, 10ft.; length overall, 30ft.

Those who complain of 2YA's "mush" should try this; I am certain that if it works for them as it works for me, we shall never hear another growl!—"Q.R.K." (Wairoa, H.B.).

A Crystal Puzzle.

I AM a crystal-set owner, and have been getting very indifferent results. One night I would get good results and the next very poor. I tried several crystals and cat's whiskers with the same result. I then ran two earths, and although the volume was greater the results were just the same. I have a low outside aerial of about 80ft., two earths and a coil of about 120 turns on a bakelite former of about 2in. diameter. I get results about half way along the slider. The power lines run past the front door. Now here's the problem: I decided to get a permanent crystal, so I tried two carborundums and didn't get a sound, although I was getting good signals with the ordinary crystal. I then borrowed another good set with the same result. Next I borrowed an R.I. Varley semi-permanent crystal and got good results. I have now purchased one and still get good results. The carborundums were O.K. in their own sets.—G. Floyd (Petone).

[From the facts given it is difficult to diagnose the cause. The difficulty seems to be unique. Some crystals would seem to have freakish propensities. Has any reader had a like experience?—Ed.]

The King's English.

WE have received several further letters in appreciation of 2YA's announcer, but as the ground has been well covered, we would ask these belated correspondents to excuse our not publishing their letters.—Ed.

Reception on West Coast.

I FEEL I must write a few lines to tell you how much I appreciated the splendid all-night transmission of the Tasman flight. Although static was plentiful we heard nearly every report. Transmission was steady, with very little fading. It was a unique event in the history of radio. Since moving to this locality, which is on the sea coast, I find radio reception very much improved. Wellington is my best New Zealand station for clarity and steadiness. Can pick Aussie in the daytime here with a 5-valve neutrodyne set. Is there a station in Sydney with the call 2UW? I have had 2UE, but 2UW (that's what it sounds like) is about 20 or 25 metres below 2UE. [Yes, 2UW works on 267 metres with 500 watts.] The other night I logged station 3ZC, Christchurch. The station came through fairly clear, but not loud. Has 3ZC very powerful generator? He is good for an amateur. [3ZC's power is 250 watts—it is a trade station.]

Quite a number of your correspondents are commenting on your announcer's pronunciation of the English language. Allow me to state that the announcer's English is absolutely A1. I certainly agree with "Fernleaf" and a few others who are criticising "Homo's" letter. Let him try announcing—"Well-wisher" (Granity).

Children's Sessions

AT 1YA.

TUESDAY, OCTOBER 2.—Uncle George in charge and with him Cousin Dick playing his winning pieces at the competitions, also the Gramophone man with a record and story about the piece.

WEDNESDAY—Hello, Uncle Tom! Have any more songs to-night about the Radio Family and the Aunts and Uncles? You have! We're so glad, because we enjoy hearing them ever so much.

THURSDAY.—To-night Peter Pan will be assisted by a little band of cousins, singing and reciting. Letters and birthday greetings to be sent out too.

FRIDAY.—Nod and Aunt Jean will entertain the Radio Family with songs and stories. Listen for the sketch with all the animals in it, making strange noises.

Changes in Programmes.

I SHALL begin in the usual popular style and state my grievances. Twice lately selections from Sullivan's "Ruddigore" have figured on the programme of 2YA's orchestra. I think on both occasions "Lilac Time" was substituted. While everybody likes to hear Schubert's melodies, a number of "Sullivanites" were disappointed. I do not know whether laws of copyright prevented the performance of "Ruddigore"—or was it considered a danger to the Kellogg Pact?—but certainly "Gondoliers," "Mikado," etc., have been played. The orchestra has given us some splendid music. One could write its praises at some length. I do not play the piano or any other instrument, but two pieces I should like to add to the list of "request" numbers are these: (1) "Fingal's Cave" overture, composed by Mendelssohn when he was twenty-one; (2) the overture "Oberon," by Weber. A local picture theatre orchestra has played the former; about "Oberon"—well consider "The Flying Dutchman." When some vocalists realise it is best to sing something within their range there will be fewer "vocal villainies" and more programmes of the standard of that arranged for last Sunday evening. The pianist seemed to "rejoice greatly" in recognition of the fact. Some months ago Mr. Ray Kemp sang "Largo Al Factotum" from Rossini's "Barber of Seville"; I feel that the average listener does not remember the song now and would not mind its repetition.—P. H. Warren.

P.S.—For superior programmes see every Friday night at 2YA.

E.W.P. (Christchurch): We do not think it would be quite fair to the group of artists concerned to publish your strictures and comparisons—our rule is not to publish criticism of individuals, if possible. We are, however, passing your point of view on to the programme organiser concerned. It must be remembered that there are people who do like operatic selections, and they are entitled to their share of "time." The majority must concede something to the minority—assuming the operatic lovers to be in the minority, which is not proven.—Ed.

SATURDAY.—Oh, what fun! Cinderella has Uncle Big and Cousin small with her again. They will have jokes and fun for all, and will also have a group of big Maori boys with them who will sing and give hakas.

SUNDAY—Children's Song Service conducted by Uncle Leo, assisted by cousins from the Beresford Street Congregational Sunday School.

AT 2YA.

MONDAY, OCTOBER 1.—Uncle Jeff and Aunt Gwen my dears. There will be stories and greetings, also pianoforte solos played by Cousin Joan. Cousin Gwen-da, whose singing you all enjoy, will be here too.

TUESDAY—Big Brother Jack will greet you this evening children. Cousin Dagmar will play the piano, and Cousin Zac will be there with his steel guitar.

THURSDAY.—Aunt Gwen and children from the Thorndon Normal School—standard 4 this time, little ones, under Miss Perry.—What a happy hour you will have listening to the chorus songs and recitations.

FRIDAY—Uncle Ernest will talk to the family to-night—there will be stories and greetings, and the children from Chilton St. James, Lower Hutt, are coming to give you of their best. These clever little children have an orchestra—so you will have a treat.

SATURDAY.—Uncle Toby and Aunt Gwen, assisted by pupils of Mrs. Martyn Williams who always recite for you so well. Greetings and stories, too, children, so we will have a merry little hour.

SUNDAY.—Uncle Ernest will conduct the children Song Service, assisted by St. Peter's Sunday School Choir under Mr. Sydney Short.

FROM 3YA.

MONDAY, OCTOBER 1.—Come one, come all, and hear Scatterjoy tell about the origin and charm of "The Gipsy." The Radiant Three-oh will sing songs of the road, and Cousin Gladys is reciting and singing too. Greetings and best writer's verse and stories for young and old.

WEDNESDAY.—Mother Hubbard and Uncle Peter, with their never-ending store of good stories, and songs, and the "Three Old Maids of Lee" in dialogues and recitations.

THURSDAY.—To-night the "Cheerio Lads" from the Y.M.C.A. are helping Chuckle and Aunt Pat. So all get ready to join in a hearty and jolly community singing.

FRIDAY.—Big Brother to the fore to-night, and the winning House Choir from the Girls' High School will provide sweet singing. So get your earphones and loudspeakers on the go.

SATURDAY.—This is a night of surprises—so why should we tell

you just what is coming? Watch out and listen!!

SUNDAY.—Uncle David in charge of the song service, and hymn singing by the scholars from the St. Albans Presbyterian Sunday School.

AT 4YA.

TUESDAY, OCTOBER 2.—Jack, Ray and Jocelyn are entertaining the family to-night with piano, violin, and songs. And Brother Bill has some stories. What are they about? Well, the best kind of story is the one you know nothing about until it is told, so you'd better wait and see. Birthdays, and the Radio Postie as usual.

FRIDAY, OCTOBER 5.—Joyce plays the piano, Arthur the violin, Noel sings a song, and Bruce gives an excellent recitation. The Family, of course, listens, and, if very very good, goes a trip on the Time Scooter. How would you like to have lived among the sturdy folk who first came and colonised New Zealand? It had Robinson Crusoe beaten easily. Well, we might pull the little green handle on the Scooter and go back sixty years, and live a little while with the early settlers. The Radio Postie will be there, of course.

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The Principle of Gramophone Pick-ups

ELECTRICAL pick-up units first started to appear in radio circles early in 1926 states an excellent article in "Radio Broadcast." Since then several dozen different types have been manufactured, and as many articles have appeared covering their operation. Yet, at a recent public demonstration of a particular make in one of the large New York stores, nine out of ten people were amazed that such a device was in existence, and, of course, knew much less of its workings. For the benefit of the uninitiated, let it be here stated that an electrical pick-up unit is nothing more than an electrical sound box for your phonograph.

The name "pick-up" unit has been

given to that particular arrangement suited for connecting your old type phonograph with your radio receiver. This has required a few circuit kinks, which are new, but the fundamental principle employed goes back to the early stage of the telephone and the phonograph. Alexander Graham Bell about 1875, discovered that when a thin piece of magnetic metal was vibrated in front of an electro-magnet, currents were created in the windings of the magnet. These currents were exactly similar in their electrical vibration to the mechanical vibration of the magnetic metal directly in front of the pole pieces of the magnet. Thus, when he talked directly against this thin piece of iron, it would vibrate and

create currents in the windings of the magnet similar to his voice vibration. This was the first electric telephone.

FEW people realise that the telephone receiver to-day is practically unchanged from Bell's original conception of the complete electric telephone. As the art developed, other more sensitive principles were used for the telephone transmitter or mouthpiece, but nothing has been found better for the receiver. And even now, the receiver, when used as a transmitter, produces better tone quality, but less volume than the ordinary telephone transmitter.

Now, Thomas Edison brought out the phonograph a couple of years after Bell's telephone. This was a device that took the minute vibrations of the thin iron disc, and, instead of changing them into electrical impulses, recorded them on a wax cylinder which was rotated when recordings were made. This was done by attaching a sharp needle on to the centre of the thin disc at the end of a horn, and the needle

well from the modern loud speaker. Here is where the radio receiver comes into the picture. So far, we have only used the turn-table, motor, and record of the old phonograph. The electrical pick-up unit has taken the vibrations off the record, and has transformed them into electrical currents; now they are to be amplified by the radio set.

Only the Audio is used.

THESE currents are not radio currents at all. They are merely the amplified music and voice from the record. Hence, only the audio amplifying end of the radio set is utilised, and the pick-up unit must be so designed as to be readily attached to this audio amplifying section of the radio receiver. The currents are then amplified through the audio amplifier and are reproduced through the loud speaker, just as the radio programmes are amplified and reproduced after they are detected by the detector tube. One would guess from this that the pick-up units are attached in some way to the detector tube, at the beginning of the audio amplifier. Most of them are arranged to operate in the plate circuit of the detector, although one is arranged to work into the grid of the detector tube and thus gain the amplification of the detector tube.

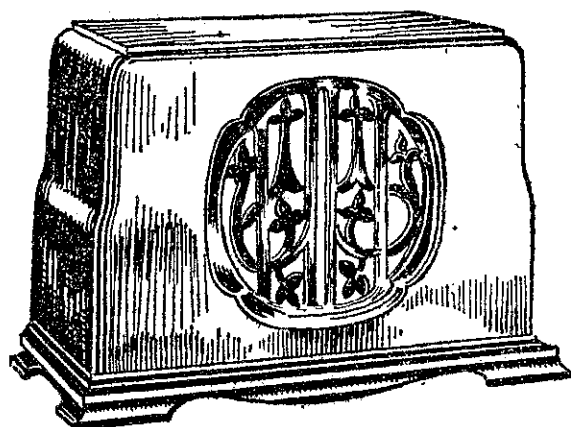
A careful study of the constructional details of quite a number of different designs shows the necessity of some sort of damping on the vibrating piece of thin iron. Naturally, everything has a natural or inherent period of vibration. Just as a tightly stretched piano string will vibrate at a certain pitch when plucked with the finger, so will the thin iron reed in front of the pole pieces of the magnet tend to vibrate at some particular pitch whenever it is set in motion. If this were not damped or stopped in some way, the unit would rattle on certain notes, and blast and distort the music. This damping is accomplished by mounting pieces of soft rubber tightly between the iron reed or diaphragm, and the pole pieces. In the Amplion Revelaphone the entire vibrating iron reed is pivoted in sponge rubber. The reed is thus left free to vibrate between the pole pieces, but it is damped by the rubber mounting at its pivot. The Bosch Recreator also operates on the damping principle of a rubber pivot, rather than rubber between the pole pieces. The Baldwin Needlephone has a rubber damped pivot as well as damping rubber between the pole pieces.

Volume Control.

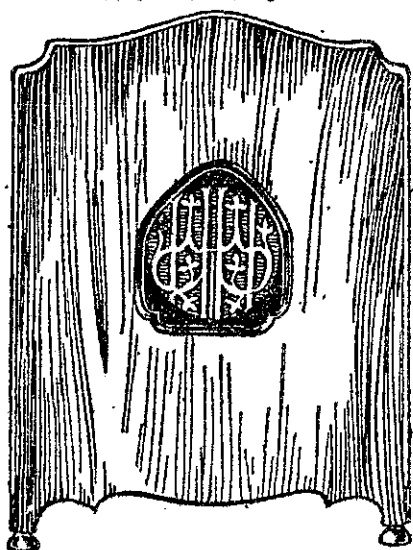
THE regulation of volume of tone has brought forth almost as many ideas as there are different electrical pick-up units. In general, these volume control boxes are variable resistances which shunt out some of the electrical currents generated in the pick-up unit. An adjustable knob enables the volume to be reduced to an almost inaudible whisper.

The question of weight on a record is indeed a serious problem. Records as well as needles, wear out, and we are quite familiar with the fact that needles should be changed rather frequently. However, one is not accustomed to think in terms of "record wearing." Nevertheless, this is quite an important factor, if the electrical pick-

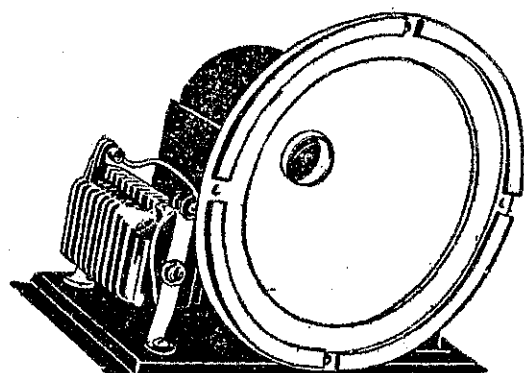
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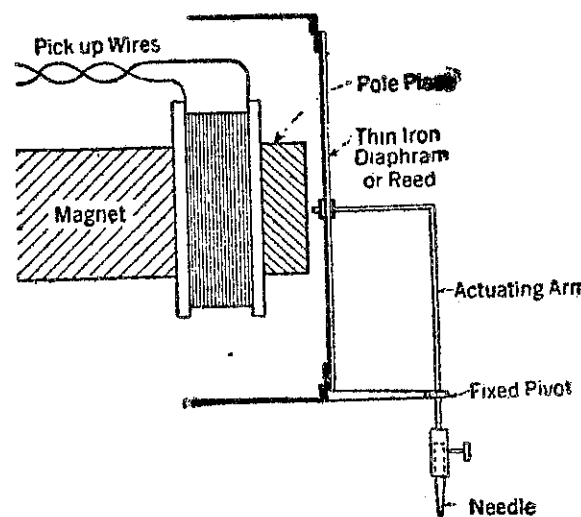
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D.6	6 Volt D.C.	Current
D.7	110/220 D.C.	Current
D.8	6/12 Volt D.C.	Current
D.80	230 Volt A.C.	Current

Also complete Unit and Amplifier for 230 Volts A.C.



Cross-Section of Electric Pick-up

was made to travel over the impression in the wax cylinder as the disc moved to and fro under the influence of the person's voice. Then, when it was desired to hear the record, the thin disc was placed at the end of a horn and the needle was made to travel over the same waving path which it had previously cut. The wax groove forced the needle to and fro, which in turn actuated the diaphragm.

AN electrical pick-up is merely the combination of these two inventions. A phonograph needle must be attached to the pick-up device. This needle actuates a thin strip of iron mounted directly in front of the pole pieces of an electro-magnet. As the needle is forced back and forth by the waving nature of the grooves of the phonograph record, the thin iron diaphragm is forced to vibrate in unison in front of the electro-magnet. This vibrating magnetic metal induces electrical currents in the windings of the magnet whose vibrations are similar in nature to those of the diaphragm, and in turn to the grooves in the record.

Of course, these currents are extremely weak, although very clear and excellent in tone quality. If we should place a pair of headphones across the output of this electric pick-up unit, we would hear some very fine music. The only problem that now remains is to amplify this sufficiently to be heard

up unit is made at all heavy. It is this factor that has controlled the size of the magnet in the pick-up unit, and accounts for the fact that all of them are extremely small.

How the Units are Connected.

THE methods of connecting the pick-up unit to the detector tube vary considerably in each case. The Bosch Recreator is attached by means of a special plug which fits into the detector socket in place of the detector tube. At the top of the plug are two tip jacks into which the cord tips are inserted. The Amplion Revelaphone is built with a combination plug and socket. The detector tube is removed, the plug inserted in the detector socket, and the detector tube replaced in the special socket at the top of plug. The Stromberg-Carlson electrical pick-up unit is built with a standard plug, which is made specially to fit into the proper jack for the purpose in their various models of radio receivers. The Pacent Phonovox Unit is designed with a very unique method of attachment which utilises the amplification of the detector tube and so permits the tube to be reinserted in its socket. A thin bakelite strip with the proper holes is pushed on the pins at the base of the tube. The tube is then inserted into the socket. By means of eyelets in two of the holes (the grid and filament) contacts are made with two pin jacks at the outside edge of the bakelite strip. The electrical pick-up unit is connected by cord tips in these two pin jacks.

The electrical coils wound on the pick-up magnet must be very small, mainly because of the smallness of the pick-up magnets themselves. As previously discussed the magnets must be as small and as light as is consistent with good results, in order to reduce the wear on the photograph records. In order to make a compact, small, electrical coil, it is necessary to use very small wire. This wire is hardly larger than a hair, being in the neighbourhood of No. 40 B. and S. gauge. Obviously, such a coil would quickly burn out if any battery currents were allowed to flow through it. Of course, any unit which is attached to the grid of the detector tube does not have to have any special precautions for eliminating the battery currents from the electric winding, as no battery current exists in this part of the circuit.

All of the pick-up units that are designed to operate on the plate circuit of the detector or the primary of the first audio transformer, must be arranged with a fairly large condenser in series. This condenser prevents the flow of the detector battery currents through the pick-up unit, but allows the audio current generated in the unit to pass through into the primary of the first audio transformer.

How to Get Best Results.

ALL of the electrical pick-up devices which we have tried operated very satisfactorily. Some were particularly low pitched while others covered the higher ranges. It would be entirely a matter of taste which would be considered the best from the point of view of tone quality. In this connection several important things should be mentioned in order to do justice to all types of electrical pick-up units. In the first place, it is most desirable to use the latest type of electrically recorded, phonograph records.

On the Victor records this can be easily ascertained by the letters "VE" at the top of the name-plate at the centre of the record. This means "Victor Electric." Electrically cut records of other makes are also plainly marked on the signature of the disc. The old-fashioned records were not made with the bass notes because there was no way of reproducing these bass notes. You will not obtain the best tone quality on any electric pick-up with an old record.

In the second place, it is essential, for best results, to employ a power tube in the last audio stage of your radio set. Such a tube should be operated on at least 135 volts and should preferably be of the 171 type. This has more effect on the reproduction of the bass notes than the audio transformers of your receiver. I have heard of a case where a man went to all the trouble of replacing his audio transformers in his radio set to give him the bass notes and then did not employ a power tube in the last audio stage.

In the third place, a good cone speaker, an exponential horn or a dynamic speaker should be used on the set. The use of the old type horns or small cone speakers will take away much of the excellent tone quality which is noticeable in the modern Orthophonic and Panatrophe phonographs.

The most important of these suggestions is that you should have a power tube and good speaker if you are seriously interested in good quality. The reason for the excellent tone quality on the latest phonographs is not solely the electric sound-box. A loud-speaker and a good power tube, such as is used in the Panatrophe, are equally essential.

SOME listeners use a buried "earth" instead of the conventional water pipe, even though the latter is available. If there is any doubt as to the success of the buried "earth," it is quite easy to test the earth connection, the best method being the comparative one. All you need for the purpose is a fairly long length of flexible wire, or of ordinary wire as used for coils if flexible wire is not obtainable. First of all, tune in your set to a fairly weak signal and listen carefully to the strength of reception, preferably during a talk. Then disconnect the present earth lead from the set and join the temporary flexible wire there, the other end of this being taken to a water tap or some other really good earth connection which can conveniently be joined up for the purpose of the test. (Make the connection to the new earth as good as possible, or otherwise the test will necessarily be inconclusive.) It may be necessary to retune a little on the set owing to the different length of lead in the earth wire, but if your present earth connection is really poor the new temporary lead will have the effect of improving reception considerably. Consequently you should either make this a permanent connection, or else overhaul the old lead, which is obviously in need of renewal.

MORE than one thousand applications for radio patents were registered in England during last year.

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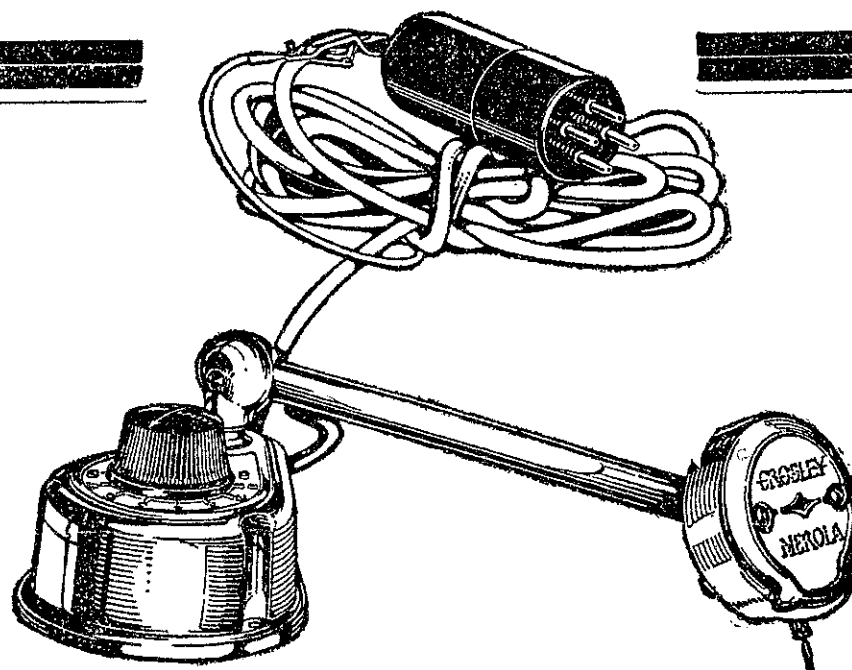
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Improving the Audio Frequency Amplification of Receivers

THE average radio enthusiast who has had his set long enough to have passed through the period of midnight and early morning searching for distant stations, and to have settled down to the enjoyment of programmes from nearby stations, will sooner or later become interested in tone quality. Tone quality depends almost entirely on the audio frequency end of the receiving set. Such advances have been made during the last year or eighteen months that uniformity of amplification with transformers is now possible and music from any of the older commercial or amateur made sets sounds thin and distorted in comparison with that from sets using the more modern and efficient audio frequency transformers, such as the Ferranti type.

Many dissatisfied owners will purchase the more efficient audio frequency transformers and substitute them for the original small transformers in their sets. In some cases other changes for improved selectivity, volume, etc., will be made simultaneously with the change in audio frequency transformers. After the change has been completed the tone quality may not seem to have been improved. There may even be whistles and burbles that were not heard with the old transformers. The fault should not be charged to the new transformers, but to the set as a whole, and some minor adjustments will usually be necessary to obtain full advantage of the improved amplification.

THE modern transformer, due to its high efficiency, requires more care in the arrangement of the wiring of the set. Few people, other than radio engineers who have made a study of it, realise the amount of feedback or regeneration that may exist in the audio stages. With the old type of transformer the regeneration was kept down by the relatively large losses, or if os-

cillation did occur the frequency was well above the audible range.

With the more modern type of transformer the losses are small, and if the regeneration is sufficient to cause oscillation, the frequency is sure to be well within the audible range. Even if oscillation is not present regeneration may cause distortion by increasing or decreasing the volume of one or more of the notes. Feedback can decrease as well as increase the signals.

To prevent feedback, make the wiring as straight and as simple as possible. Start at the antenna end and go straight through the set keeping plate and grid wires away from each other and as short as possible. Never run a grid wire parallel to a plate wire. The use of 1 mfd. or 2 mfd. condensers across the B batteries will frequently improve results. They should be placed inside the set and as close to the transformers as possible. These condensers by-pass signals out of the B batteries which as a result of their resistance may cause resistance coupling from one stage to the other. It is sometimes necessary to pull out the wiring of the audio end of the set and replace it, following the above instructions.

A radio frequency by-pass condenser of the correct capacity is built into the Ferranti audio frequency transformer. Therefore it requires no other by-pass condenser across either winding in any stage.

THE valves may also be a source of trouble when more efficient transformers are used. The general increase in amplification and the greatly increased volume of the low notes may overload the last valve, resulting in distortion. This can be overcome by using a power valve in the last stage. In some cases the last valve will carry the volume if the B and C voltages are increased.

IN making your comparisons after the set has been changed over, the following points must be kept in mind. The chief difference between the old and new transformers is the increased amplification of the lower notes. If the music that you are listening to has very few low notes, the difference will be small. Organ recitals, orchestral music, and male quartets will show up the real quality of the transformers. This does not mean that only this class of music will be improved. Reception of all kinds will be improved, but the improvement will be most marked in the above classes of reception.

It is very misleading to try to compare transformers by temporary wiring with switches to throw over from one transformer to the other. This is due to the strong tendency to regeneration that will exist in such wiring. The volume may be increased or decreased by regeneration as much as 50 per cent. When such an arrangement is used, the amplification of each stage and of the combined stages should be measured by accurate methods. The combined amplification should approximately equal the product of the individual stages.

Although care is necessary in installing Ferranti transformers in existing sets, there are few cases where they will not greatly improve the quality of reception. The results to be obtained are well worth the trouble because the tone quality is so nearly perfect that radio music sounds real and satisfying.

Call Signs

Change in Near Future.

FROM January 1, 1929, new call letters will be used by transmission stations the world over. An endeavour has been made to allot each country letters chosen from the name of the country, in order that the transmitter may easily establish his identity. Broadcasting stations, however, are not affected by this arrangement, the change being confined to amateurs, ships and coast stations.

New Zealand has been allotted the call signs ZKA to ZMZ. These must be given out before the district number and letters which will, where possible, remain as in use at present.

Government stations will have three characters, and these will replace the former characters.

Ships are to be allotted call signs of four letters. This will mean the addition of any letter to follow the three allowed this country, e.g., ZLBY.

Amateurs are to use signs of five characters. Two from the first two of the allowed three, a district number (as now used), and district lettering, e.g., ZL3AB will probably be the call of amateur 30B.

Among the mandates to share these letters are the Cook Islands and Samoa. In this connection it is interesting to notice that Samoa has been allotted ZMA to ZMZ (Za Moa), while Cook Island has ZKA to ZKZ (Kook).

It is more than chance that New Zealand is to work from ZLA (Zealand).

Stations in calling one another first send out call sign of station wanted, then the (French "to"), and finally their own call letters. Thus one New Zealand amateur calling another may call thus: ZLA 1AK de ZLB 3XY.

Aircraft Wireless.

THE "CALCUTTA'S" POWERFUL AIRCRAFT SET.

The Short Calcutta flying boat recently mentioned in the cables as moored in the Thames just off the Terrace, is equipped with a Marconi wireless transmitter of 500 watts power, the most powerful aircraft wireless transmitter yet designed, and a five-valve receiver. This apparatus has been specially developed for use in the large flying boats and airships which will fly on the projected Empire air routes. The installation is capable of communication with air ports at distances of from 300 to 400 miles by telegraphy or telephony, and can thus travel between air port or other wireless stations 600 to 800 miles apart without losing contact.

The set is so designed that should aircraft carrying this type of apparatus have to alight they will still be able to communicate by wireless with the nearest wireless station, while in the event of a flying boat being in need of help on the water, the pilot would be able to send out the SOS call to ships. The range of wavelengths provided for the transmitter is variable between 600 metres and 1500 metres. The standard wavelength for ships' working is 600 metres and that for aircraft 900 metres. The receiver may be tuned in to any wavelength between 600 and 4000 metres.

Care of Batteries.

Box Container Suggested.

The "A" battery with its charger and the "B" batteries, or a "B" battery eliminator, should receive the very best attention, for the satisfactory operation of the receiver depends thereon. It is a good practice to build a box to house these items. Several coats of good asphaltum paint will protect it against the fumes from the "A" battery. This box can be divided into two compartments—one for the "A" battery and charger, the other for the "B" batteries, if the constructor so desires. A hinged cover will be almost a necessity to prevent dust from collecting on the apparatus and clothing from coming in contact with the top of the "A" battery. Vent holes should be provided for the escape of fumes. A battery cable of the detachable plug variety, used to make connections from the set to the battery box, is a very convenient arrangement. This allows the battery to be instantly connected or disconnected from the receiver for inspection or repair, and the unit is so arranged that it can be put together only in the proper manner.

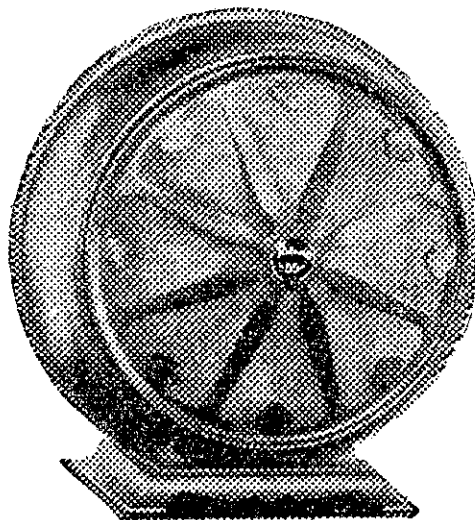
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Glossary of Wireless Terms

From week to week we give here a section of the glossary of wireless terms from the "Listener's Guide."

PICK-UP, ELECTRO-MAGNETIC.—

A device for attaching to a gramophone to enable the output from the record to be passed through the audio stages of a radio receiving set, and thereby amplified before issuing from the radio loudspeaker. The unit is, in itself, merely a reed type loudspeaker or phone unit with an attachment to the reed to enable gramophone needles to be held into position.

When the needle is vibrated against the surface of the record, the reed in turn is moved correspondingly as the action in turn alters, producing a flux in the iron of the magnets over which the windings are wound.

The flux introduces an alternating E.M.F. in the windings surrounding the magnets, which is of frequency corresponding to the vibrations activating the needle. The pick-up generates minute voltages which require to be stepped up before they are of sufficient magnitude to actuate the diaphragm or cone of a loudspeaker.

To increase the voltages generated in the pick-up, the ordinary audio amplifier is brought into operation, either as a separate unit or plugged into the broadcast receiver, so that two audio stages

or, in some cases three, are brought into operation. Mechanical means are used in the ordinary gramophone to amplify the sound vibrations produced in the sound box, and of course absolute fidelity of reproduction cannot exist in such circumstances.

Power valves will handle this volume without overloading, and the output will be much purer in consequence. Then the loudspeaker must be brought into consideration if perfect reproduction is to be expected. It should be capable of good reproduction of both the high-pitched and low-pitched sounds.

POLES.—The opposite ends of a magnet or terminals of a battery are spoken of as poles; in the former as north and south poles, and in the latter as positive and negatives; termed also plus and minus polarity, respectively.

POTENTIOMETER.—A compact device for varying the potential applied to different parts of wireless circuits.

POWER AMPLIFICATION.—A system of low-frequency amplification which makes use of valves and transformers specially designed to deal with considerable energy; is essential to efficient loudspeaker operation.

Modern Transformers in Sets Operating from B Battery Eliminators

WHEN some transformers, such as Ferranti, which have high efficiency and high inductance, are used in radio sets operated from alternating current battery eliminators, trouble may be experienced because of incorrect design of the B eliminator resulting in feedback from the audio transformers.

Troubles of this character are indicated by the presence of "bubbles" or a series of "put-put" sounds in the output commonly known as "motor boating."

There may also be a residual hum of a pitch corresponding to twice the frequency of the alternating current supply, and this is more to be expected when using audio transformers which are efficient over the entire broadcast range, as any residual due to insufficient filtering is amplified by the transformers in the same way a low note would be.

"Motor boating," when using a B eliminator, is usually caused by one of two things. First, the filter system may not be correct.

Second, the resistances may not be by-passed enough, resulting in feedback through the resistances. For any given frequency there is a relation between the values of inductance and capacity which must be obtained or the filter will not do its work properly.

If the filter is not working properly, a small low frequency voltage will be applied to the detector valve and this will be amplified by the transformers. If audio transformers used in the set do not give a high amplification of the low notes, motor boating may not result. The trouble in the filter system is generally due to the inductance.

The inductance of the choke coils varies with the amount of direct current flowing. For example, a choke having 20 henrys of inductance with

no direct current flowing in it may have its effective inductance reduced to 10 or even to 5 henrys with 20 or 30 milliamperes flowing through it.

If the resistance across the output of the eliminator is not by-passed with sufficient condenser capacity, there will be an alternating current voltage impressed on the plates of the valves ahead. If this voltage is large enough, regeneration will result, and if the impedance of the transformer is high, the oscillation frequency will be within the audible range.

The only way to locate such troubles is by experimenting, and the application of some of the following suggestions will usually eliminate them.

Try a larger choke coil or an additional choke coil in the filter system.

Increase the value of capacities used in the filter system. It may be necessary to increase both the amount of capacity and inductance used in the filter.

Try grounding the B minus of the eliminator, and if a short circuit results due to grounds on the lighting system, make the connection through a condenser of 0.5 mfd. capacity.

Try condensers of one of two microfarads capacity connected between the B minus and each tap of the eliminator, although an extreme condition may require as much as four microfarads across the tap connected to the first audio frequency transformer.

In some cases choke coils of 12 to 15 henrys connected in series with all leads running from the B eliminator to the set will produce results, although usually such a choke is necessary only in the detector lead. The proper value of the choke coils can only be determined by experimentation. The by-pass condensers must be connected from the B minus of the eliminator to the lead of the choke that is connected to the radio set.

RADIO DIRECTORY

What to Buy and Where

AUCKLAND

- ATWATER-KENT RADIO** ... **Frank Wiseman, Ltd.**
170-172 Queen Street, Auckland.
- ALTONA & HAMMARLUND-ROBERTS SETS.** **Johns, Ltd.**
Chancery Street, Auckland.
- AMPLION LOUDSPEAKERS** ... **All Radio Dealers.**
- BREMER-TULLY RADIO** ... **Superadio, Ltd.,**
147 Queen Street, Auckland.
- BURGESS RADIO BATTERIES,** **All Radio Dealers.**
- CE-CO VALVES** ... **All Radio Dealers.**
- FADA RADIO** ... **National Electric & Eng. Co., Ltd.**
Customs St.; Radio Supplies, Symond St.
- FEDERAL, MOHAWK, GLOBE** **Federal Radio House,**
8 Darby Street, Auckland.
- FERRANTI RADIO COMPONENTS** ... **A. D. Riley and Co., Ltd.** Anzac Ave., Auckland, and all leading dealers.
- GILFILLAN AND KELLOGG** . **Harrington's, Ltd.,**
138-140 Queen Street, Auckland.
- GREBE RADIO** ... **Howie's,**
Dilworth Building, Custom st., Auckland.
- MARCONI ECONOMY VALVES** **All Radio Dealers.**
- MULLARD VALVES** ... **All Radio Dealers.**
- RADIOLA RECEIVERS** ... **Farmers' Trading Co., Ltd.,**
Hobson Street, Auckland.
- RADIOTRON VALVES** ... **All Radio Dealers.**
- RELIANCE BATTERIES** (N.Z. Made) ... **Reliance Battery Mfg. Co., Ltd.,**
96 Albert Street, Auckland.
- T.C.C. CONDENSERS** ... **A. D. Riley and Co., Ltd.** Anzac Ave., Auckland, and all leading dealers.

COUNTRY TOWNS

- ANCHORADIO, BREMER-TULLY, RADIOLA, BROWNING-DRAKE, AND ATWATER-KENT RADIO** **Radio House,**
Hamilton. G. S. Anchor, Manager.
- BROWNING-DRAKE SALES AND SERVICE** ... **J. H. Sinclair,**
Otane, H.B.
- CROSLEY ELECTRICAL AND BATTERY MODELS** ... **The Forrest-Crosley Radio Co., Ltd.** Cuba Street, Palmerston North.
- GAROD, CROSLEY, RADIO AND ACCESSORIES** ... **The Hector Jones Electrical Co.**
King and Queen Streets, Hastings
- GILFILLAN, FEDERAL, STANDARBYNE AND GARRARD ELECTRIC RADIO — ALL ACCESSORIES** ... **W. M. Pitcher and Co.**
Hamilton.
- GREBE, CROSLEY AND RADIOLA SERVICE** ... **E. Dixon and Co., Ltd.,**
Hawera.
- RADIOLA DEALER AND SERVICE** ... **G. C. Carrad.**
140 The Avenue, Wanganui.
- ROLA CONE SPEAKERS** ... **J. B. MacEwan and Co., Ltd.,**
Federal Radio Dealers, New Plymouth.
- PHILIPS VALVES AND APPARATUS** **All Good Radio Dealers,**

On Short-wave

Short-wave Stations of the World on Telephony

MR. F. W. SELLENS writes:—

A probable solution of the mystery station reported from time to time as calling what sounder like "Au Japanese," has been received from Mr. J. L. Lethbridge, Cromwell.

This gentleman, in sending a report of reception from 5SW to the B.B.C., asked them if they could give him any clue as to the station broadcasting in French just above 5SW. Their reply was, that it was probably "Radio Saint Assise—F.W.," which works on 24.5 metres.

THE Hilversum short-wave station (PCJJ), which at present has a power of 5K.W., has applied for permission to use four times this power.

The "Wireless World" (England) writes: "One of the best trans-Atlantic relays yet achieved by the B.B.C. was that which took place on Friday morning last, when WGY, Schenectady, broadcast a running commentary on the Tunney-Heeney fight.

"The signals were picked up by Keston and relayed to stations of the B.B.C. Not only were the words of the commentators heard with exceptional clarity, but listeners were able to distinguish the sounds of ringside enthusiasm."

Extension for 5SW.

FOR the benefit of an ever-increasing number of short-wave enthusiasts in India who regularly listen to the London programmes as radiated from 5SW, the short-wave station at Chelmsford, the B.B.C. has decided to begin transmitting half an hour earlier on Friday evenings. Instead of starting up at 7 p.m., 5SW will therefore begin at 6 p.m., and close down for the half hour between 6.30 and 7 p.m. when the news bulletin is broadcast.

(6 p.m. B.S.T. on Friday evening is 4.30 a.m. on Saturday morning New Zealand time.)

The earlier start has been specially asked for by Indian listeners, and demonstrates the keen interest that is being taken throughout the whole Empire in British broadcasting.

"And while we are on the subject of 5SW (writes 'Popular Wireless') what about news for the outer Empire? How long will the present ridiculous practice persist of excluding from its transmissions what the Dominion and Colonies are particularly interested in?"

My log for the past week is as follows:—

Saturday, September 15.

Reception from 5SW at R8 was spoilt by rapid fading. KDKA was tuned in at 1.30 p.m. when strength was R3. Rapid fading spoilt intelligibility. After 2 p.m., volume improved, and some native melodies, etc., were given by the "South Sea Islanders." When they signed off at 2.32 p.m., strength was R5.

2XAD was R5 at 1.30 p.m., increasing to R7 3.31½ p.m., when they closed down. The latter part of the programme consisted of dance music from the Hotel St. Regis Rood Orchestra; of New York City.

PCJJ put over a good gramophone concert from 3.30 p.m. till after 6.30 p.m. Strength ranged from R4 to R9, decreasing after about 5 p.m.

MR. F. W. SELLENS has compiled the following very complete list of overseas stations. The majority of stations are not audible in New Zealand, except under the best conditions, but it has been thought advisable to include all as a check for any reader being lucky enough to log one of the weaker ones. The list is partly from "World-Radio," with a few others from other sources.

The times given are based on standard time in the various countries, all shown in New Zealand mean time. Summer time is observed in United States and Great Britain during the summer months and allowance must be made for that period.

Abbreviations: M., Monday; T., Tuesday; W., Wednesday; Th., Thursday; F., Friday; S., Saturday; Sun., Sunday.

Call.	Wavelength, metres.	Power, kilowatts.	Location.	Schedule.—New Zealand Time.
6WF	.. 104.5		Perth, W. Australia	Most evenings from 11.30 p.m.
7LO	.. 90	4 ..	Nairobi.	Daily, 4 a.m.-7 a.m. Sun. till 9 a.m.
EH9XD	.. 85	..	Zurich (Radio Club).	
F8AV	.. 80	0.4 ..	Nogent-sur-Seine.	Daily, except W. from 9.30 p.m., Sun. from 2.30 p.m.
RFM	.. 70	..	Khabarovsk.	
WBZ	.. 70	..	Springfield (Mass.).	M. for 15 minutes after each half-hour from 4.30 a.m. till 12.30 p.m.
OHK2	.. 70	..	Vienna.	M., W., and F., 11.30 p.m. till 12.30 a.m. T., Th., and S., 5.30 a.m. till 6.30 a.m.
AFK	.. 67.65	0.5 ..	Doberitz.	From 10.30 a.m.
6XAL	.. 66.04	0.5 ..	Los Angeles (California).	
2XAQ	.. 65.4	0.05 ..	Newark (N.J.).	
2XBA	.. 65.18	0.5 ..	Newark (N.J.), S.W. of WAAM.	W., F., and S., 10.30 a.m. till 3.30 p.m.
KFBC	.. 65.18	..	San Diego.	
WABC	.. 64	0.5 ..	Richmond Hill (New York)	Daily, except M. 10.30 a.m. till 4.30 p.m.
KDKA	.. 63	..	East Pittsburgh.	
9XU	.. 61.06	0.5 ..	Council Bluffs (Iowa).	
GC	.. 61	..	Paris (Radio L.L.).	
3XL	.. 59.86	30 ..	Bound Brook (N.J.).	M., 2.20 a.m. till 4 a.m. Other days, 9.30 a.m. till 3.30 p.m.
2XE	.. 58.5	..	New York City; relays WABC.	Occasionally after 5.30 a.m.
AGJ	.. 56.7	..	Nauen.	
XJ	.. 54.02	..	Columbus (Ohio).	
2XBH	.. 54.02	0.15 ..	Coney Island (N.Y.).	From 9.30 a.m.
WCGV	.. 54	..	Brooklyn (N.Y.).	
7XAO	.. 53.54	0.1 ..	Portland (Oregon).	
8XAL	.. 52.05	0.5 ..	Harrison (Ohio).	
WLW	.. 52.02	..	Cincinnati (Ohio).	From 10.20 a.m., except M. Weather reports, 8 p.m. and 7 a.m.
AIN	.. 51	..	Casablanca.	
	.. 50	..	Karlsborg, Sweden.	
IAX	.. 45	..	Rome (Italy).	Broadcasts occasionally.
	.. 44.4	0.24 ..	Vienna.	
KDKA	.. 43	..	East Pittsburgh.	
SKR	.. 42.8	..	Constantine (Tunis).	Sun., 8.30 a.m. till 10.30 a.m.
YR	.. 40.2	..	Lyon (Rhône).	Daily, except M. 3 a.m. till 4 a.m.
	.. 38	..	Agen.	
AFK	.. 37.65	..	Doberitz.	
JHBB	.. 37.5	..	Ibarahiken (Japan).	Occasionally relays JOAK
WJD	.. 37.01	..	New York.	
	.. 37	..	Radio Vitus.	Th., S., and M., 7.30 a.m. till 8.30 a.m.
EATH	.. 37	..	Vienna.	T. and F., 9 a.m. till 10.30 a.m.
3BB	.. 35	..	Sourabaya, Dutch East Indies.	T. and Th., 11.15 p.m. till 1.15 a.m. Sun., 2.15 p.m. till 4.15 p.m.
6XAR	.. 33	..	San Francisco (Calif.).	From 10.30 a.m.
6AQ	.. 32.9	..	Perth, W. Australia.	Almost every morning from 2.30 a.m. Sometimes from 10 p.m.
2NM	.. 32.5	.. 32.5	Caterham, England (Gerald Marcuse).	Sun., from 5.30 p.m.; M., from 4.30 a.m.; Th. and S., 9.30 a.m.-11.30 a.m.
2BL	.. 32.5	..	Sydney, Australia.	
7MK	.. 32.5	..	Copenhagen.	W. and F.
FL	.. 32.5	..	Paris, Eiffel Tower.	Time signal, 7.26 a.m. and 7.26 p.m.
EH9XD	.. 32	..	Zurich (Radio Club).	
3LO	.. 32	..	Melbourne.	M., 6 a.m. till 8 a.m.
JB	.. 32	..	Johannesburg.	
EH9OC	.. 32	..	Berne (Switzerland).	
8XAO	.. 32	0.75 ..	Detroit (Mich.).	
ANE	.. 31.93	..	Bandoeng, Java.	W. and F., 4.10 a.m.-6.10 a.m.
4XD	.. 31.43	..	Nashville, Tenn. (short wave, WSM).	
	.. 31.25	..	Bergen.	
	.. 31.5	0.3 ..	Helsingfors.	
PCJJ	.. 31.4	..	Hilversum, Holland.	W., 3.30 a.m. till 7.30 a.m., 10.30 a.m. till 1.30 p.m.; F., 3.30 a.m. till 7.30 a.m.; S., 3.30 p.m. till 6.30 p.m.; Sun., 1.30 a.m. 4.30 a.m.
2XAF	.. 31.4	30. ..	Schenectady, New York.	T., 9.30 a.m.-3.30 p.m.; W., 9.30 a.m.-3 p.m.; F., 9 a.m.-3.30 p.m.; Sun., 11.30 a.m.-3.30 p.m.

2XAL	..	30.91	..	New York (short wave, WRNY).	Daily, 3.30 a.m.-5.30 a.m. and 11.30 p.m.-1.30 a.m.; M., 6 a.m.-11 a.m.; T., 6.30 a.m.-11.30 a.m.; W., 11.30 a.m.-4.30 p.m.; Th., 6.30 a.m.-1.30 p.m.; S., 6.30 a.m.-3.30 p.m.; Sun., 11.30 a.m.-2.30 p.m.
EA	..	30.7	..	Madrid.	
LG	..	30	..	Bergen (Norway).	
2FC	..	28.5	..	Sydney.	
8XK	..	27	40.	Pittsburgh.	T. and F., 5.30 a.m.-7.30 a.m.
2XAG	..	26.92	..	New York.	
2XAB	..	24	..	New York.	
5SW	..	24	15.	Chelmsford, England.	Daily, except Sun. and M., 12 p.m. to 1 a.m., and from 6.30 a.m. to 10.30 a.m. M., 12 p.m. to 1 a.m.; and S. 6.30 a.m. to 10.30 a.m.
2XAA	..	22.99	..	Houlton (Maine).	After 9.30 a.m.
WQWO	..	22.8	1.	Fort Wayne (Indiana).	After 9.30 a.m.
	..	22.2	0.24	Vienna.	
2XE	..	22.1	..	Richmond Hill (N.Y., S.W. of WABC).	After 9.30 a.m.
2XAD	..	21.96	..	Schenectady (New York).	M., 9 a.m., 2 p.m.; T., 5.30 a.m.-7.30 a.m.; 9.30 a.m.-3.30 p.m.; Th., 9.30 a.m.-3.30 p.m.; F., 5.30 a.m.-9.30 a.m.; S., 9.30 a.m.-3.30 p.m.
PCLL	..	18	..	Kootwijk (Holland).	Th., 1.30 a.m.-3.30 a.m. and occasionally T. and S.; relays proceedings of League of Nations.
AGC	..	17.2	..	Nauen.	
ANH	..	17	30.	Bandoeng, Java (Radio, Malabar).	Sun., 12.10 a.m. till 2.10 a.m.
2XG	..	16.02	..	Rocky Point (Long Island).	T. and S., 3.30 a.m.
ANE	..	15.93	15.	Bandoeng, Java (Radio, Malabar).	W., Th., and F., 5.10 a.m.-7.10 a.m.
	..	15.5	..	Nancy, France.	

capacity neutralising principle, are disappointing. Neutralised radio frequency receivers as a type are probably more widely used than any other type of receiver, except, perhaps, the crystal receiver, and their efficiency when properly constructed and adjusted is never doubted. Quite the most common cause of failure in home-made neutrodyne sets is incorrect adjustment of the neutralising condenser. The purpose of this condenser is to compensate for the unavoidable capacity which occurs in the receiving valves, and to a lesser extent in other parts of the circuit, but to be effective its adjustment must be made with great exactness. The effect of the accidental and unavoidable capacity in the radio frequency amplifying valves and associated components is virtually to form a partial short circuit across the radio frequency amplifier, with the result that energy picked up by the aerial is passed more or less completely to the detector valve without being properly amplified by the amplifier. Great loss of sensitivity results. The method of adjusting the neutralising condensers to avoid this effect is simple. The receiver is tuned in to a fairly strong local station, and the filaments of the radio frequency amplifying valves are then turned off. It will be found that signals from the local station will still be heard, though generally at considerably reduced volume. The neutralising condenser is then adjusted until the signals disappear or become so faint that they are practically inaudible. If more than one valve is used in the radio frequency amplifier, first one valve should be adjusted. When signals are cut off by the adjustment of the neutralising condenser on the first valve, that valve should then be lighted, the second still being turned off. It will be found that signals will again become audible, and the second valve should then be adjusted until they disappear again. The receiver will then be completely neutralised. It should be borne in mind that it is generally necessary to make a slight readjustment of the neutralising condenser if the radio frequency amplifying valves are changed. This will certainly be necessary if valves of one type or make are replaced with a different type.

time, at R5. Some of his talk sounded like a Maori haka.

5SW from 11 p.m. was R4—quite strong for this transmission. Signals were spoilt, probably on account of swinging aerial at this end, as a gale of wind was blowing.

These late evening transmissions from 5SW are gradually improving in strength. It is of course midday at the other side, and daylight at least half the way round.

Correct Neutralising.

Causes of Failure.

IT is common experience among home builders that preliminary experiments with various forms of neutrodyne circuits, or other receivers, such as the Browning Drake, embodying the

RADIO—Gilfillan and Bremer-Tully

LARGEST STOCKS OF RADIO ACCESSORIES IN SOUTH CANTERBURY.

COMPLETE INSTALLATIONS A SPECIALTY.

BREHAUT BROS.,

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THE WHOLE COUNTRY TALKED—

of the wonderful relay of the recent EUCHARISTIC CONGRESS held in Sydney. This is but another signal proof of the excellence of a

MACK'S SHORT WAVE SET

that did the work, which is a fully shielded set, calibrated and guaranteed, and can be purchased for £14/10/-. Extra broadcast coils can be bought for 20/-.

HEAR ENGLAND, HOLLAND, AMERICA, RUSSIA, AUSTRALIA, AND THE WORLD ON A SHORT WAVE SET BUILT BY

MACK'S RADIO CO., LTD.

76 and 77 KENT TERRACE, WELLINGTON

2AJ, Wellington, was heard testing on the 30-metre band.

Sunday, September 16.

Conditions must have been bad for DX. 2XAF at its best was not more than about R4. This was the only distant station heard till RFM was on the air during the evening. Static on this was very bad.

Monday, September 17.

3LO was tuned in at 6.15 a.m., when all that could be heard was "Hullo" at times, and some morse V's. The session commenced with the time from Melbourne Observatory at 6.30 a.m., followed by the announcement that the programme was for one hour only. Volume R9 with bad fading. After 7 a.m., fading was not so bad, reception being much better.

Tuesday, September 18.

5SW was very good. Just before 6 a.m. some songs by a choir were enjoyed. This was followed by a talk by the headmaster of Christ's College on "Education and Unemployment." This was 95 per cent. readable at R8. At 6.15 a.m. a flute recital was heard. RFM was R5 during the evening. Static very bad.

At 11 p.m. the carrier of 5SW was not audible.

Wednesday, September 19.

From 5.15 a.m. till 7 a.m. PCJJ came in at even volume of about R8. Several items by Mr. —. Dutch pianist, were heard.

Big Ben was heard from 5SW at 5.30 a.m., followed by a lady talking about British Red Cross work. Seventy-five per cent. readable at R8. Volume remained at this till about 7 a.m.

KDK was tuned in at 2.30 p.m. Baseball results, weather forecast, and the next day's programmes were read. R4.

A political talk by Governor Al. Smith was heard from the City Auditorium, —, Nebraska, through 2XAF.

His audience appeared to agree with all he said by the way he was cheered. His concluding sentence was: "There can be only one decision on November 6, that is an overwhelming Democratic majority." (Loud cheers.) The talk finished at midnight, Eastern daylight saving time (3.30 p.m. here).

A Jap., probably JHBB, on about 31 metres, was heard at R8 during the evening. He shouted JOAK several times. The programme of this station is often relayed by JHBB on various short-waves.

2HC New South Wales, and 3(JR)? Victoria, were also heard testing.

Thursday, September 20.

5SW at 6 a.m. was R7, but rapid fading spoilt reception. The Wireless Band gave some items from 6.15 a.m.

A voice was heard on about 44 metres, but static was too bad to understand anything, even if it was English spoken.

At 8 p.m. a call was heard "Victorian Experimental Station 3(GP)? testing." The letters sounded different each time they were given. R5, static bad. 7CW Hobart came in well on about 33 metres. Strength R5, and very steady.

RFM was R5 with a strong ripple.

The Jap. was heard on about 60 metres this time. I don't know if it is always the same station, but he transmits on several wavelengths.

Friday, September 21.

PCJJ from 5 a.m. till 7.30 a.m. was very good. Strength fairly even all through at R7-8, decreasing slightly towards 7.30 a.m.

5SW commenced with Big Ben, followed by a talk on novels by a lady.

5.45 a.m.-6 a.m.: Concerted items were heard. 6 a.m.: "London and Daventry calling" was called. Something was said about a golf conference at Manchester, I think. The talk that followed 75 per cent. readable, was all about golf. Strength R8.

RFM was about R5 and very rough. The Jap. was on about 35.5 metres this

Pictures to be Regularly Radiated by B.B.C.

ONLY a short while ago, the British Broadcasting Corporation stated that while sympathetic with the development of picture radiation, it could not undertake any such system. The engineers of the corporation have kept themselves in touch with this field, and have now definitely decided to undertake still picture transmission from Daventry, 5XX. The transmissions will, if the public so desire, be included in the regular programme hours. The Fultograph system, as apart from television, is to be employed.

Although picture transmission is still in the experimental stage, this move on the part of a body so conservative as the B.B.C., predicts an important future for this science. American stations have, for some time, been regularly transmitting pictures, although by a different system. Good results have been obtained, but it cannot be said that picture transmission is yet definitely established. This science is to-day where wireless was in 1921, and it is very unlikely that either New Zealand or Australia will undertake anything of the nature until something more definite has been established.

However, this move by the B.B.C., especially in the adoption of the Fultograph system in preference to television, is of no minor significance.

The Fultograph System.

IN discussing the system with an official of the B.B.C., the inventor Captain Otto Fulton, remarked: "My apparatus is as simple as a cart—to a cart there are only wheels and the body, and if you take any of them away it is not a cart any more."

The apparatus is certainly simple. On the top of a box is clockwork which

revolves slowly a cylinder like the cylinder of an old type phonograph cylinder. Semi-absorbent paper, dipped in chemical solution, is placed round the cylinder and a platinum needle traces out in $3\frac{1}{2}$ minutes an easily-recognisable portrait. It is claimed that a one-valve set with a suitable arrangement to replace the loudspeaker can reproduce the pictures a distance of one mile from the transmitting station. Beyond this more valves are required.

When a photograph is to be transmitted a negative is printed on a sheet of zinc or copper foil coated with sensitised fish glue. During the printing the glue exposed to the light becomes insoluble. Washing the glue removes the portion that has not been exposed to the light, leaving an insoluble image. This is hardened and impressed into tin.

The glue picture is wrapped round the cylinder and as the cylinder revolves a metal stylus moves over it. The glue acts as an insulator, but when the stylus touches it a current passes and is transmitted.

A somewhat similar arrangement at the receiving end causes an identical picture to be traced out.

In Use At Vienna.

CAPTAIN FULTON and his fourteen assistants have done their experimental work in Vienna. His aim has been to put picture reception within the reach of the man in the street. "All the time I have tried to simplify radio picture apparatus for the man at

home," he told a representative of the B.B.C. The present Fultograph apparatus will cost about £15, and anyone will be able to use it.

It is already in use in Vienna, where every day a news picture, a sport picture, and a fashion plate or children's joke are broadcast. The received pictures are $4\frac{1}{2}$ in. by $3\frac{1}{2}$ in.

Television.

WITH this term are associated many names, perhaps the best known being that of Baird, the Scotsman. This inventor has evolved an apparatus to enable the vision of living and moving beings, objects and scenes to be transmitted by wireless or land line in a manner similar to that in which sound is transmitted by wireless and telephony.

Four devices are required to adapt the art of radio to television, two the photo-electric cell, and the neon "flash" lamp—are the "eye" and the "paintbrush" respectively, of the radio television apparatus. The other two essentials are the scanning mechanisms of the transmitter and the receiver.

The principle is based on the fact that the human eye can be focused on an area only the size of a pin-prick. To receive a sharp impression the eye must momentarily focus on each point on the object. Television apparatus breaks up into points the image which is to be televised, and restores it again, point by point, into a perfect whole at the receiving end.

We are accustomed to think of the images presented to our eyes as even.

unbroken scenes. Such is not the case. There are minute holes in our field of sight which is composed of a multitude of little impressions fitting closely together. At twenty to thirty inches from the eye a crack of 1-100 of an inch will vanish.

Advantage of this is taken in making illustrations for printing purposes, and this principle has been applied to television. If a scene can be broken before the television transmitter into small dots and reproduced, each according to its corresponding brightness, in the same relative position at the receiver, the picture can be reproduced with such accuracy that it will be acceptable to the eye. If this can be done at the rate of about fifteen times a second, a continuous moving picture can be reproduced at the receiving end. This is television.

The Systems Compared, and Contrasted.

WITHOUT having to go into the details of the television equipment, it will be clear that there are remarkable differences between the two systems. In that both are a modification of the wireless waves and result in the transmission of pictures the systems are alike. Beyond this the similarity does not exist. One transmits still pictures and the other moving ones.

The system to be used by the B.B.C. has much in its favour. It is efficient and cheap, and can be used now. Television is a science of the future. New publications are pregnant with fresh ideas, but few are, at the present time, workable. Moving pictures, sporting everything is within the range of television and imagination is reluctant to remain in any one field, so great is its scope—but its realisation is yet to be.

Mr. Baird's Progress.

A £700,000 Company.

RECENTLY Baird International, Ltd., a company having a share capital of £700,000 with Lord Amptill as chairman, was floated in London. The company acquires the rights in the Baird inventions and patents held by the Baird Television Development Co., Ltd., a company having a nominal share capital of £125,000. The Baird inventions are stated to embrace:—

(1) Television to enable vision of living and moving beings, objects and scenes to be transmitted by wireless or land-line in a manner similar to that in which sound is transmitted by wireless and telephony.

(2) Noctovision—a name applied to the application of infra-red rays to the Televisor to enable vision in total darkness to be demonstrated.

(3) Phonovision—the recording of a "television sound wave" in conjunction with music and reproduction from the record on a "Phonovision" screen of the actual moving scene as originally recorded.

(4) Facsimile Telegraphy—the sending of pictures by a slowing down of the television equipment.

(5) Automatic synchronism—a device whereby the transmitting and receiving apparatus are automatically kept in step.

The directors preferred not to state any definite estimate of profits accruing from the sale of television receiving equipments. Success attended the issue of the 1,000,000 "A" shares of the company of 5s. each, offered at a premium of 1s. per share, and the lists were closed at 10.30 a.m. on the day of issue.

Mr. Baird predicts that complete "seeing-in" sets will be available this month for £25 each, and that they will receive pictures from the company's broadcasting station.

RECENT cable messages, however, indicate quite clearly that Baird is making steady progress in important points and is even tackling the simultaneous transmission of voice and vision. A measure of success would seem to have been achieved which augurs astonishing things in the future—just how astonishing remains yet to be seen.

According to a recent issue of the "Morning Post" "A big stride forward was demonstrated at the Baird Laboratories, Long Acre, W.C. One of the party went on to the roof of the building, where a transmitting televisor

had been set up, and the rest of the party went with Mr. Baird into a room where there was a receiving apparatus.

"The receiver gave an image, about half as large again as an average cigarette card, but the detail was perfect."

"When the sitter opened his mouth his teeth were clearly visible, and so were his eyelids and the white of his eyes and other small details about the face."

"He was a dark-eyed, dark-haired man, and appeared in his natural colours against a dark background. He picked up a deep-red coloured cloth and wound it round his head, winked, and put out his tongue. The red of the cloth stood out vividly against the pink of his face, while his tongue showed as a lighter pink."

"He changed the red cloth for a blue one, and then, dropping that, put on a policeman's helmet, the badge in the centre standing out clearly against the dark blue background."

"The colour television proved so attractive that the sitter was kept for a long time doing various things at the request of the spectators. A cigarette showed up white with a pink spot on the end when it was lit. The finger nails on a hand held out were just

visible, and the glitter of a ring showed on one of the fingers."

A DEVICE has been invented by which aeroplane pilots can be directed from a base without the use of headphones and a trailing aerial. The headset is replaced by a visual indicator which shows when a plane is on or off its course marked by a directive aerial beacon. A short vertical rod displaces the dangling wire which frequently lashes itself to pieces and is a constant source of trouble to the pilot. The receiver weighing only 15lbs. is designed to be tuned from 285 to 350 kilocycles and may be used for the reception of radio telephone and telegraph messages, being arranged for remote control of tuning and volume. It is doubly shielded, and shielding of the engine ignition system is also employed.

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