

THE RADIO RECORD

Published Weekly
REGISTERED G.P.O., WELLINGTON, N.Z., AS A NEWSPAPER.

Vol. II., No. 31.

WELLINGTON, FRIDAY, FEBRUARY 15, 1929.

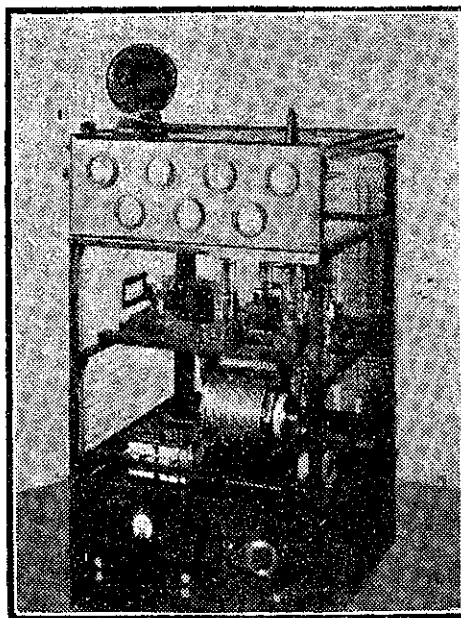
2 YB New Plymouth, to Operate Shortly

T probably will not be long now before "Station 2YB, New Plymouth," will be a well-known call-sign on the air.

For some time past the Broadcasting Company has had in hand the construction of a small transmitting plant for installation at New Plymouth. This plant is now about completed, and an hour's test carried out from the studio at 3YA, on Tuesday evening, was very successful. The little plant, which is of 50 watts, with a wave length of 244 metres, was evidently intently listened to by people in New Plymouth, one enthusiast telegraphing his report on the reception: "Even better than 3YA."

The New Plymouth broadcasting station is to be controlled by the North Taranaki Radio Society, which is a live enthusiastic body. It will provide the studio, and arrange local concerts, and incidentally, the new station will be used for testing the possibilities of rebroadcasting 2YA. It is hoped in this way to secure a better broadcast service for the people of New Plymouth than they have hitherto enjoyed.

NEW PLYMOUTH has always felt that it has fared badly in respect to broadcast reception. It would seem, apparently, that while Mount Egmont has been such a blessing to Taranaki, making it a land to flow with milk and honey, it has impaired, owing to its screening effect, reception of 2YA in New Plymouth. As the mountain could not be moved, the North Taranaki Radio Society considered ways of getting around it. The society, therefore, proposed erecting a receiving station on a flank of the mountain, with a relay line to a transmitting station in the town itself.



Transmitting Plant of 2YB photographed at Station 3YA.

The enterprise displayed by the society struck a responsive chord in the Broadcasting Company, which then offered to lend a small transmitting plant for use in New Plymouth. This is the plant that is now nearly ready. It has been assembled from parts of other plants which the company had on hand, and consists mainly of equipment from the old station, which was taken over by the Radio Broadcasting Company.

THE North Taranaki Radio Society has arranged for its studio to be located in Collier's Music Warehouse. The society has organised itself thoroughly with the view to efficiently carrying out the pre-

liminary work, and for afterwards carrying on the service. Small committees have been appointed with specific duties, the society recognising that small committees rather than large ones are the secret of success.

The Broadcasting Company will install the plant, and has also undertaken to provide an operator to work the plant. The company will also be responsible for the upkeep and maintenance of the plant, and for the cost of power. Beyond that, the company has no liability. The society provides the studio, the aerial system, landline, and studio equipment.

THE transmitter as at present reconstructed by the Broadcasting Company's chief engineer, is designed to deliver from 50-100 watts energy to the antenna. The main oscillating circuit is of the Colpitt type, working into a tank circuit, which is capacity coupled to the antenna system. Modulation is by the Heising method, two modulator tubes of a similar type to the oscillators being used. The filter and choke units are mounted in the lower portion of the framework. Above these are the tuning circuits, consisting of the necessary inductances and condensers, and above these again are the tubes. A stage of audio amplification is incorporated in the transmitter to give sufficient energy to operate the modulators.

Built into the transmitter is a monitor rectifier, whereby a check can be kept on the quality of the transmission delivered to the antenna.

The speech amplifier is somewhat smaller than that used for the main broadcasting stations, consisting of two stages of amplification. Incorporated in the amplifier is a "mixer" whereby three microphones or two microphones and a pick-up may be swung into circuit as desired, without the use of switches.

Broadcast of "The Merry Wives"

Successful Relay by 2YA and Rebroadcast by 3YA

LAST Friday evening an historical broadcast was performed by 2YA, Wellington, and 3YA, Christchurch, when two scenes from Shakespeare's famous comedy, "The Merry Wives of Windsor," were relayed from the Grand Opera House, Wellington, where the play was being performed by the Allan Wilkie Shakespearean Company.

The relay was most capably accomplished by 2YA, and rebroadcast by 3YA. This was the first occasion in New Zealand on which a Shakespearean performance by a professional company was put on the air. The transmission by 2YA and the rebroadcast by 3YA was strikingly successful, every word by the performers coming through with extraordinary clearness, thanks to the elaborate precautions by the technicians of 2YA and 3YA.

A LARGE and appreciative audience was present at the Grand Opera House, Wellington, to witness the performance of "The Merry Wives of Windsor."

The only visible indication that the players were about to be heard by a vast radio audience of over 80,000 people was the unobtrusive presence on the stage of two varnished cedar boxes placed close to the footlights on the floor of the stage between the lights and the performers. These two boxes were each placed about 15 feet from the end of

the footlights, and being right on the floor of the stage could scarcely be noticed. These boxes comprised the latest type of condenser microphones, noted for the freedom from any hissing noise which is characteristic of the older type of double-button carbon microphones.

A special telephone line from the side of the stage to the studio of 2YA, Wellington, afforded instantaneous communication with the switch-board room at the studio. The microphone lines and telephone line were very exhaustively tested during the afternoon, and only when the technicians were satisfied that the maximum results were assured were the tests concluded.

Nothing was left to chance in connection with the technical department of the relay, but the station director had also to rely on the human element. Strangely enough, the latter failed him, for, by some oversight, the relay was switched off before the third scene which had been announced to be broadcast.

This was a most unfortunate contretemps, as the two scenes which had been put on the air were incomplete without the famous "buck-basket" scene. It was like a story without a finish.

During the enactment of the delightful "letter-reading" scene by Misses Ford and Page (Miss Hunter-Watts and Miss Lorna Forbes), which was the first to be relayed, Mr. Allan Wilkie himself listened in by means of a pair of headphones connected with the relay lines. He expressed himself as well pleased with the effect. In the next scene to be broadcast—that of the Garter Inn—Mr. Wilkie took a prominent part in the role of Sir John Falstaff, with Mr. Alexander Marsh, the distinguished English actor, appearing as "Master Brook," the disguised husband of Mistress Ford.

The dialogue was crisp and clear by radio, and Sir John Falstaff's inimitable laugh and the uproarious merriment of the audience were reproduced with unerring fidelity. During the brief wait before the mirth-provoking "buck-basket scene" the relay was suddenly switched off, much to the disappointment of thousands of listeners.

INTERVIEWED after the performance, Mr. Allan Wilkie expressed his pleasure with the completely satisfactory report which had already come to hand regarding the broadcast. He remarked, "It is my regret that I was unable to have my radio audience of 80,000 people in the theatre here to-night."

The Shakespearean programme on Sunday evening from the studio of 2YA, Wellington, and again relayed by 3YA, Christchurch, was a brilliant success. Mr. Allan Wilkie gave an effective address on "Some Popular Fallacies concerning Shakespeare," and trenchantly dealt with certain erroneous conclusions expressed in newspaper critiques.

The supplementary items included vocal and instrumental Shakespearean items by members of Mr. Wilkie's company and others, with appropriate gramophone records interspersed.

Remarkable Discoveries by German Professor

Radio Waves Reflected from Moon Sphere

WHAT has been described as one of the most interesting discoveries since that of the Heaviside Layer, has recently been made and part-examined by the eminent German scientist, Professor Carl Stormer.

Professor Stormer had been informed by Engineer Jorgen Hals of Bygdo that he had picked up echoes of radio signals broadcasted from the well-known Philips radio station, PCJ. First came the usual echo caused by the waves which travel round the earth, and return within 1-7 of a second. Three seconds later, a period long enough for radio waves to travel over half a million miles, another echo was audible, though weaker than the first.

The second echo must have been caused by the reflection of the waves from the outside universe—from regions beyond the sphere of the moon.

THE Professor was greatly impressed by this remarkable discovery, and requested that signals should be sent out at five-second intervals from PCJ, so that he could investigate the phenomenon.

This was done, but without the expected results. Later, during his sojourn in Holland, Professor Stormer visited the Philips station, and it was agreed to continue the experiments, this time with twenty-second intervals. Again, results were negative, but after several more attempts, during which the experiments were almost abandoned, success came at a time considered most favourable.

It had been resolved to release three successive shocks in certain tone heights, and a remarkable succession of echoes were recovered from 3 to 17 seconds after the signals were first picked up. In this instance, the signals were so loud that there was no

shadow of doubt as to their identity as echoes.

The professor wired PCJ at once, telling of the success, and received the reply that the echoes had also been heard in Holland. Later than this, signals were not heard by Professor Stormer, and although Engineer Hals advised that he had picked up echoes again by the time the professor arrived, they had disappeared on account of atmospheric disturbances.

Professor Stormer marked the discovery as a very rare phenomenon, and the experiments are to be carried on.

THE scientific explanation was given as due to rays of the North Light, and the fact that there are certain parts of the universe which are impenetrable to electricity, and others that will admit it. The region at which it becomes impenetrable fluctuates to a great extent, thus explaining the varying times at which the echoes were audible. The influence of the North Light is an admitted fact, for with a strong North Light is sometimes happens that communication over long distances is cut off. Further details of the explanation are deeply scientific, and too lengthy to do justice here.

If the echo really exists, it would be exceedingly interesting to continue with the experiments. The study of the movements of North Light rays within the universe is of the utmost importance. The tropics will probably offer the best conditions for such research. The lecture greatly stirred the interest of a large scientific audience, it being one of the most remarkable heard. Professor Bjerkens congratulated Professor Stormer, and expressed his hope that he might succeed in entirely clearing up the phenomenon.

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1YA Musical Committee

A MEETING of the 1YA Musical and Dramatic Committee was held at the studio, 1YA, Auckland, on Friday, the 8th of February, at 8 p.m. Present: Mr. Karl Atkinson (in chair), Auckland Gramophone Society; Mr. L. E. Lambert, Bohemian Orchestra; Mr. C. B. Plummer, Auckland Choral Society; Mr. F. McCallum, Little Theatre Society; Mr. V. Trask, Athenian Club; Mr. G. T. Lee, Aeolian Orchestra; Mr. J. W. Shaw, Workers' Educational Association; Mr. J. F. Montague, Auckland Comedy Players; Mr. S. J. Hayden, Station Director at 1YA; Mr. D. Wrathall, Programme Organiser at 1YA.

A letter was received from the Radio Broadcasting Co. advising that the one-act play competition was now under way and that entries received up to the present time were very promising.

The question of a "Maori Night" was discussed at considerable length following on an outline of the special Maori pageant which was held at 2YA last year.

It was finally decided to recommend to the Company that a sub-committee should visit Ngaruawahia for the purposes of interviewing Princess Te Puia and endeavouring to arrange for the Ngaruawahia Maoris to present a complete programme.

The committee further decided to hold a "Topsy Turvy" programme in which artists would contribute items outside their usual sphere.

The question of the 1YA Choir was fully considered, as was the report from the Company's Musical Director on this subject. The committee was of the opinion that sixteen voices would be preferable to the double quartet and resolved to obtain the Company's opinion further with regard to the number of voices.

The committee decided to meet again on the 8th of March at 8 p.m.

IN order to make listening-in to foreign broadcasting meaningful, the B.B.C. in conjunction with their official organ, "World Radio," has undertaken regular courses in several of the languages of Europe.

Popular Fallacies regarding Shakespeare

Mr. Allan Wilkie Broadcasts from 2YA.



DURING my tour of the Dominion in 1927 I had the privilege of broadcasting two little addresses dealing with different phases of Shakespeare. In one I remember endeavouring to disabuse the minds of my listeners that Shakespeare was an academic entertainment; and the other showing how the phrases and writings of Shakespeare had become incorporated in our daily speech, even though in the majority of cases we might be ignorant of our indebtedness to him for sayings which had become household proverbs. To-night I propose to touch upon some popular fallacies regarding Shakespeare. They are many and varied, and it will only be possible for me to refer to a few, and those very briefly.

A conversation overheard during the lunch hour on Wednesday in a well-known cafe in Wellington exemplifies a mistaken belief regarding Shakespeare which I should like to think is very exceptional, but unfortunately I hear of so many instances of a similar nature that I am reluctantly compelled to realise that notwithstanding our much-vaunted system of modern education such colossal ignorance is far from rare.

The conversation was between a lady and gentleman seated at a table in the cafe, who were discussing the current entertainments in the city, and the lady inquired "What was on" at the Grand Opera House?

"Oh, they are playing Shakespeare there," replied her friend.

"Oh, yes, Shakespeare," repeated the lady vaguely. "Are they playing it in English?"

She evidently had a confused notion that Shakespeare was something akin to Italian grand opera, which, although occasionally rendered in English, was more usually heard in the language of Mussolini's compatriots.

WHEN I was playing "The Merchant of Venice" recently in a certain town in New South Wales, the custodian or caretaker of the theatre, apparently a well-known and popular identity of the town, stood on the front steps and greeted the members of the audience, with most of whom he seemed to be on familiar terms, as they entered. One little group, however, stopped and debated with him the advisability or otherwise of going in to see the play.

One of them, obviously referring to the character of Shylock, remarked to him, "You know it requires a very fine actor to play this part."

"Oh," replied my friend the caretaker, "This man's good, he's the original, he wrote it."

At one stroke he thus disposed of the Baconian theory for all time, and also paid me the greatest compliment of my whole career.

These two little stories, both of which I can personally vouch for, expose the popular fallacy that Shakespeare, however much we may cherish him as our national poet, is appreciated by, or even known to, a large section of the community. Such callous indifference and abysmal ignorance makes one wonder whether we deserve

NOW, let us examine another erroneous belief regarding Shakespeare, which I find reflected in the "Dominion" critique of a play I produced last week. In his comments on the play the critic states, "The very fact that the lesser known plays are only produced once in a generation or

in the first place, the theory advanced by the writer, presupposes that the mass of the people are the finest judges of the merits of a theatrical entertainment, on which line of argument the merits of "Chu Chin Chow," "Charley's Aunt" and "East Lynne" are pre-eminent. Also it postulates the theory that the taste in Shakespearean plays is unchanged and unchangeable, whereas taste and preference will be found to vary, not only in every generation, but in practically every decade, and with every country, and even, to some extent, with every town.

The plays that have been most successful in Wellington, may fail to attract in Dunedin and vice versa. Samuel Pepys, in his famous diary, describes "A Midsummer Night's Dream" as "The silliest play that ever I did see," yet to-day it vies with "The Merchant of Venice" as the most popular of all Shakespeare's plays.

No one will seek to deny that "Othello," probably the finest constructed play of Shakespeare, is an excellent dramatic entertainment. Twenty years ago, and even less, it was one of the biggest draws in Shakespeare—to-day it is one of the least attractive. "Much Ado About Nothing" has all the qualities that make for popularity.

Two fine, and well-known, leading characters in Benedick and Beatrice, and an equally well-known low comedy part in Dogberry, witty lines, intensely humorous and dramatic situations, a charming song, dances, and all the ingredients of a popular play.

SUNDAY last listeners to 2YA were privileged to hear Mr. Wilkie deliver his interesting address on Shakespeare. That so great an interpreter of the master dramatist as Mr. Wilkie would take an unusual angle, was almost to be expected. A new light was thrown upon the works of Shakespeare, revealing the very broad outlook of one who has for a lifetime been associated with drama.

The address, repeated below, by the courtesy of Mr. Wilkie, came over splendidly, reflecting great credit on the man before the microphone, and also the man behind it.

the many great men which the English race has produced.

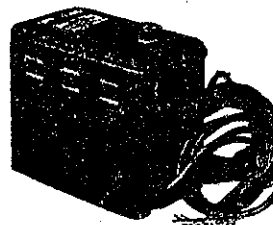
One cannot conceive a Scotchman in any part of the world, no matter how humble his origin and circumstances, who has not at least a working knowledge of Robbie Burns, or, say, a German to whom Goethe or Schiller would convey nothing more than a name.

SPEAKING of the Germans, there occurs to me another popular fallacy regarding Shakespeare. It is continually reiterated through the medium of the British Press, and by the Germans themselves that Shakespeare is infinitely more popular in Germany than he is with his fellow countrymen, both in England and throughout the British Empire.

Now, in the last issue of the German Shakespeare Yearbook, the number of stage performances of Shakespeare throughout Germany for the previous year amounted to 1683, while here in Australia and New Zealand, with my company, I give an average of over 300 performances annually, which, in ratio to the population of Australia and New Zealand combined, and that of Germany, indicates that you are getting at least 50 per cent. more Shakespearean representations than the Germans. And it is also to be noted that every one of those 1683 performances of Shakespeare in Germany was subsidised by either the Government or the municipal authorities.

In that one respect I do admit that Germany and indeed every other civilised country is far ahead of us, inasmuch as they realise the importance of the drama in their national life, and by the help of substantial subsidies, foster and encourage the production of classical and literary drama.

so, may be conceded to a rough classification of their merits as a theatrical entertainment." How far this generalisation might apply to the play referred to in this particular case, this is not the time nor the place to discuss, but the statement as a whole is based on a superficial knowledge of the determining factors in Shakespearean production, and will be found on examination to be entirely fallacious, although his opinion is undoubtedly shared by a large number of people.



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Audiences are invariably delighted with it, but for some unaccountable reason, it is never a draw with the public. A recent production of this play in London with two most popular players in Henry Ainley and Madge Titheridge, ran for two or three weeks only. Brough and Boucicault, with a magnificent production in Australia years ago lost a small fortune over it. True, Irving with the aid of a beautiful production and a cast which included Ellen Terry, Forbes Robertson and William Terriss, managed to get a run out of it at the Lyceum, but that was the solitary exception, and even with him it never took a place in his permanent repertoire, and was soon dropped.

On its merits as a theatrical entertainment it ought never to be out of the repertoire of a Shakespearean company, and be equally as popular as "As You Like It" and "Twelfth Night." Why isn't it? I defy the "Dominion" critic, or anyone else to tell me why.

"Coriolanus," although one of the lesser-known plays, in my recent seasons in Sydney, Melbourne and Adelaide, was acclaimed by the Press and public as the greatest success of the 19 plays then in my repertoire, but the "Dominion" critic found the play tedious in parts, yet "Coriolanus," a hundred years ago was extremely popular and constantly acted.

THE most potent factor, however, in deciding the selection of Shakespearean plays for stage presentation, has been the question of parts, and it will be found that in most of the neglected plays there is no outstanding character which offers a suitable vehicle for the exploitation of the personality and talent of the star actor or actress.

A notable instance of this kind is "The Winter's Tale," which, with a poor leading man's part, and three women's parts of almost equal value, had been shelved for the past forty years in New Zealand, until I revived it here in 1927. Played for two or three nights in every large centre, it proved extraordinarily popular, and I have no hesitation in stating, that judged purely as a theatrical entertainment, there is nothing better in Shakespeare, "The Merchant of Venice" and "A Midsummer Night's Dream" not excepted.

Of course, it would be foolish to contend that all of Shakespeare's plays are of equal merit, but it is equally foolish to dogmatise regarding the merits of certain plays because they are not constantly placed before the public. The critic who does so is simply following

a fallacious belief, unsupported by facts, and based upon insufficient knowledge of the circumstances which govern the choice of plays for stage representation.

WHILE on the subject of critics, let me point out another fallacy from which they suffer. No doubt with the very best of intentions, and the desire to be helpful, they constantly stress in their criticisms of the performances, the philosophy, wisdom, and intellectual qualities of Shakespeare. Now, the primary motive with which the majority of people attend a theatre, whether they go to see Shakespeare, a musical comedy or a mystery play, is for the purpose of being entertained, and there is no surer method of making them stay away than to give them the impression they are going to witness an "educational" entertainment.

All great drama is, of course, educational in the highest degree, but the educational aspect should be merely incidental and to a certain extent unconscious, and I know of no greater disservice to the theatre in general and Shakespeare in particular than this continual stressing of his moral teachings and educational influence.

Emphasise and make people realise the fact that Shakespeare contains more genuine comedy and greater drama than all other playwrights combined, that the humours of Falstaff are even more amusing than the inanities of musical comedy—that the dramatic situations in "Macbeth" or "King Lear" are even more thrilling than the peurile jack-in-the-box absurdities of the latest crook drama, and every performance would be filled to overflowing.

The belief that Shakespeare is high-brow and heavy mental food dies hard fostered as it is by pedants and commentators who seek to obscure his inherent simplicity and fundamental greatness, under a mass of dry-as-dust annotations and academic learning.

In other words, let Shakespeare speak for himself through the medium of the stage, for which his plays were written and designed. For, to quote Frederic Harrison:—"It is impossible to judge any drama by reading it. The whole nature of a play of the first rank is transfigured when we see it adequately performed. It is only revealed in acting. No imagination can enable us to conceive the whole force of a really great drama until we SEE IT. You might as well try to judge a symphony of Beethoven by looking at the score, and that is more true of Shakespeare than of any other dramatist, ancient or modern. Shakespeare was a player to the tips of his toes; and he must be SEEN and HEARD on the stage to be truly known."

Systems of Radiovision Too Much Radio Entirely New Angle Conceived

THE difficulties which still hamper the achievement of true radiovision, or the transmission of moving scenes by wireless, do not arise if it is possible to connect the transmitter to the receiving station by one or more line wires. Most of the successful demonstrations of "moving-picture" effects claimed by various experimenters have, in fact, been carried out over connecting wires.

Such a limitation is, of course, fatal to the popular conception of a moving-picture service in which signals will be broadcast through the ether and picked up on an ordinary garden aerial. If it is necessary to provide a connecting wire between the central distributing station and each individual receiver, the initial cost of installation will be so high as to restrict the service to a comparatively small circle of wealthy subscribers.

A Fatal Limitation.

THERE are two main reasons why a connecting wire is necessary in the present state of television development. In the first place, owing to the number of separate modulation frequencies required to transmit a clear picture, there is no "elbow room" available for them in the ether. A radio service of moving pictures must therefore either be confined to inconvenient hours outside the ordinary broadcasting times, or else give rise to wholesale interference with existing broadcast programmes.

In the second place, the energy picked up by an aerial from a radiated signal wave is so small that an expensive outfit is necessary to amplify the received currents up to the point where they are capable of operating the Neon receiving lamp.

Quite apart from the expense of a multistage amplifier, it is well known that beyond a certain point the effect of atmospheric and internal "tube noise" becomes so great as almost, if not wholly, to mask the effect of the original signals.

Telephone Vision.

ASSUMING that the use of connecting wires is necessary, the existing telephone service appears to offer the best medium for operating television apparatus in its present state of development.

The Bell Telephone Laboratories have, in fact, now developed a combined telephone and television system in which it is possible for a speaker at one end of the line to see the distant person with whom he is conversing, and also to have his own features simultaneously televised and transmitted to the far end of the line.

How the System Works.

THIS achieves the ideal of telephonic conversation. Not only does the user hear, but he also sees the person with whom he is conversing. It is a definite step forward in the annihilation of space.

As the speaker talks into the microphone he faces a mercury-vapour lamp, bent into the form of a circle, so that the whole of his features are illum-

THE advantages of giving listening an occasional rest is stressed in the following article from the Sydney "Wireless Weekly": "What part should the listener play in broadcasting? The broadcasting station transmit everything that can usefully or agreeably be put over, but it is the duty of every listener to choose between what he should hear and what he should leave alone.

There are people who have their radio sets switched on during practically the whole time of transmission, and loudly complain if what they hear during any session is not to their liking. Now, there would be something wrong with broadcasting if any individual listener really enjoyed the whole programme from morning to close-down time.

No one, however leisured his or her life, ought to listen all the time. Yet, like so many other things, listening to wireless broadcasting may become a habit, the listener fearing that he may be missing something by not having the radio switched on.

THE first advice that I give to listeners, after the first enthusiasm has worn off, is to exercise as much restraint in the use of broadcasting as is exercised in the enjoyment of any other of the good things of life. To this end an intelligent study of the programmes of the various stations will contribute materially.

Most people simply switch on their sets at an habitual hour, and then praise or blame the broadcasting organisations, according to the measure of their personal appreciation or otherwise of the items they happen to pick up. One should look up the programmes beforehand, and decide what one wishes to listen to, and only that.

IT is inevitable, if the programmes are rightly compiled, that there will be many items to which any given listener will have no inclination to listen, and he will be very well advised not to listen at all at such times. But if one listens with discrimination, prepared for what is coming, and anxious to hear it, one will enjoy it very much more than if it is simply heard haphazard. Anticipation affords almost as much pleasure as realisation.

inated. Beyond the lamp, is a screen containing two apertures. In the second of these appears the image of the distant speaker.

The reflected rays from the head and shoulders of the local speaker pass through the second aperture, and, after being analysed by a rotating disc fitted with spirally-arranged holes, fall on to a photo-electric cell. This converts the light-and-shade effects into corresponding electric currents, which are then fed to the line wire and reappear as a visible image before the distant speaker.

Meanwhile the incoming picture signals from the distant station cause the intensity of a local Neon lamp to fluctuate. These light variations are built up into an image by a second series of spiral holes formed in the same rotating disc, and are then thrown on to the first aperture in the screen referred to above.



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Radio Round the World

IN a Bill recently brought before the Austrian Parliament there will be clauses making punishable the use of high frequency apparatus for message or other purposes in such a way that the reception of radio broadcasting is interfered with.

CHRISTMAS in Sweden began in reality with Sunday, December 23, the Christmas Eve traditionally being a holiday. And so did the Christmas-wireless programme. On Sunday a whole-day programme was offered, including a choir concert from Goteberg with old Swedish Christmas songs, culminating in an evening performance of Maeterlinck's drama, "Pelleas and Melisande," with incidental music by Sibelius. Christmas Day a whole-day programme of serious character was presented, and Boxing Day a light programme. In the former was a studio performance of Johann Sebastian Bach's Christmas Oratorio and a programme for Swedes abroad, including a talk by the Foreign Secretary, Mr. Ernst Trygger.

ON Saturday, December 15, Ravag introduced a novelty in the shape of a "Subject" evening, that chosen for this occasion being "An Autumn Storm." At 6.15 there was a lecture by Dr. Robert Horch, with musical illustrations of a storm over land and sea, followed by the full weather reports and prospects, which are of special interest at this time of year to winter sport enthusiasts, and then came a four-act drama by Ivo Vojnovic, called "Aequinoctium" (Equinox), the keynote of which is emigration and storms in foreign climes. Vienna weather reports are remarkably full, the snow-depth at all the Austrian sport centres of any importance, of which there are scores, being given regularly every Saturday night. These "subject evenings" are given fortnightly.

OBJECTIONS, in the form of questions, in the Second Chamber, have been made to the erection of the new Philips Holland-India transmitter at Huizen, now nearing completion. The chief of these objections is that with a high power, this transmitter will overpower the existing transmitters at Huizen and Hilversum. It is suggested that the granting of a license for such a transmitter is contrary to the Dutch Telegraph and Telephone Law which enacts that the available time for transmission—which is scarcely sufficient to meet demands—shall be divided between the various broadcast associations. At the same time it is asked whether, supposing the new transmitter to be merely an experimental one, the Minister is prepared to grant a similar license to the religious associations which own the existing station at Huizen.

THE whole of Canada is kept in daily touch with the farthest of her northern inhabitants through the radio apparatus assembled on the top floor of an inconspicuous building in the heart of Ottawa, amidst the clanging of street cars and the tooting of automobiles. Here the Department of

Marine and Fisheries have their radio installation, which is in daily contact with Cape Hope's Advance, Ungava Bay, Hudson Straits. Signals come in with enough volume from this Far North point to be put on the loudspeaker and heard through the greater part of the three-storied building. A short-wave receiver, especially adapted by the Canadian Government radio department to the particular needs of this reception, brings in the signals from the 500-watt station overlooking the Hudson Straits. A similar 500-watt transmitter stands in front of the Ottawa operator to transmit the orders and questions from the various Government departments to the Far North.

The Future of the Fultograph

GERMANY, France and Austria have now included Fultograph transmissions in regular broadcasting hours as part of the general service of broadcasting. The B.B.C., however, has not yet made up its mind, with the result that Wireless Pictures 1928, Ltd., is in a state of great perplexity.

The issue is coming to a head shortly, when it is believed that Savoy Hill will announce their intention to extend the experimental transmissions over a definite period long enough to encourage the public to buy sets. This step will represent the admission that Fultograph has come to stay in British Broadcasting.

THE month of December saw two important developments in Bavarian broadcasting. The one relates to an innovation in the programme. Every morning at 5.45 a well-known Professor of Biology and Physical Culture of the University of Munich gives listeners the opportunity of going through a series of systematically thought-out physical "jerks" to liven up the system generally and to give all parts and organs of the body an "airing." The second important development is concerned with the general attitude towards broadcasting in Bavaria. Up to December 1 the Bavarian Newspaper Publishers' Union had maintained a ban on anything relating to local broadcasting, including the printing of short abridged programmes as in other German dailies. This ban has now been removed, with the effect that the Bavarian Press will take an active interest in broadcasting and will also print short excerpts of the daily programmes.

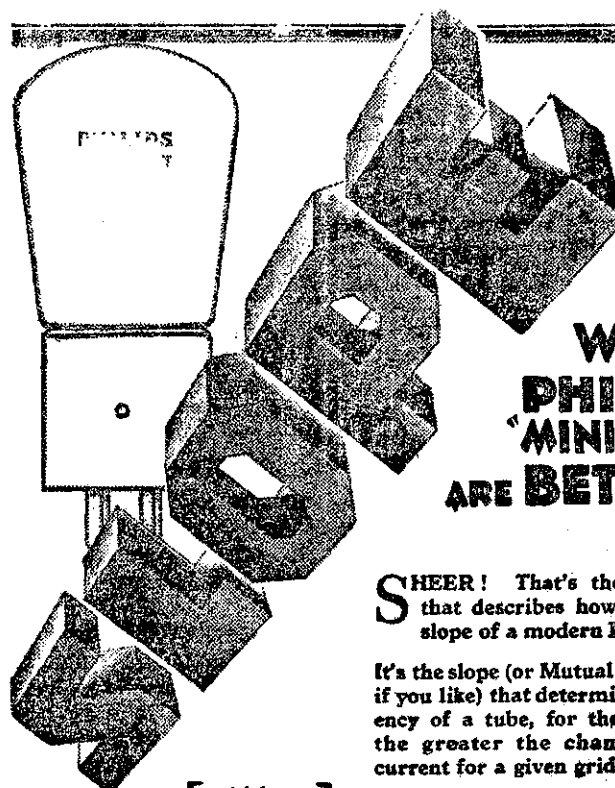
THE Paramount Film Company, in conjunction with the Los Angeles "Evening Express," have fitted out one of their studios in Hollywood as a 5 kw. broadcasting station, known as KNX Paramount, Los Angeles (285.5 metres wavelength). The power is to be increased later to 50 kw. The first broadcast was given on Sunday, No-

vember 11. In addition to regular relays from concert halls and theatres, the new station will chiefly broadcast talks on film questions. It will also serve as a medium for replying to the numerous letters received from film enthusiasts. The relay of tone-films is foreseen as a future activity of this station.

AUDITIONS for the free concert-radio "debuts" offered by the National Broadcasting Company for young artists selected by the National Music League began with a list of 1500 applicants. An audition committee of ten was chosen by the League to hear and pass judgment upon the candidates. The final decision as to the winners will rest on a double audition heard by two groups of judges. One group, seated in the auditorium with the artist, will decide on his abilities as a concert performer. The other will hear the performance through a loudspeaker and judge the artist's broadcasting qualifications. Such a final test is essential, because the performances will be of a combined concert and radio nature. However, the

National Music League warns candidates that in its three years of experience with young musicians, it has found that only five per cent. are qualified to undertake musical careers as a means of earning a livelihood. The remaining ninety-five per cent. are doomed to failure, and they are obliged to advise them either to give up music entirely and enter some other profession, or to approach it from the teaching angle.

THE Bavarian stations relayed a ceremony in the Valhalla, near Regensburg, on the Danube, when the bust of Franz Schubert was placed in the famous shrine. The Valhalla is near Kelheim and overlooks the Danube. It was built under Louis I of Bavaria at the beginning of the last century. It is situated on a height and copied from a well-known Greek temple. Busts of all famous Germans are placed in the shrine. Not very long ago the Bavarian stations relayed the ceremony from there when the bust of "Turnvater" Jahn, the father of German athleticism and gymnastics, was placed there.



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Literary communications should be addressed: "The Editor"; business communications to "The Manager."

Advertisers are asked to note that alterations of advertisements should be in hand Friday of each week for insertion in the succeeding issue, printed Tuesday, bearing Friday's date. No responsibility is accepted for blocks remaining unclaimed three months after each insertion.

N.Z. RADIO PUBLISHING CO., LTD.
P.O. Box 1032, WELLINGTON.

WELLINGTON, FRIDAY, FEBRUARY 15, 1929.

EDITORIAL NOTES

OUR Taranaki friends will be more than pleased at the satisfactory outcome of the trial made on Thursday last of the transmitting plant assembled in Christchurch by the Radio Broadcasting Company for erection at New Plymouth under the title of 2YB. Congratulations of the heartiest nature can be accorded to the Taranaki Radio Society for its enterprise in this matter. Every sympathy has always been available for the wireless enthusiasts of Taranaki in the difficult plight that has been theirs in regard to reception. The arguments that proceeded in the early days of 2YA will still be remembered. Into them there is now no need to go, but without reviving those old controversies it may be admitted, we think, that the geographical conditions attaching to the situation of Taranaki are a material factor in the quality of reception possible from station 2YA. The difficulty is to be solved by the erection of a receiving station and the provision of a land-line into New Plymouth for the retransmission of such programmes from 2YA as it is desired to relay.

WITH commendable enterprise, however, the Taranaki enthusiasts aim to provide programmes of their own, as well as using those desirable from 2YA. Organisation of a comprehensive nature has been undertaken to utilise the talent and equipment available in New Plymouth. With the backing of enthusiasm and the loyal support of all concerned, we anticipate that a definite advance will be recorded in radio matters in this area. The dealers are looking for increased trade, and all interested in radio are anticipating that benefits will accrue from the combined enterprise of the North Taranaki radio enthusiasts and the Broadcasting Company.

WE have already indicated in earlier articles that it is our view that this Taranaki enterprise will be the forerunner of a campaign of development on similar lines in other centres. It is admitted that the areas favourably served by the existing four YA stations are limited, and that without high-quality receivers listeners situated outside those areas are not able to receive full value from the existing radio service. In order to make radio available to large areas of population outside the districts now adequately served by the YA stations, it is necessary to place relay stations at strategical points. Such provision will permit of radio being placed on tap as desired at less cost to prospective listeners than otherwise would be the case. That is the crux of the matter. Economic factors have to be taken into consideration. Those who are prepared to pay the price of high-quality receivers capable of receiving the YA stations from any point in the Dominion are limited in number. There is a large circle which is prepared to go to a certain figure to enjoy radio. It is the desire of those governing the radio service that it shall be possible to provide reticulation points in new districts as rapidly as possible, in order to tap these hitherto unexploited areas of population. As it proves possible to do this, then radio will become increasingly popular and the whole organisation will be strengthened. We look upon the Taranaki enterprise as a milestone in the progress of New Zealand radio.

Radio Licenses as on Feb. 1.

Particulars of radio licenses as received in the General Post Office, up to February 1, 1929, are as follow:—

	Receiving.	Transmitting.	Dealers.	Grand Total.
AUCKLAND	14,653	61	426	15,140
WELLINGTON	17,608	59	610	18,277
CHRISTCHURCH	8,350	57	283	8,690
DUNEDIN	3,006	25	164	3,195
	43,620	182	1,483	45,285

"Trooping the Colours"

2YA to Broadcast Interesting Ceremony

THE trooping of the King's colour is the most impressive display of military ceremonial that London enjoys during the year. It can be seen only in London, but on Sunday, March 3, Wellington is to have a ceremony of a similar kind, though perhaps not of the same degree of grandeur. On that day colours will be presented to the First Battalion Wellington Regiment, the ceremony taking place in the Basin Reserve.

The British Broadcasting Corporation has described the "Trooping of the Colour" on relay from the Horse Guards Parade and the occasion has made a very interesting broadcast, the sharp words of command shouted across the parade ground, the clang of rifle butts, the jingling of harness and the music of the massed bands all coming over well.

The Wellington ceremony will be broadcast by 2YA.

Do you Overload your Set?

Wellington Listeners to Have Interesting Test

NOW that the New Plymouth transmitter is about ready, the Broadcasting Company proposes to install it at 2YA for a short period until all the studio preparations at New Plymouth are completed. An application for permission to do so has been made to the Post and Telegraph Department and has been granted. The motive underlying this action by the Broadcasting Company is to carry out an experiment for the benefit of the people of Wellington.

The Broadcasting Company proposes to test dual transmissions on high and low power—on 5000 watts and on 50 watts. These simultaneous dual transmissions of the same programme will enable the owners of valve sets to prove whether their sets suffer from overloading when tuned in to 2YA.

IT will be remembered that complaints have been made by Wellington listeners concerning their reception of 2YA, when more distant listeners report perfect reception. The occasion is therefore being availed of by the Broadcasting Company to arrange for transmissions on the high and on the low power so that listeners will be able to demonstrate to their own satisfaction whether they are overloading their sets when listening to the big station.

Overloading is a very common occurrence, but generally the bad reception is then attributed to some other reason. In the event of poor reception, due to overloading the set, the remedy is simple. Without doubt, the dual transmission will prove to many listeners that they are overloading their sets.

Vocational Guidance

Series of Lectures at 3YA

DURING next week, at 3YA, a series of four lectures on vocational guidance will be given by Mr. G. M. Keys, M.A., Department of Education, who is in charge of the Vocational Guidance Department at the Boys' Gordon Hall, Y.M.C.A., Christchurch. The lectures will describe the methods

and possibilities of vocational guidance, while the professions, trades, and farming, will be discussed.

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The Christchurch Radio Society

A Progressive and Entertaining Body

THE Radio Society of Christchurch is an incorporated body, composed of broadcast listeners, experimenters and transmitting amateurs; the broadcast listeners being in the majority. The Society was formed shortly after the war, and has a record of service to the broadcast listener. Before the advent of the Broadcasting Company the Society carried on a broadcasting service for two periods.

The objects of the Radio Society are very worthy one. In brief, their aim is to diffuse the knowledge of radio among all interested and to bring this about the club arranged that at each meeting a prominent lecturer speaks on some phase of radio or demonstrates some type of set. A few of the subjects discussed recently are as follows:—

The Browning-Drake Receiver.

Efficient crystal receivers.

Exponential loudspeakers, and how to build them.

The elementary theories of radio.

A demonstration of the electric pick-up.

The Society's regular lecturers are: Mr. R. A. McLennan, Lecturer in Radio at the Canterbury College, and Mr. C. R. Russell, M.Sc. The Society is indeed fortunate to be able to secure the valuable services of two such authorities in radio, and their influence should be felt far and wide among the listeners in Canterbury.

Again, the Society is very fortunate to have such an able and enthusiastic president as Mr. H. V. P. Brown, who is an amateur transmitter and whose call is 3CG. Mr. Brown takes a great interest in amateur transmitters, and for these takes buzzer classes every Thursday night. Mr. Brown also edits a progressive little paper devoted to amateur radio, in particular amateur transmission.

An extensive library and well-fitted workroom are placed at the disposal of club members, and experienced members are always ready to assist those who are new to radio. Any person interested is invited to go along to the meetings, which are held every Thursday night at 198A St. Asaph Street—a comfortable room specially built for the Society. The subscriptions are 5/- nomination for members over 18 years of age, and £1 per annum, payable quarterly in advance. Country members are admitted for 10/- per annum, while junior members are expected to pay 10/- per annum.

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2YA Transmissions

Further Tests on Thursday

A FURTHER test is to be made regarding the transmission of 2YA. This is to take place on the evening of Thursday, February 14.

During the month of January the station operated on alternate nights under crystal and master oscillator tube control respectively, and on the last night of the test both systems were in use. On Thursday it is proposed that there should be a further test, the two systems being again in use, just as on January 31, save that the order will be reversed.

On Thursday, February 14, therefore, the station will run under crystal control until 9 o'clock, there will then be an interval to allow the change-over and for the second half of the programme transmission will be under master oscillator control.

This test should provide conclusive proof regarding the two methods of control. As on the previous occasion, the same record will conclude the first portion of the programme and will open the second half.

WHILE the reports to hand regarding the two systems point to a definite conclusion, the new test has been arranged in order that there shall be no shadow of doubt and no question raised on the score that the conditions under which the test was conducted favoured either of the two systems. Pending the receipt of the reports on the final test as above, on February 14, the reports will not be tabulated nor fully investigated.

"Such a Boon"

What Radio Means Out Back

A LISTENER in the far north of Gisborne writes to 3YA:—

"After owning a four-valve home-constructed set for 12 months I have found radio such a boon in the formerly dull country evenings that I recently purchased a six-valve factory-made receiver. On the four valves I logged 47 stations and on the six in less than 14 days have already 42, although, as you know, conditions have been only moderate. With both sets I get 3YA almost any time you are on the air, and I found you almost my most reliable station after dark. I must say your tone is much improved by the six-valve set. I am a contented listener, though living in hopes of still further improvement in programmes, while fully appreciating your present ones.

"I tuned in to your test transmission to-night (New Plymouth plant) and, strange to say, found volume fully as great as your usual. Owing to rather loud static I disconnected ground, and then volume remained quite full, tone pure and sweet, no fade, and from my amateur viewpoint the transmission was excellent. We should get good results from Taranaki."

Unique Event

Art and Commerce Join Special Mid-day Service for Canterbury Hands

ON the evening of Thursday, February 21st by courtesy of the directors of the D.I.C., 2YA, Wellington will broadcast on relay a grand promenade concert which, is to be presented in commemoration of the opening of the new and greater D.I.C., which the directors proudly claim will be New Zealand's pre-eminent department store. The concert will be held in, and broadcast from, the magnificent new building on Lambton Quay, undoubtedly one of the most imposing commercial houses in the Dominion. By means of a public-address system of loudspeakers on every floor, the thousands of interested visitors who will throng the great building will be privileged to hear what promises to be a truly delightful concert, and their privilege will be shared by many more thousands of interested radio listeners in every part of the Dominion. The very best talent has been engaged, and the artists participating will be entirely under the direction of the D.I.C. management. Details of the very fine programme to be presented will appear in next week's "Radio Record." It is anticipated that arrangements will be made by the D.I.C. branches in other centres to broadcast the concert from loudspeakers in front of their respective buildings, so that the interested public in those centres may have the opportunity of hearing the concert. The directors of the D.I.C. are warmly appreciative of the courtesy of the Broadcasting Company in so readily consenting to co-operate in the unique national celebration of a momentous event in the history of New Zealand's commercial development.

Weather Reports

A REQUEST that there should be a special mid-day weather report broadcast for the benefit of the harvesters of Canterbury has been made to the Broadcasting Company by Mr. Edward Kidson, Director of the Meteorological Branch of the Department of Scientific and Industrial Research, in the following letter:—

"It has been suggested that special weather forecasts for farmers in Canterbury during the harvesting season would be valued highly by the agricultural community. We have been asked if it would be possible to have such forecasts issued from the Christchurch Radio Broadcasting Station at about mid-day. If you could make an experimental trial of such an issue, broadcasting at 1 p.m., say, for a fortnight, we would be prepared to send the necessary telegrams. It is clear that from your point of view there are difficulties in the way and unless it would be possible to make the issue a regular one throughout the summer months it does not seem to me that a fortnight's trial would be of much use. I should be glad if you would let me have your views on the matter as early as possible."

The Broadcasting Company replied that it gladly acquiesced to the suggestion. There will therefore be an experimental session daily from 3YA for a fortnight, commencing from last Monday. If the response is satisfactory and it is found that the farming community of Canterbury appreciates the extra session, it is likely to become a regular feature during the summer months, despite the difficulties.

Hawke's Bay Radio Society

Cordial Invitation to the Radio Broadcasting Company

RECENTLY, Mr. E. H. Culver, hon. secretary of the Hawke's Bay Radio Society, paid a visit to 2YA, when it was suggested that a representative of the Radio Broadcasting Company might be able to pay a visit to his district. The Hawke's Bay Society has now extended a very cordial invitation to Mr. J. Ball, the editor-announcer, who will visit Hastings on the first available opportunity. No date has yet been fixed.

In writing to Mr. Ball, Mr. Culver remarks: "In the event of your being able to come through, we will endeavour to arrange a meeting of listeners from the whole district, so that you can hear opinions from all angles. I can assure you that such a visit would be worth while, both from your company's point of view, and also from our own, for there is a great deal of dissatisfaction existing, which I am satisfied would be cleared up by such a visit."

Big Brother Bill's Picnic

A CHILDREN'S picnic has been organised by Big Brother Bill for Saturday, February 23. An open invitation has been given to all radio children, and their parents, if they care to come, to picnic at the farm of Mr. and Mrs. Stenhouse, Wakari. Arrangements are being made for transport, lollies, sports, prizes, and games.

An interesting feature of the day's proceedings will be a broadcast, on relay, from the home of Mr. and Mrs. Stenhouse. The results of the day's sports will then be announced for the benefit of all radio children who have not been able to be present. Besides Big Brother Bill, Aunt Sheila, and others interested in the children will have something to say.

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Leckie v. Glasson Contest at Wanganui

SEVERAL boxing enthusiasts have made the suggestion that 2YA should undertake to relay the boxing contest to be held at Wanganui on the 14th, between Leckie and Glasson, and have cited the success of the relaying of the Wanganui Band Contest as a precedent for the making of the effort. While it is recognised that great interest is taken in the boxing match, it is also to be recognised that a great deal of expense is involved in such a relay, as was consummated on the occasion of the Band Contest. The expense, together with the preliminary organisation, is in fact such that it is regretted that a relay on the occasion of the fight is out of the question. In addition, a complete programme has been arranged and published for the night in question, the 14th instant, and it is not practicable to arrange a relay in substitution at short notice.

In recognition, however, of the interest taken in the boxing contest, effort will be made by 2YA to secure the result before the close of the evening session and broadcast same for the information of listeners.

Promptness of 2YA

AN example of the very efficient sports service rendered by 2YA was demonstrated very graphically last week when the latest Australian cricket scores were given over the air. On tuning in to 2YA shortly before 5 o'clock, the score was heard to be "Australia, three wickets down for 'x'

runs." After that, 2YA closed down, and another private broadcaster was heard on the air. He, too, gave out sporting scores, but his information was not quite so up-to-date as 2YA, for one heard that "No wickets had fallen for 'y' runs." 2YA is supplying a very urgent need with their sports service, and are to be commended on the promptness with which results are obtained and put over the air.

"Like Being at Home"

A GENTLEMAN from the Old Land, now resident in the Nelson district, has written to the Broadcasting Company, to ask the address of Mr. Lambert Harvey, tenor, who sings for 1YA. It appears that the gentleman knows well the voice of Mr. Harvey, who was a well-known singer in England, and when he heard Mr. Harvey on the air in New Zealand, it was like meeting an old friend in a strange land.

An extract from the correspondent's letter reads: "On looking through the programme of music from your station on Wednesday, January 30, I noticed one name announced which was familiar to me in the Old Country. This made me very interested, and so I determined to go somewhere to hear his singing. You can imagine my great delight, and longing to speak when the voice which came over the air was the same, or, at least, to me it seemed so, as that which I had often listened to from the Newcastle-on-Tyne station, and from various platforms. It sent a thrill through me that prompts these lines of inquiry."

Hawke's Bay Notes

AT its last meeting, the Hawke's Bay Radio Society decided to take an official record of the observations of members, regarding the tests by 2YA with the crystal and master oscillator controls. Members were asked to submit their observations to the writer so that an opinion, covering that of the majority of reports might be sent to Wellington from the society. Sounds easy enough, but to get a unanimous report is hard. Opinions differ so, but in this case, the majority favoured crystal control. Some of the cards sent in suggested that in daylight, crystal control was best, but at night honours were with the master oscillator. In a couple of cases, members stated that they did not take much notice of the tests, but happened to listen to a couple of better-than-usual nights, and on investigating found that the master oscillator was being used. Generally, however, opinions favoured the crystal control.

RECEPTION conditions generally of late have been up to summer standard, and there has not been a great deal to complain about. The distortion and fading of 2YA persists, however, and the Radio Society is hopeful that the Radio Broadcasting Company will be able to allow Mr. Ball and one of the engineers to come through and get some first-hand experience. If they come they will be assured of a hearty welcome.

THE Napier Radio Society seems to be waking up at last, and headed by Dr. Zeile, an enthusiastic fan, are organising a campaign to install radio equipment in the Napier Hospital. The society is aiming at £1000, and as there are nearly 300 beds in the institution, all this money will be required.

IT is hoped that the activities of the society will not be confined to this hospital collection, for there are many other matters which need attention. Hastings possesses a pretty live society, and if Napier "comes back," the two should be able to develop into a very strong and influential body.

ANOTHER move by the Hastings Society to keep up interest is the holding of a ladies' night on the 27th of this month, and as a result it is hoped to get the ladies interested in the club's activities. Quite a bright musical programme has been arranged, this including songs, recitations, Hawaiian selections (in costume), comedy stunts and a display of conjuring. It will be quite a change for local listeners to be entertainers. A small dance will probably follow. If this venture is a success, others will follow. There is evidently plenty of talent in the society.

HUNTING for "Yanks" seems to be a common pastime these evenings. Everybody's getting 'em, it seems, and the Japs and Aussies are also coming through well.

IN talking of reception during the hot weather, a Taranaki paper says that even 4YA was heard there, to say nothing of the Australians.

Alternate Programmes New Sydney Scheme

THE management of the N.S.W. Broadcasting Company admit "that there is a definite obligation upon the management of the two Sydney stations to diversify their programmes, but a little co-operation from listeners in the direction suggested would meet with excellent results. For some time after the two A class stations in New South Wales came under the one control, it was necessary to work out advance bookings that had been made prior to the amalgamation. These have now been completed, and programmes are being established upon definite classified lines, whereby the one station is presenting a classical programme, while the other one is performing a lighter type of entertainment."

It must be remembered, however, that in Sydney there are two A class stations, and the above place is only possible where the broadcast company's income is enormous.

The New South Wales Broadcasting Company are advising listeners to pay attention to the class of music 2BL and 2FC are putting on the air, and to establish a more orderly way of listening to programmes. 2BL and 2FC are broadcasting two different types of programmes—to please the "high-brows," and lovers of "popular" music. Listeners are advised to tune in the type of music they desire.

THE management go on to say:—"It is necessary for listeners to recognise two outstanding facts. The first is that the broadcasting stations have to present a programme on seven days in every week and right throughout the 52 weeks of every year. The second is that no form of entertainment however well it may be presented, can fail to lose its freshness, if those who are being catered for satiate themselves by over-indulgence in that particular form of amusement."

"When listeners recognise that a certain responsibility devolves upon themselves to more carefully exercise a choice from the programmes of the items that fall within their own requirements, and not expect that every item or even every programme must be for the entertainment of every listener, then wireless broadcasting will reach its zenith as a public utility."

Plant of W2XAF

SOME very interesting details of the plant used at the American short-wave station, W2XAF, have come to hand. This transmitter is one of the several developmental transmitters maintained by the G.E. Co. at Schenectady, U.S.A. The frequency of the transmitter is kept constant by means of a 2287.5 kilocycle quartz crystal, which is operated under thermostatic control. The output of the crystal oscillator is passed through a frequency multiplier until the output frequency is four times that of the input or 9150 kilocycles, which corresponds to a wavelength of 31.4 metres. The power to the aerial is 10,000 watts, and all modulation is carried out on the last frequency doubling stage.

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Loud-Speaker Troubles

I HAVE a letter from a reader in which he complains of what he calls loudspeaker "resonance," and rattling of his loudspeaker on certain notes. He has tried all sorts of remedies, but has been unable to eliminate the effect and wants to know what is the cause.

Although rattling is in a sense an example of resonance, it is hardly what is commonly understood by that term, and it is better in considering this trouble (which, by the way, is very common) to think of the resonance and the rattling as two separate effects.

The resonance, properly speaking, is the extra amplification—I mean acoustical amplification—which is often found to occur on certain notes or more generally on one particular note. As a rule, this is due to the natural acoustical properties of the horn (it is more liable to occur with a horn speaker than with one of the cone type).

Vibrating Air Column.

It is, therefore, something which is inherent in the speaker itself and cannot be cured. You have to bear in mind that the air-column within the horn has a natural frequency of vibration and when a note is sent from the speaker, which is the same, or very nearly the same, as the natural note of the air column, you are bound to get an extra amplification set up, with correspondingly augmented re-inforcement of the sound.

Sometimes, however, you may get vibration of the horn itself, and if this is the case, it can often be cured by winding insulating tape in a spiral fashion over the outer surface of the horn.

Rattling.

AS regards the rattle, this can only occur if so screw or other part of the speaker is loose, or if the diaphragm is striking the pole-pieces of the magnet. The remedy for a rattling loose part is obvious: the various screws and other parts of the speaker should be carefully "gone over" to make sure that there is nothing that is sufficiently loose to cause the rattle.

Chattering Diaphragm.

AS regards the striking of the diaphragm against the pole-pieces of the magnet, this is due to the clearance between diaphragm and magnet being insufficient. In most loudspeakers the adjusting screw is for the purpose of varying the distance between magnet and diaphragm, and as the clearance between the two is reduced the loudness of the reproduction is increased. You may make an adjustment which gives you excellent reproduction for a selection which is fairly uniform in loudness, and yet when a note of exceptional loudness occurs you may get a rattle or "blast."

The remedy here is equally obvious: the adjusting screw must be turned in the direction to decrease sensitivity until all rattling and chatter are eliminated. As a rule, the chatter caused by the diaphragm striking the magnet is quite unmistakable, and there is very little likelihood of it being confused with any other kind of rattle.

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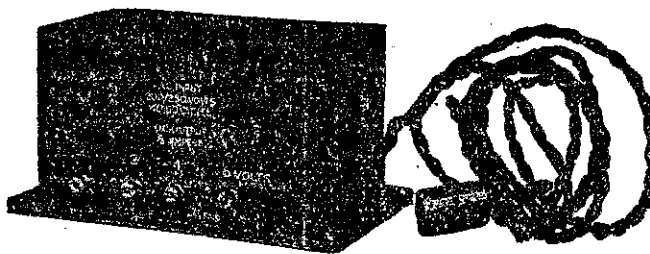
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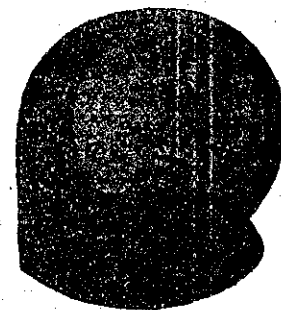
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IN BRIEF.

A. E. ELLISON, Reefton.—We are afraid the data for which you ask will involve a great deal more searching than would repay such an effort.

A Small DX Set.

WOULD you be so kind as to publish a circuit, using 1 valve, that would be good for DX work?

ANSWER: Such a set, when bringing in anything past the local stations, would give very distorted reception, that would not hardly be worth while. One valve sets are seldom very efficient, and are not generally adapted to work from any distance. However, as one correspondent to the DX Club has had good results, we will describe and publish a one-valve set.

Tinned Copper Wire.

F. L., Greymouth, writes:—"I have been unable to obtain tinned copper wire, such as is specified for Megohm's Screen Grid Browning-Drake. Would enamel wire do?"

ANSWER: Yes. Tinned copper wire is really more suitable, because of the greater conductivity of the coating given the wire, but enamelled copper wire is almost as good, and can be readily obtained from all dealers.

A Burnt-out Valve.

I AM in trouble with my crystal and amplifier set," writes J.M., Wellington. "I have been using a low fila-

ment consumption valve, but the B battery runs down very quickly. I tried connecting up the C battery with the positive terminal on to the A negative, which connected with the valve, C negative, and the F (GB) terminal of the transformer. The F positive I connected to be negative. I found that the C ran down in about two hours, and when I switched on the valve again I found it would not work."

ANSWER: This is what happens when people try experiments about which they are not very certain. From the sketch, the correspondent said he was connecting the voltage of his C battery across the filament of his valve. Taking it that the C negative was 4½ volts, the total voltage on the filament would be 9, which would account for the valve not lighting when it was tried later on.

The fact that the C battery ran down regularly goes to prove this. The amount of current used by the filament (filament consumption) is very high. That is the reason why large A battery cells are used. The C battery, if used in its correct position, that is, to make the grid negative, runs down very slowly, in fact, a C battery lasts anything from six months to twelve

months. The cells in the C are much smaller than those in the A, or even in a B, for the amount of current required from the B battery is greater than that required from the C, so it can be quite readily understood that, when a sudden heavy draw is placed upon the battery, it would run down very quickly, as the correspondent describes.

The correct connections were shown in last week's "Radio Record" in the Crystal Corner, when a one-valve amplifier (double grid) was described. It will be seen that the C battery is connected between the "G.B." or "F." terminals of the transformer to the A negative, not as the correspondent has shown. In this way, the only element of the valve affected by this battery is the grid.

When dull emitter valves are used, one must be prepared to replace his B batteries more often than he would if using bright emitter valves, for there is a heavier current drain with this former type.

The Filter Choke.

IN the issue of the "Radio Record" just to hand, you published a filter choke specifying a sheet of 28 gauge tin-plate 28in. by 20in., out of which 80 laminations 3½in. by 2½in. were to be cut. As this would run into a little more tin is it meant that there should only be 40 laminations should be made and cut in half, thus making 80 pieces? Also, could the windows be cut out after the pieces have been halved, as it would be much easier?

ANSWER: It is evident that there is some slight slip in the specifications, which should read: 1½ sheets of tin plate 28in. by 20in. The windows should be cut after the plates have been cut in two pieces, otherwise great difficulty would be experienced.

Potentiometers for Carborundum Units.

CAN you tell me how many ohms there are in potentiometers that are used in carborundum stabilising units?—"QUESTION-MARK" (Wellington).

ANSWER: Potentiometers with a resistance of 400 ohms are required.

"Could a 400 ohm potentiometer be used in series with the detector

H.T. supply to raise the voltage from, say, 60 volts, until the distortion caused by too much voltage ceases, say, at 20 volts?"

ANSWER: This would depend on the filament consumption of the valve. If this were 1, then the 400 ohm potentiometer would be quite suitable; but if the consumption were .06 amps. at least 700 ohms would be required, while if .25 amps. only 200 ohms would be needed.

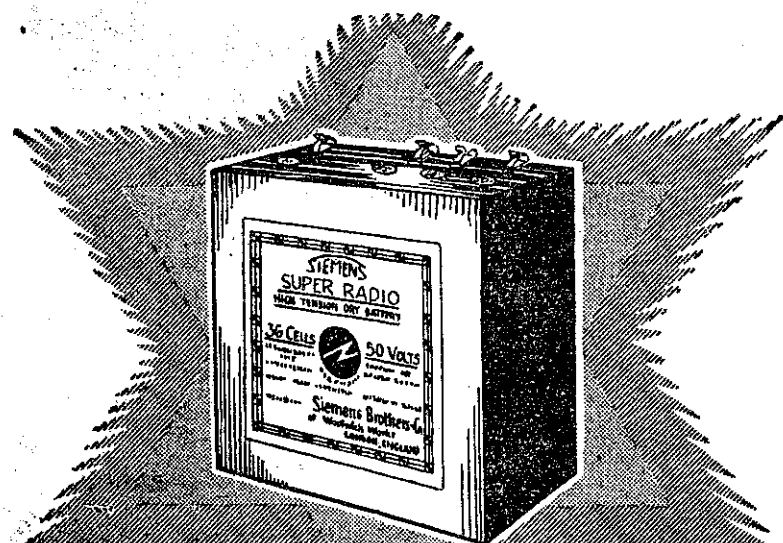
Set Unselective.

"A.C." (Wellington) writes:—"I have a six-valve factory set and for some time have been subjected to interference by 2YA whilst listening in to 1YA and 3YA, unless I make certain adjustments with my "sensitivity" control, which has the effect of greatly reducing volume. My aerial consists of two 30ft. steel masts 139ft. apart, with insulator inserted to reduce the length of aerial to about 100ft., and in addition the lead-in accounts for about 40ft. of wire. I have been advised to shorten the aerial and also to increase the height of the masts about 15ft., but before going to this trouble (and expense) would like your opinion as to the advisability of doing this. When 2YA is silent I get remarkable results. For instance, I received Dunedin (4YA) at good loud-speaker strength about a month ago at 12.30 p.m., and last evening I logged 2BL and 4GB at 9 p.m. In passing, I might mention that the "earth" is connected to a water-pipe which is in very sandy soil until it enters the bank where it connects with water main. I am greatly interested in "Notes and Comments."

ANSWER: The factory-built receiver (specified, but withheld from publication for obvious reasons) is quite selective, so that the trouble probably lies outside the set. Quite likely the aerial is pointing towards 2YA, so that it increases the strength out of proportion to that of the other stations. "A.C." would not be advised to shorten his aerial, but to raise it would be a good plan. A wave-trap such as described by "Pentode" in our issue of November 9 would probably greatly sharpen tuning, though the other stations would be only slightly weakened.

B Battery from the Mains.

I HAVE a factory-made one-valve set, and if it is possible I would like to get the B battery supply from the 230-volt mains by means of the electrolytic rectifier.—P.H.



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IT is not possible to supply plate voltage direct from a rectifier. The reason, briefly, is this: To charge a battery, there are two essential operations. (1) The reduction of the voltage of the mains to that of the battery to be charged. This is brought about by a step-down transformer. 2. The "rectifying" of the current from alternating to direct. This may be brought about by several means—by a valve, by an electrolytic, or by the vibrating method. This current is fed direct in the battery to be charged.

Eliminators carry the process one stage further. After the rectifier comes a filter which removes the pulsations from the pulsating direct current furnished by the rectifier, and leaves a smooth flow of direct current. To convert an electrolytic charger into an eliminator this filter, a system of chokes and condensers, must be added.

In practice, it has been found that there are other modifications, which render the electrolytic rectification rather unsuitable for the eliminator.

Distortion from 2YA.

CAN you please tell me what is wrong with my set when it only distorts on 2YA? My set is a three-valve regenerative receiver, and I receive all the other stations, such as the Australians, Americans, and New Zealanders with good clear volume on the speaker. — "CLEAR RECEPTION" (Blenheim).

There are two solutions to this problem: (1) 2YA is putting out distorted signals, in which case the trouble would be just occasional—at least it would not happen every time 2YA is tuned in.

(2) That the set or the speaker cannot handle the output supplied from 2YA. In the set the trouble may arise from the incapacity of the last valve to handle the output, in which case a larger capacity valve should be used. A semi-power valve would be suitable. Again, the transformers may not "have a straight curve," that is to say, they will not handle a great deal of volume with a semblance of uniformity.

The batteries may be low or out of proportion. Try the C to make certain that it is up to strength. This would cause chronic distortion when a great current was to be handled.

Loss in the Loud Speaker.

"WHAT is the meaning of demagnetise? Is there any way of putting it right or of preventing the same thing happening again?"

ANSWER.—Probably the cause of this trouble is that the loudspeaker has been connected in circuit the wrong way round. That is to say, its positive terminal has been connected to the negative of the set, and its negative towards the H.T. positive.

When this is done the steady current running through the loudspeaker tends to destroy the permanent magnetism inside the loudspeaker. Generally this takes a fairly long time—several months in many cases—but if the connections are not corrected the permanent magnet of the speaker becomes almost useless and inoperative. Fortunately the makers of the instrument will generally put it right for you for a small charge, but failing this it can be re-magnetised by one of the firms specialising in that class of work.

A CONNECTION to earth is not always necessary or beneficial for short-wave work.

A Corner for Beginners

By Observer

CORRESPONDENTS are requested to observe carefully the following points. Failure to observe these may mean delay in answering and even the loss of the communication.

1. Addresses.—All technical correspondence, whether inviting reply or not, must be addressed: "The Technical Editor," "N.Z. Radio Record," Box 1032, Wellington.
2. Each letter to bear (inside) the department to which it refers.—Construction, Crystal Corner, Questions and Answers, or General.
3. Letters inviting reply must be accompanied by a stamped and addressed envelope, but the right to answer any letter through the columns is reserved. Correspondents should watch the columns carefully as one letter may be answered in more than one section.
4. Advice requiring discrimination between factory-made sets or between makes of components cannot be given.
5. All letters to be signed, but a nom-de-plume may be added.
6. Reports for the DX Club to be addressed: "DX," Box 1032, Wellington.

A Novel Earth.

T. PASCOE (Auckland) writes describing a type of earth that should appeal to listeners who have a difficulty in obtaining a good earth through bad soil conditions. He writes: "I have read with interest the reports of your readers on 'Copper Earth.' I have used this type of earth for nearly three years, and heartily endorse the praises which have been given it."

Mr. Pascoe's earth is briefly this:—The ground connection is established through the use of a discarded copper. A hole was dug in the ground (loose, volcanic soil) and the clay was placed in this, so that it would come round the sides of the copper, making a good contact between it and the earth. The copper was then sunk in this, and filled with coke, so that it might be 4in. below the surface of the ground. The copper was then covered with a sheet of corrugated iron, in which a hole was made. Through this hole a bottle with the bottom knocked out was placed, so that the upper end was clearing the surface of the ground. A piece of wood was placed in the bottle to keep the passage clear.

The correspondent states that the use of the clay very much improved the connection.

Artificial Static.

A GREAT deal of so-called static can be traced to a faulty B battery, even though it may read 45 volts, and to all outward appearances is apparently in good condition. When a B battery is run down internal noises are the natural expectation, although some of the batteries die very quietly.

To test for a noisy B battery, proceed as follows:—

Disconnect the batteries from the set, testing one at a time. Connect one cord tip of a pair of head phones to one terminal of the battery, holding the other tip tightly in the hand and with the forefinger and thumb of the

same hand grasp the other battery terminal. If a steady crackling sound is audible, you may rest assured that the disturbance resides within the battery. Do not connect both receiver tips directly across the battery, as it will invariably ruin the phones.

Position of Aerial.

RECEPTION differs in different parts of any city, and the variation in reception is appreciable. Some stations are received with exceptional intensity. Other stations are poorly received. Adjacent buildings cast shadows which manifest a decided influence upon reception at any one point.

If the best results are to be obtained every possible means must therefore be exhausted to so arrange the outdoor aerial that the stations are received with uniform intensity. This means that the aerial must be made non-directional to the stations received with exceptional intensity and directional to the stations poorly received in the neighbourhood.

C Battery Flat.

I NOTICED while reading questions and answers in the "Radio Record," Vol. 11, No. 30, that one of four readers is having the same trouble with his three-valve set as I had, and of which I wrote you some time ago about (Vol. 11, 28). He signed himself "Puzzled," Christchurch.

Firstly, I wish to thank you for your information in regard to my own trouble. Secondly, I wish to state for the benefit of "Puzzled" that I took my set to an expert for overhaul, and the only thing that was wrong was that I was in need of a new C battery. This was installed, and since I have had perfect results.—F. COGLE (Launceston).

Both correspondents complained of noisy sets. In the case of the Christchurch correspondent, the noise was proved to lie in the set itself, and

manifested itself by a grating sound whenever the set was turned on. It appeared that there was something wrong with some of the components. Our present correspondent complained of a planing noise, and was advised to overhaul his set testing for breaks. It was stated that the batteries were all OK, so it was taken for granted that the C was up to scratch.

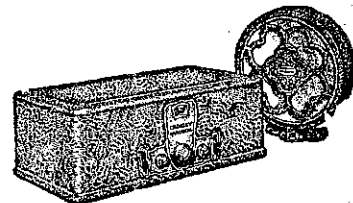
This emphasises the necessity to keep a careful check on all the batteries, not forgetting the small C, which quite commonly is placed within the cabinet and is likely to be overlooked. Batteries cause more trouble than any other component in the set, and need regular and careful attention.

Trouble Shooting.

DO not use an L.F. amplifier which has no grid-bias battery in it. It is out of date, and can easily be altered.

REVERSING the connections to your L.F. transformer may be an old-fashioned plan, but nevertheless it is often very effective in reducing the hum due to electric-light mains.

THE use of too much filament voltage may cause a valve to lose its emission, and is one of the commonest causes of poor reception.



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THE WOMAN'S POINT OF VIEW

By "VERITY"

Good Pastry

After the Day

(By Alexander Gifford.)



About Dressing Gowns

THE most popular, and, in many ways, the most elegant dressing gown of to-day is the one which is made exactly, or almost exactly, like a man's.

They are frequently made in just the same kind of silk, too, and quite a number of women buy them at men's shops.

Long sleeves, a roll collar, and a pair of pockets are three of the more practical reasons for preferring this kind of dressing gown to any other. The chief aesthetic reason is that no other type agrees so happily with the ubiquitous pyjama, and few will consent to take up so little space in the wardrobe or suitcase, and yet cover their owners so warmly and thoroughly when in use.

Printed Silks and Satins.

The silks and satins used for the dressing gowns are nearly always printed, and usually in most attractive colours.

It is naturally possible to choose a plain fabric and have it made up in the same way, but the printed ones are generally more interesting, especially as the trousers of most of the best pyjamas are plain.

In spite of the excellence of this kind of dressing gowns, there are occasions, however, when a less tailored-looking garment is more comfortable and becoming. An afternoon siesta is one of the most important of these.

If you are going to rest at all, you may as well do so as thoroughly as possible, and a really comfortable rest gown is distinctly helpful.

Many of these are really charming. They are made in very soft silks which hardly crease at all; in supple satins, and sometimes in velvet.

Most of them have a fairly deep V neck and plenty of fullness, without any apparent bulk, obtained as a rule by a wide cross-over skirt. Their sleeves are usually quite long, invariably quite loose, and frequently have that mediaeval effect which is almost universally becoming, and essentially appropriate for this kind of garment.

Shetland and Velveteen.

Flowered crepe de chine makes charming rest gowns, washes perfectly, and, therefore, shares many of the practical qualities of those made for men, in silk.

The long Shetland dressing gowns lined with chiffon are delightfully soft and warm, and these, like the manish one and the simply made crepe de chine pack into a surprisingly small space, and show no creases. It is unwise, however, to expect them to endure a strenuous existence, and unless they are cleaned with expert care, they lose their shape and softness of texture.

Velveteen, on the other hand, wears and washes exceedingly well, and when a pleasant colour has been chosen, and the cut is good, the velveteen dressing gown becomes a thoroughly satisfactory possession.

Elizabethan Gloves

"QUEEN Elizabeth" gloves are the latest gauntlets for those who like novelty in their accessories. They are made in soft suede in deep crimson or vivid green and ornamented with gold fringe and gold braid, the glove itself being heavily embroidered with gold threads and gold beads in imitation of the gloves of Tudor times.

THIS is the time we see fruit tarts and tempting-looking cold meat pies on the sideboard. Methodical housewives set apart one special day in the week for pastry-making. It is more economical and saves many rather trying hours in the hot kitchen on a summer day.

First, it is important to have all your cooking utensils cold and dry. A marble slab for rolling gives better results than a board, and a glass rolling pin is preferable to the old-fashioned wooden one. Now try this recipe for neat-pie crust.

Finely sieve 1lb. of flour into a cold basin and break up into it 3oz. each of butter and lard. Make a well in the centre of the mixture, dropping therein half a teaspoonful of lemon juice and sufficient cold water to make a paste. The colder the water is, the better will be your pastry, so if you have it, pop in a lump of ice before using.

Now roll out the pastry and fold in three. Do this quickly three times, so that you get as much air as possible in the folds. This helps to make it light. It is now ready for the pie dish, and remember that meat crusts should be half-an-inch thick. Brush over with yolk of egg and bake in a quick oven.

Using Up the Trimmings.

No matter how carefully you weigh up your ingredients, there is always a certain amount of pastry left over on pie-making day. Here is one of several different ways of using it up. Roll out the trimmings to a thickness of 1/4 in., and sprinkle all over a fine layer of parmesan cheese. Furl up the pastry without disturbing the cheese and cut into fingers. Place on a greased baking tin and cook in a hot oven until a pale brown.

These, when cooked, will be cheese straws. Let them cool off and then store away in a biscuit tin; you will be glad of them for the next emergency supper.

Green Tomatoes

Green tomato marmalade is an uncommon preserve. Skin and slice tomatoes, place in a pan, and cover with sugar, allowing one pound to every pound of fruit. Keep warm until the sugar melts, then boil for one hour.

After the day, when you come home to me,
Thence am I, too, at home—so happily
At home to have you there, so pleased to spread
My little talk about you, help to shed
Long hours as a garment, and be free.
Life has so many voices till you key
The How's hundred tasks in harmony
When you return to dinner, fire, and bed

After the day

You bring me rest; I pray that it may be
That I bring peace to you, that always
Harbour each one the other, each one
Fed
From out the other's store, Then are
we wed
In perfectness, and find entirety
After the day.

Prepare some angelica by covering with boiling water and shred finely. Add 1lb. of this to every 1lb. of the jam. Boil for about twenty minutes, continually stirring the mixture. Pour into warm jars and cover when cold.

Pickled Tomatoes.

To 5lb. sliced fruit, add six onions, cut finely, and 12 small chillies. Place the ingredients in a pan, sprinkle salt over them, and leave for 12 hours. Drain off the liquid, and add a quart of vinegar. Place in a warm oven to bake slowly for about an hour, then place in warm jars. Make a mixture of one dessertspoonful each of mustard and brown sugar, and one teaspoonful each of cloves, pepper, and ginger. Boil this, and pour it over the mixture in the jars. Cover when cold.

Tomato chutney is always an appetising pickle for use with cold meat. Take 5lb. of green tomatoes, wipe, and slice them in a pan, sprinkling each layer with salt. Allow to stand 12 hours, then strain off salt liquid.

Slice four large onions and 3lb. of apples, and place them with tomatoes in a pan with 1lb. brown sugar, 4oz. sultanas, 1 teaspoonful ground ginger, 1 teaspoonful mustard, 1-teaspoonful cayenne, and a packet of spice. Add one quart vinegar, and boil until the mixture is soft, stirring occasionally as it thickens. When cold, put into jars and tie down.

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Annotations of Annabel *The Letters of Katherine Mansfield*

DEAREST:

If one had power to award dramatic cross of valour for prowess in the theatrical field in face of heaviest odds, then would it go to Mr. Allen Wilkie for resolutely and undauntedly hitching his waggon to a star and pursuing, without haste or pause, the moon of his delight that knows no wane—presentation of the Plays of his Well-beloved Bard.

Surveying the somewhat sparse and stolid audience assembled to witness "Coriolanus," one reflected how greatly was needed a little leaven of imagination to leaven the bland but dull reception accorded to the martial tragedy. For 'twas a notable dramatic event, past years not having afforded opportunity of witnessing the doughty needs of this particular war-lord, or listening to the inspired periods of the tempestuous Volumnia, wolfish mother of the great lion cub; ably played by Miss Lorna Forbes, who literally swept all before her, garbed in cyclamen-shot purple draperies that fringed and hung upon her magnificent proportions as though swathed by Juno herself.

A lovely, drooping Virgilia was Miss Hunter-Watts, making arresting foil to the warrior-mother inciting her more than willing hero to deeds that won the empire. The stage mob, as it blundered in and out and decimated quite in the modern way of communist with his quarry, was strangely reminiscent of our socialist friends who occasionally lift their voices in our peaceful isles. Fierce and futile, yet were they successful in bringing extinction upon their sometime saviour who in spite of backsliding, was yet the noblest Roman of them all. In the seething crowd of shrieking detractors I picked several familiar figures; petty, pilfering mischief-maker, peripatetic agitator, and bustling barker, all out for themselves, as large as life, and devil take the hindmost.

Arresting was Mr. Wilkie as the haughty autocrat, mighty in prowess, and of eloquence unparalleled. Imposing his entrances, majestic his gesticulation, his noble lines orated with fiery force. Unhappily, by some fluke of acoustics, much of the dialogue was missed and, so to speak, went up in hot air; this being vastly disappointing to one devout listener who, on many a hot Sunday afternoon in the past, had tried and failed to read the play through for herself.

Fairy Custard

BLEND a tablespoonful of flour and the same amount of butter, thoroughly first with themselves and then with a breakfastcupful of very hot (not quite boiling) milk, stirring over

ANOTHER of the Dominions' gifted girls is leaving shortly to follow the gleam in the wider world of opportunity that lies beyond our islands. Clever Miss Kathleen Salmon's work as a painter is already notable, and it needs no sibyl to prophesy success for this dweller in the Scottish city of the south, which is ever prone to appreciation of whatsoever things are lovely in the arts, and warmly generous to young strivers and treaders of the flinty path of achievement.

ALREADY the advance guard of wintry habilaments is upon us, and helmeted we shall go, or so it appears in the meantime. For which praise be, a disguising headpiece being a very present help in time of trouble of unpowdered nose and aftermath of sunburn that would detract from the allure of Cleopatra herself. Ingratiating shop assistants subtly suggest the coming mode in sibilant aside, and we are initiated into the glory that is to be of reversible silk of heavenly hue and texture; so that it begins to seem hardly worth while to amass oddments at three and three-farthings, cut into strange and useless lengths, and apt, as the weeks and months go by, suddenly to confront one like the ghosts of forgotten sins.

IT would seem that Mr. St. John Irvine, nothing if not versatile, is hardly likely to emulate, in these later years, his memorable "Changing Winds." In some short stories recently published, although the interest never becomes absorbing, the Irish author interests in the wide scope of his clear-eyed vision, ranging from Michael, weary of his bogs, to the shy, quiet Englishman journeying to Paris to worship at the shrine of the Winged Victory, "tameless and swift and proud." Though disillusion is the prevailing note, yet there are passages that enchain attention by virtue of intuitive observation and merciless analysis of motive, and he does not love the Bolsheviks. Says one of his characters—

"... Seems to me, when it comes to real cruelty and torture and killing, the brotherly-love merchants and the we're-all-as-good-as-one-another brigade have tyrants like Nero licked. I don't know as I wouldn't rather spend a weekend with old Momma Borgia than a couple of minutes with Comrade Trotsky. I'd feel safer somehow! ! !"

Your

ANNABEL LEE.

the fire for about ten minutes. Beat the yolks of four eggs with a tablespoonful or so of soft sugar and add; then cool the lot. When stone cold and in a fireproof dish, cover with a foam made by beating the whites of those eggs, plus a trifle of lemon juice, till stiff as stiff and frothy. Then bake in a very fast oven for about a quarter of an hour.

THE world is very aware of Katherine Mansfield, her genius and personality, her courage, faith, and restless searching for the stark and absolute truth which was ever the one true light that beckoned her like a flame.

It is to be doubted whether Mr. Middleton Murry is justified in casting upon the troubled waters of the world these intimate revealings of a valiant spirit tried beyond all limit of high faith and courage; but there can be no doubt that literature is enriched by this chronicle of gallant endeavour, and many who faint by the wayside of life will gain fresh impetus in realising the gallantry with which Katherine Mansfield faced that grim valley of shadows which is paved with pain, whose final Mecca is Death.

In these letters of the closing years of her life, she is discovered as poet and child; brilliant exponent of aims and technique of the artist; acute, clear-sighted critic of her contemporaries' work; and wistful woman whose heart's hope was some day to dwell with those she loved in a sweet, small home with multitudes of flowers, when "the time for singing of birds is come."

"I want to range about with you," she wrote to Mr. Middleton Murry, "but always with our own cottage to come back to, and its thread of smoke to see far away. That's life, that's the warm south, wherever it is."

The literary quality is of assured richness and clarity, with a wealth of comment on the passing show, notably humorous and ironic being her observations on life in foreign pensions; all illuminated by an exquisite faculty of conveying every shade and facet of earth's loveliness; which, combined with penetrating realisation of cruelties and ineptitudes of the Great War, her wide appreciation of the sweeping panorama of the world and impatience

with its vulgarities, shams and foolish curiosities, hold spellbound the discriminating student of books and men. All heightened and adorned with lovely descriptive touches—

"The wind with light, faint footfalls walks over the sea: the water rings against the shore, like a bell, striking softly."

In a mood of despondency she wrote:—

"I know so devilishly well the agony of feeling an immense longing just to have what everybody else takes so easily as their portion—health—a body that isn't an enemy—a body that isn't fiendishly engaged in the old, old torture of breaking one's spirit. . . ."

Profound and tragic and gay, lighting up the intricacies of existence with the beacon of her genius, these gallant letters will live on in the literature of England, together with those of her fellow-immortals, Keats and Wordsworth and gentle Charles Lamb. At one with that great company is the gifted girl who hailed from our own little land, to whom the world pays homage, and to whom, in her gay, brave acceptance of a bitter destiny, our hearts go out in a great pity and a great admiration.

"Cover her face, mine eyes dazzle,
She died young."

—R.U.R.

Doughnuts.

1 cup water, 1 tablespoon "Anchor" milk powder, 1 cup sugar, $\frac{1}{2}$ teaspoon salt, 4 teaspoons baking powder, 1 egg, 5 cups of flour (scant measure), $\frac{1}{2}$ teaspoon grated nutmeg.

Method.—Beat up egg well, and add sugar and water. Sift flour, milk powder, baking powder, salt, and nutmeg together, and then add it to the mixture. Mix well. Turn the mixture on to a well-floured baking board, roll out to about quarter-inch thickness. Cut the mix with doughnut cutters. Fry in deep fat, and drain on brown paper.

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Next Week's Features

Features from 1YA

FOLLOWING the church service on Sunday evening a programme will be presented from the studio, the artists including Mrs. B. Jellard (who is making a welcome re-appearance before the microphone after a long absence), and Mr. Arthur Colledge, well-known as the bass vocalist with the St. Andrew's Quartet. Specially-selected gramophone records will also be introduced.

THE main vocalists on Tuesday evening's operatic programme will be Miss Madge Clague, contralto (who has now firmly established herself as a favourite with listeners), Miss Lola Solomon, soprano (who makes a welcome re-appearance at 1YA), and Mr. Ernest Snell, the well-known Auckland baritone. Miss Clague's items include "Softly Awakes My Heart" (from "Samson and Delilah", by Saint Saens), and Miss Lola Solomon will be heard in "Dove Sono" ("Where Am I?", from "Le Nozze di Figaro"), and "Voi She Sapete," from the same opera. The great baritone aria from "Un Ballo in Maschera," "Thou the Destroyer," will be among Mr. Snell's items. On the instrumental side of the programme, Mr. Cyril Towsey will play "Ballad in A Flat" (Chopin), and the studio orchestra, among other selections, will contribute Liza Lehmann's beautiful song cycle, "In a Persian Garden," and selections from the musical comedy, "Tell Me More" (Gershwin).

THE New Zealand Four will make their second appearance before the microphone on Wednesday evening, and

will contribute a splendid variety of solos, duets and choruses. They will be assisted by Mr. Dan Flood, the well-known Auckland humorist and monologue entertainer. Mr. Arthur E. Wilson, in continuation of his short organ recitals, will play, among other items, "To the Evening Star" (Wagner), "Even Song" (Martin), and "Gavotte," by Dupont. He will be assisted by the popular baritone, Mr. Clinton Williams, who will sing, with organ accompaniment, "Lord God of Abraham," from "Elijah," and "The Watchman" (by Squire).

A SPLENDID variety programme will be presented on Thursday evening, the artists including "The Lyric Quartet," Mr. Arthur McElwain (comedian), and The Bohemian Duo, whose numbers include "Jeannie, I Dream of Lilac Time" and "Get Out and Get Under the Moon." Happy Abe and Dismal Ike will perform another of their humorous sketches, while on the instrumental side of the programme will be heard the Auckland Trio, and Miss Ina Bosworth, violiniste.

THE principal vocalists contributing to Friday evening's programme will be Madame Mary Towsey's Quartet, whose programme includes a wide variety of vocal numbers, including "Fair Shines the Moon," "The Fairies are Tripping," and "Follow Me Down to Carlow." An artist making his initial appearance at 1YA will be Mr. C. A. Ferguson, pianist. Orchestral selections to be played by the Studio Orchestra will be "London Scottish March," and a selection from the musical comedy "Blue Mazurka," by Lehar. An outstanding item on this programme should be Miss Molly At-

kinson, rendering Tosti's "Parted," with violin obbligato by Miss Ina Bosworth. Mr. J. F. Montague will include among his elocutionary numbers on Friday evening Kipling's dramatic poem, "Gunga Din."

THE vaudeville programme arranged for Saturday evening will include the popular Snappy Three in vocal trio numbers, Messrs. Higgott and Morrison (banjo duetists), and the Auckland Trio. Mr. James Sharp, after a long absence from the microphone, will make a welcome reappearance, his humorous items including "How to Compose a Rag-time Song" and "The Safety Pin." The concluding portion of the programme will be given over to dance music.

Features from 2YA

AT the conclusion of the evening service on Sunday a studio concert will be given, the artists being Miss Myra Sawyer, Mrs. T. Treacey, and Mr. W. Boardman. Miss Sawyer, who is making a welcome reappearance, will sing Vincent Wallace's "Sweet Spirit, Hear My Prayer" and "An Indian Squaw Song" by Jrlando Morgan. She will also sing a duet with Mr. Boardman. Mr. W. Boardman (bass baritone) will be heard in "Love Leads to Battle" and in the stirring song, "The Trumpeter." Mrs. T. Treacey is a contralto from the studio of Signor Truda. She has done consistently good work as a church soloist, and at competitions.

ON Monday evening at 7.40 Hare Hongi will give another of his interesting talks on the Maori language.

For her items on Monday evening, Madame Briggs has chosen "As When the Dove" from Handel's "Acis and Galatea." Liszt's beautiful song, "Thou Art Like a Lovely Flower" and Schumann's "Devotion." As Madame has devoted a great deal of study to songs of this nature listeners are assured of a musical treat. Miss Nora Greene, one of New Zealand's most artistic and popular contraltos, will sing a number from Gluck's opera "Orfeo" entitled, "Che Faro," of "Have I Lost Thee?" She will also sing two songs by Sullivan, "Will He Come?" and "Golden Days."

THE tenor soloist of the evening, Mr. Eric Rishworth, is making a welcome reappearance before the microphone, and will sing "Mary of Allendale," and two Mendelssohn numbers: "To a Rosebud" and "A Bird is Calling." These numbers should suit Mr. Rishworth's voice admirably and he can be relied upon to give an artistic rendition of songs of this nature. Mr. S. E. Rodger, a leading Wellington baritone and one who has had experience abroad, will give as his contribution to the programme "All Joy be Thine" (by Sanderson) and a bracket of two numbers, "God's Slumberland" (by Gray) and "O Flower Divine" (by Haydn Wood).

MR. VICTOR S. LLOYD, an unconventional entertainer, will relate another of his experiences.

A feature of the instrumental section of Monday evening's programme will be the 1st and 2nd movements of Beethoven's famous "Moonlight Sonata," played by Mr. G. Gregory. The orchestral items will include Boildieu's overture "La Blanche Dame," Grieg's "Peer Gynt Suite," Braga's "Angel's Serenade," a valse by Moskowski, and a selection from Tschalkowsky's "Le Lac de Cygnes."

ON Tuesday evening there will be a relay from the Town Hall of the civic reception and presidential induction ceremony of the New Zealand branch of the British Medical Association from 8 o'clock until approximately 9.30 p.m., when a light programme will be given from the studio. For this concert the orchestra will play the overture to "The Bohemian Girl" and other attractive items of a light nature, chief amongst which will be a selection from "The Gondoliers." Mrs. Jackson, an artist whose first appearance created very favourable comment, will sing some popular songs. Mr. Jock Martin will entertain listeners with some humorous items from his repertoire, and Palmer's Hawaiian Trio will play two groups of popular numbers.

THE vocal section of the programme on Friday night will consist of excerpts from well-known operas, the vocalists being the Ariel Singers. Miss Jeanette Briggs will sing two operatic arias, the famous "Reynara nel Silenzio" or "Silence Over All," in which number Lucia, in the opera "Lucia di Lammermoor," describes how she saw an apparition which causes consternation in her brother's household, and is one of the causes of the tragedy that follows. The well-known Puccini air "Vissi d'Arte" will also be sung by Miss Briggs. The famous tenor aria from "Rigoletto," "Questo e Quella," will be one of Mr. Roy Hill's items, his second number being "The English Rose" from Edward German's popular comic opera "Merrie England." Miss Ngaire Coster has chosen for her solo the well-known "Carmen" aria, the "Habanera," and she will be heard in a duet from a little known opera "La Mercandante." Two well-known bass arias will be sung by Mr. J. M. Caldwell, whose items will be "Within These Sacred Bowers" (from the "Magic Flute," by Mozart) and "Vulcan's Song," from "Philemon et Baucis," by Gounod. A vocal quartet number from Weber's "Preciosa" entitled "The Stars that Above Us are Shining" will complete the vocal programme.

THE orchestral items for Friday evening will be "Tziganne" (by Lacomme), the selection "Tales From the Vienna Woods" (by Strauss), a suite by Tschalkowsky entitled "The Nutcracker," a piano and strings number, "Andante from Concerto," by Saint-Saens (soloist, Mr. M. Dixon), and the musical comedy selection, "The Firefly."

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A BRIGHT and varied programme will be presented on Saturday night, the programme opening with the selection "Melusine," by the orchestra, followed by a popular song by the Melodie Four, "Together." Other items of interest by the Melodie Four will be the quartette numbers, "Eileen Alanah" and "Mulligan's Musketeers," two numbers which should appeal to a large number of listeners, the former being an old ballad which always seems popular, and the latter a bright humorous number, that always receives a good reception whenever it is sung.

THE baritone soloist, Mr. R. S. Allwright, will sing Del Riego's famous "Slave Song," and Mr. W. W. Marshall (bass) will be heard to advantage in "Gipsy Dan." Tenor solos by Mr. F. Bryant will be "Linden Lea" and "The Sweetest Flower That Blows," two numbers which should suit this singer admirably. Mr. Sam Duncan has chosen for his tenor solo a song that was well and favourably known some 30 or 40 years ago, and one that can well bear repetition, "Tom Bowling," and in Mr. Duncan's capable hands this song will prove to be one of the gems of the evening. Further items by the studio orchestra will include "Reminiscences of the Plantation," a novelty arrangement of "Il Trovatore" and Ardit's well-known waltz, "Il Bacio," which is often heard as a soprano solo.

Notes from 3YA

LOCAL artists singing for 3YA at the after-church concert next Sunday evening will be Miss Nellie Lowe, Miss Mavis Spiller, and Mr. A. G. Thompson. The gramophone records chosen for the occasion will include the "Peer Gyn" Suite, and a remarkable production, "Storm on the Volga."

TWO songs in Maori will be sung by Mr. Rangī Hiwi Couch on Monday evening—"Beneath Thy Window" and "Waiata Poi." This popular tenor will also sing "Kashmiri Song" from Amy Woodforde Finden's delightful "Indian Love Lyrics." The other vocalist for Monday evening will be Miss Betty Hilliard, whose songs will be of the vaudeville and popular type. Another artists will be Mr. Bracey Wilson, the well-known Scottish humorist. One of his numbers will be "The Wedding of Sandy McNab," and the other "I Saw Peter Henry Home."

The instrumental music of Monday evening's programme will be provided by the Studio Trio and by the Municipal Band, the items being, as usual, of a varied nature.

THREE very interesting songs will be sung by Mr. E. J. Johnson, baritone, on Wednesday evening. One, "The Bedouin Love Song," is but rarely sung, owing to the difficulty of doing full justice to it. It is, however, a song which should be safe with Mr. Johnson. In his second song, "The Windmill," tells its own story of its daily round and common task for the sake of mankind. It is a fine song by Nelson. The third song is one breathing patriotism, "Your Land and Mine."

A COLORATURA soprano singer, Mrs. W. M. Walton, will make her first appearance on Wednesday evening. She is an Australian now resident in Christchurch, on

the staff of the Bristol Piano Company. She has chosen three songs which should demonstrate her ability, "Santuzza's Song," (from "Cavalleria Rusticana"), Lane Wilson's "Carmenia" and "The Pipes of Pan," from "The Arcadians."

MISS LUCY FULLWOOD, mezzo-soprano singer and pianiste, will appear in those roles on Wednesday and Thursday respectively. For her vocal numbers she has chosen songs by Crane, Ronald, Phillips, and Sanderson. Three different types of recitations will be given by Mr. R. R. Willis on Wednesday evening. Two are by Longstaffe, "My Little Rosa" and "Carlotta Mia," and the third is "The Weather Friend," a story in American dialect.

A PROGRAMME of old English folk songs will be given on Thursday evening by the Madame Gower Burns Quartet. The choruses will be "Some Folks Do" (a very old favourite), "It was a Lover and His Lass," "Dabbling in the Dew," "John Peel," and "Good-night." The solo numbers will be "A Pastoral" (by Carey), "I've Been Roaming," "When Daisies Pied," "Cherry Ripe," "Simon the Cellarer," "Where the Bee Sucks," "The Arrow and the Song," and "Drink to Me only with Thine Eyes." There will be some fine duets included: "Trust Her Not," and "I Know a Bank." The instrumental music for the evening will be supplied by the Bohemian Quintet.

THE GEISHA, one of the most popular of stage productions, will be radioed by the Radiolians on Friday evening. All the principal solos and choruses will be sung. During the evening humorous items will be given by Mr. George Titchener. Dance music items will be played by the Bailey-Marston Dance Orchestra.

THERE will be a vaudeville programme on Saturday evening. Miss Connie Flamank (contralto) will be singing; also Mr. W. J. Trewern (baritone), and Mr. J. Graham Young (baritone). The Joyous Pair (Messrs Dorothy and Edna Johnson), will present a further budget of popular duets at the piano, to ukulele accompaniment. Mr. Jock Lochart will give more of his humorous songbits with patter. Humorous elocutionary numbers will be given by Mr. Campbell Brown. Last to be mentioned, but not least on any vaudeville programme, will be Mr. Leslie Croft, who will make his second appearance at 3YA. Mr. Croft is a champion mouth organist. His turns will comprise trick playing on small and large mouth organs, improvisations from well-known operas, and, in general, a mixture of melodies.

Notes from 4YA

THE church service from St. Andrew Street Church of Christ, conducted by Pastor W. D. More, will be broadcast on Sunday. This will be followed by a relay of the concert by the St. Kilda Municipal Band, the last before they leave to take part in the Wanganui Band Contest.

ON the afternoon of Tuesday, February 19, the afternoon tea music from the Ritz will be relayed. On

Tuesday evening three new singers will render items. Miss Stuart Mitchell, a very fine mezzo-soprano, will be heard in "Isla McLean," "June is in My Heart," and Goring Thomas's fine song, "A Summer Night." Three ballads will be sung by Miss Phyllis Clare (contralto), and she will also be heard in a duet, "The Voyagers" with Mr. F. C. Cooper. Mr. Allan Mitchell, a lyric tenor, will sing three numbers, including "Echo" and "The Devout Lover." Mr. F. C. Cooper has included an old favourite in his numbers, "The Midnight Review" by Glinka. Elocutionary items will be given by Miss Roberta Williams.

A POPULAR programme has been arranged for Wednesday evening, and will include a delightful combination of musicians, "The Melodious Five," who will render several popular numbers. This combination is in great demand at local functions. A feature of the programme will be a presentation of excerpts by The Serenaders of Lehar's fine musical comedy, "Gipsy Love." Mr. Lester Molier, the popular elocutionist, will give elocutionary items, and Mrs. Ernest Drake will be heard in pianoforte solos.

ON the afternoon of Friday, February 22, Miss Buccleuch, of the D.S.A., will continue her interesting Fashion Talks. The evening session will be a particularly fine one. The performers will include some of Dunedin's foremost artists. One new singer is being introduced in the person of Miss Muriel Eager, A.T.C.L., soprano. Her numbers will include "Qui La Voce" (from Bellini's opera "I Puritani"). Miss Irene Hornblow, L.R.A.M., is singing "Sweet Spirit Hear My Prayer" (from "Maritana"), "Lullaby" (by Byrd), and "I Attempt from Love's Sickness to Fly" (by Purcell). Mr. L. E. Dalley (tenor) and Mr. Arthur Lungley (baritone) will be heard in the duets "Flow Gently Deva" and "In This Solemn Hour" (from "La Forza del Destino"). The former has included in his numbers the famous aria from "The Messiah," "Thou Shalt Break Them," and the latter "O Tu Palermo" (by Verdi). The 4YA Broadcasting Trio will supply trios and solo numbers, Miss Eva Judd (violiniste) playing "Romance in G," by Evendsen, and Mr. P. J. Palmer ('cellist) playing "Scherzo," by Van Goens. Mrs. Ernest Drake, pianiste, will play "Arabesques" Nos. 1 and 2 by Debussy. The elocu-

tionist for the evening is Miss Madge Yates.

THE artists appearing on Saturday, February 23, are Miss Mira Ahlers in popular song hits; Mr. Buster Brown, singing humorous Scottish songs; Miss Anita Winkel and Major F. H. Lampen in comedy sketches. This will be followed by a special programme until 11 p.m.

Programmes to Taste

AN Australian radio writer says:—"The average listener never pauses to think of the gigantic task of supplying programmes to suit all tastes every day in the year. He takes for granted what is broadcast and if an occasional item does not come up to his expectation he exclaims "rotten" and straightaway writes to the papers complaining, or perhaps he expresses his feeling in a more definite manner, but seldom does he take the trouble to write expressing appreciation of the majority of the items in the programmes, which to him are satisfactory and the remarkable descriptions of sporting events and other functions. Some listeners appear to think that the programmes are framed for them alone and when an item is broadcast to please others—well, the fat is in the fire." We have this type of listener in New Zealand.

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Full Programmes for Next

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Sunday, February 17

1YA, AUCKLAND (333 METRES)—SUNDAY, FEBRUARY 17.

- 3.30 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.7: Selected studio items.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle Leo.
 6.55: Relay of service from Church of Christ—
 Preached: Mr. Ernest Aldridge.
 Organist: Mr. Ivan Lambert.
 8.30: Orchestral—Royal Philharmonic Orchestra, "Symphony in E Flat No. 39" (Mozart) (Columbia records 02715-6-7).
 8.45: Contralto solos—Mrs. B. Jellard, (a) "Soul of Mine" (Barns); (b) "My Gentle Child" (Del Riego).
 8.53: Pianoforte solo—Ignaz Friedman, "Mazurka" (Chopin) (Columbia record 03619).
 8.57: Bass solo—Mr. A. Colledge, "Now Heaven in Fullest Glory" (Haydn).
 9.1: Cello solo—Felix Salmond, "Kol Nidrei" (Bruch) (Columbia record 04190).
 9.9: Contralto solo—Mrs. B. Jellard, "Harvester's Night Song" (Power).
 9.13: Organ solos—Quentin Maclean, (a) "In a Persian Market" (Ketelbey); (b) "In a Chinese Temple Garden" (Ketelbey) (Columbia record 01921).
 9.20: Bass solos—Mr. A. Colledge, (a) "The Lord is My Light" (Liddle); (b) "Light in Darkness" (Cowen).
 9.27: Orchestral—New Queen's Hall Light Orchestra, selection from "I Pagliacci" (Leoncavallo) (Columbia record 02714).
 9.34: Close down.

2YA, WELLINGTON (420 METRES)—SUNDAY, FEBRUARY 17.

- 3 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 6.0: Children's Sunday service conducted by Uncle George.
 6.10: Relay of service from Vivian Street Church of Christ. Preacher:
 Paster W. G. Carpenter. Organist: Mrs. Sincok. Choir-
 master: Mr. W. J. Mason.
 8.15 (approx.): Studio concert.
 Orchestral—Philadelphia Symphony Orchestra, "Scheherazade Sym-
 phonic Suite" 3rd. Movement (The Young Prince and the Young
 Princess) (Rimsky-Korsakov), (H.M.V. Records D1438/9).

- Soprano solo—Miss Myra Sawyer, "Sweet Spirit, Hear My Prayer" (Wallace).
 Violin and piano—Erici Morini and N. Schwalb, "Adagio Molto Expres-
 sivo" and "Scherzo" from "Sonata in F Major" (Beethoven) (H.M.V. Record EC2).
 Bass solo—Mr. W. Boardman, "Love Leads to Battle" (Buononcini).
 Instrumental—String Sextette, (a) "Chant de Berger" (Galos); (b) "Romance" (Rubinstein) (Zonophone Record 5154).
 Contralto solo—Mrs. T. Tracey, "Ave Maria" (Luzzi).
 Orchestral—Grand Symphony Orchestra, "Intermezzo—Cavalleria Rusticana" (Mascagni), (Parlophone Record A4033).
 Lyric tenor with orchestra—Nino Ederle, (a) "Spirito Gentil" ("La Favorita") (Donizetti); (b) "Ecco Ridente" ("Barber of Seville") (Rossini) (Parlophone Record A4039).
 Overture—National Symphony Orchestra, "Stradella" (Flotow) (Zono-
 phone Record EE116).
 Duet—Miss Myra Sawyer and Mr. A. Boardman, "Still as the Night" (Goetz).
 Pianoforte solos—Ignaz Jan Paderewski, (a) "Nocturne in F Sharp Major" (Chopin); (b) "La Campanella" (Paganini-Liszt) (H.M.V. Record DB1167).
 Soprano solo—Miss Myra Sawyer, "An Indian Squaw's Song" (Morgan).
 Band selection—Band of H.M. Coldstream Guards, "Suite Francaise" (Foulds) (H.M.V. Record B2751/2).
 Contralto solos—Mrs. T. Tracey, (a) "Love's Night" (Temple); (b) "Recompense" (Sanderson).
 Instrumental—Victor Olof Sextet, (a) "Serenata" (Moszkowski); (b) "Hungarian Dance No. 5" (Brahms), (H.M.V. Record B2451).
 Bass solo—Mr. W. Boardman, "The Trumpeter" (Dix).
 March—International Band, "Dress Parade" (Arranged Enriquez) (H.M.V. Record EA424).
 Close down.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, FEBRUARY 17.

- 3.0 p.m.: Afternoon session—Selected gramophone items.
 4.30: Close down.
 5.30: Children's song service, conducted by Uncle David.
 6.15: Chimes of hymn melodies.
 6.30: Relay of service from St. Saviour's Church of England, Sydenham—
 Preacher: Canon C. G. Mutter.
 Organist: Mr. C. Hoskin.
 7.45 (approx.): Studio programme.
 Overture—Berlin State Opera House Orchestra, "Tannhauser" (Wagner) (Parlophone record A4036-7).
 8.0: Soprano solo—Miss Alma Shuker, "Gloria" (Buzzi-Peccia).
 8.5: Baritone solo—Mr. Robt. Samson, "Prologue—I Pagliacci" (Leon-
 cavallo).
 8.9: Violin solos—Edith Lorand, (a) "The Old Tower of St. Stephens" (Brandl-Freisler); (b) "Minuet in G" (Beethoven); (c) "Schon Rosmarin" (Kreisler) (Parlophone record E10549).
 8.17: Mezzo-soprano solo—Mrs. Bessie Steward, "Oh! Wondrous Mystery of Love" (Liszt—transposed by H. M. Lund).
 8.21: Instrumental quintette—Parlophone Instrumental Quintet, "Silent Night, Holy Night" (Parlophone record A2581).
 8.25: Soprano solos—Miss Alma Shuker, (a) "Now Sleeps the Crimson Petal" (Quilter); (b) "A Little Coon's Prayer" (Hope).
 8.31: Trio with chorus and orchestra—Stracciari, Appoloni and Ticozzi—"Toreador's Song" ("Carmen") (Bizet) (Columbia record 04173).
 8.35: Orchestral—San Francisco Symphony Orchestra, "Funeral March of a Marionette" (Gounod) (H.M.V. record ED5).
 8.39: Baritone solos—Mr. Robt. Samson, (a) "Sacrament" (MacDermid); (b) "Blow, Blow, Thou Winter Wind" (Sargeant).
 8.43: Band selection (descriptive) H.M. Grenadier Guards "In a Clock Store" (Orth) (Columbia record 9029).
 8.47: Mezzo-Soprano solos—Mrs. Bessie Steward, (a) "Gather Ye Rosebuds" (Sanderson); (b) "If My Dream Ship Come Home" (McGeoch).
 8.56: Tenor solo—John McCormack (violin obligato by Kreisler), "Ave Maria" (Schubert) (H.M.V. record DB578).
 9.0: Violin solos—Mischka Elman, (a) "Les Farfadets" (Pente); (b) "Valse Caprice" (Rissland) (H.M.V. records DA507).
 9.6: Chorus and orchestra, "Cavalleria Rusticana" (Mascagni) (H.M.V. record EB27).
 9.10: Organ solos—Reginald Foort, (a) "Miniature Overture"; (b) "Waltz of the Flowers" (Tschalkowsky) (H.M.V. record C1386).
 9.18: Tenor solos—John McCormack, (a) "Desolation"; (b) "A Dream of Spring" (from "Songs from the Chinese Poets") (Bantock) (H.M.V. Record DA917).
 9.24: Orchestral—Berlin State Opera Orchestra, "Der Freischutz" (Weber). (H.M.V. record D1249).
 9.30: Close down.



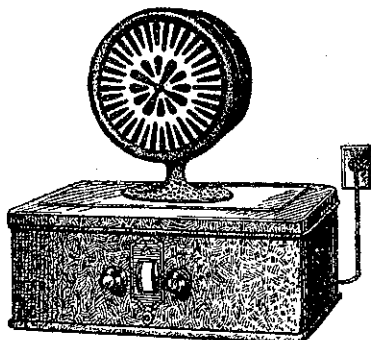
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4YA, DUNEDIN (463 METRES)—SUNDAY, FEBRUARY 17.

- 5.30 p.m.: Children's song service, conducted by Big Brother Bill.
6.30: Relay of service from St. Andrew Street Church of Christ—
Preacher: Pastor W. D. Mora.
Choirmaster: Mr. Hickey.
Organist: Miss E. Stokes.
8.5: Relay from St. Kilda Band Rotunda of concert by the St. Kilda Band.
9.15: Close down.

Monday, February 18

1YA AUCKLAND (333 METRES)—MONDAY, FEBRUARY 18. SILENT DAY.

2YA, WELLINGTON (420 METRES), MONDAY, FEBRUARY 18.

- 3 p.m.: Chimes of the G.P.O. clock.
3.1: Selected gramophone items.
4.30 and 4.55: Sports results to hand.
5.0: Close down.
6.0: Children's session, conducted by Uncle Jeff.
7.0: News session, market reports, and sports results.
7.40: Lecturette—Hare Hongi, "Maori Language and Pronunciation."
8.0: Chimes of the G.P.O. clock.
8.1: Overture—Orchestra, "La Blanche Dame" (Boieldieu).
8.11: Soprano solo—Madame Emily Briggs, "As When the Dove" ("Acis and Galatea") (Purcell).
8.16: Pianoforte solo—Mr. G. Gregory, "First and Second Movements—Sonata in C Sharp Minor," Op. 27, No. 2 (Beethoven).
8.23: Baritone solo—Mr. S. E. Rodger, "All Joy Be Thine" (Sundersen).
8.27: Violin solo, with orchestral accompaniment, "Angel's Serenade" (Braga).
Waltz—Orchestra, "Valse" (Moszkowski).
8.37: Contralto solo—Miss Nora Greene, "Have I Lost Thee?" ("Orfeo") (Gluck).
8.42: Cembalo solos—Anna Linde, (a) "Le Coucou" (Dquin); (b) "Le Tambourin" (Rameau).
8.46: Tenor solo—Mr. Eric Rishworth, "Mary of Allendale" (Hook).
8.50: Instrumental—Orchestra, repeat number.
8.58: Weather report.
9.0: Mr. Victor S. Lloyd will relate another of his experiences.
9.15: Suite—Orchestra, "Peer Gynt Suite," No. 2 (Grieg):
1. Abduction of the Bride.
2. Arabian Dance.
3. Peer Gynt's Home-coming.
4. Solweig's Song.
9.25: Soprano solos—Madame Emily Briggs, (a) "Thou'rt Like a Tender Flower" (Liszt); (b) "Devotion" (Schumann).
9.31: Vocal trio—Nessi, Venturini, and Baracchi, "Turandot—The Minstrel Trio—Ping, Pang, Pong" (Puccini), (Parlophone record AR1013).
9.39: Baritone solos—Mr. S. E. Rodger, (a) "God's Stumberland" (Gray); (b) "O Flower Divine" (Haydn Wood).
9.45: Novelty—Clapham and Dwyer, "Golf" (Clapham and Dwyer), (Parlophone record A2524).
9.53: Contralto solos—Miss Nora Greene, (a) "Will He Come" (Sullivan); (b) "Golden Days" (Sullivan).
9.58: Tenor solos—Mr. Eric Rishworth, (a) "To a Rosebud" (Mendelssohn); (b) "A Bird is Calling" (Mendelssohn).
10.2: Ballet suite—Orchestra, "Le Lac Des Cygnes" (Tchaikowsky). (1) Scene; (2) Dance of the Swans; (3) Hungarian Dance.
10.14: Close down.

3YA CHRISTCHURCH (306 METRES)—MONDAY, FEBRUARY 18.

- 3.0 p.m.: Afternoon session—selected studio items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's session conducted by "Sister Scatterjoy."
7.15: News session.
7.30: Talk—Mr. E. J. Bell, "Books."
8.0: Chimes.
Programme by the Christchurch Municipal Band under the conductorship of Mr. A. Schnack, and assisting artists.
8.1: March—Band, "Advance Guards" (Alford).
8.9: Tenor solo—Rangi Hiwi Couch, "Kashmiri Song" (Woodforde-Finden).
8.13: Instrumental trios—3YA Broadcasting Trio, (a) "Allegro Appassionata" (Lalo), (b) "Presto" (Lalo).
8.33: Popular songs—Miss Betty Hilliard, (a) "Sweet Susie O'Shea" (Penn), "My Mammy" (from "Oh, Lady, Lady") (Donaldson).

- 8.38: Overture—Band, "Diamond Cross" (Greenwood).
8.51: Song of relaxation—Mr. Bracey Wilson, "I Saw Peter Henry Home" (Bennett Scott).
8.56: Chorus with orchestra—Light Opera Company, Gems from "Rose Marie" (Friml) (H.M.V. Record C1205).
9.0: Weather report.
9.1: Talk—Mr. G. Keys, M.A. Diploma of Education "Vocational Guidance" (Explaining its methods and possibilities).
9.16: Hymn—Band, "Rock of Ages" (Dykes).
9.23: Tenor solos—Rangi Hiwi Couch, (a) "Beneath Thy Window" (sung in Maori) (Tischemacher), (b) "Waiata Poi" (Hill).
9.29: Instrumental trios—3YA Broadcasting Trio, (a) "Song of the Mountains" (Grieg), (b) "Negro Spiritual" (Clugh Leighton), (c) "Serenata" (Moszkowski).
9.39: Popular songs—Miss Betty Hilliard, "Meadow Lark" (Keidel Floroto).
9.43: Waltz—Band, "Mime" (Pitt).
9.53: Scottish humorous song—Mr... Bracey Wilson, "The Weddin' O' Sandy McNab" (Lauder).
9.58: March—Band, "Semper Fidelis" (Greenwood).
10.2: Close down.

4YA DUNEDIN (463 METRES)—MONDAY, FEBRUARY 18.

SILENT DAY.

Tuesday, February 19

1YA, AUCKLAND (333 METRES)—TUESDAY, FEBRUARY 19.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.8: Studio items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's session conducted by Uncle George.
7.15: News and market reports—Book review.
8.0: Chimes.
8.1: Overture—Orchestra, "Norma" (Bellini).
8.11: Baritone and soprano with chorus and orchestra, Apollo Granforte and Hilda Monti, "Rivedrai le Foreste Imbalsamate" (Once Again Shalt Thou Gaze Upon Our Forests), and "Su Dunque" (Arise then) ("Aida"), (Verdi) (H.M.V. Record DB1153).
8.19: Contralto solo—Miss Madge Clague, "Softly Awakes My Heart" ("Samson and Delilah") (Saint-Saens).

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BOX 830

WELLINGTON.

- 8.23: Relay of orchestral entr'acte from Majestic Theatre Orchestra under the conductorship of Mr. J. Whiteford Waugh.
 8.30: Soprano solo—Miss Lola Solomon, "Dove Sono" ("The Marriage of Figaro") (Mozart).
 8.34: Baritone solos—Mr. E. Snell, (a) "Eri Tu" ("Un Ballo in Maschera") (Verdi); (b) "Come, Open Wide Your Window" ("Don Giovanni") (Mozart).
 8.42: Pianoforte solo—Mr. Cyril Towsey, "Ballade in A Flat" (Chopin).
 8.50: Comedian with orchestra—Frank Crumit, "The Three Trees" (McNaughton) (H.M.V. Record EA387).
 8.54: Relay of orchestral music from Majestic Theatre.
 9.0: Weather report.
 9.2: Talk—Mr. A. B. Chappell, M.A., "The Maori."
 9.17: Song suite—Orchestra, "In a Persian Garden" (Lehmann).
 9.29: Tenor solo—Tudor Davies, "Ah, Moon of My Delight" (Lehmann), (H.M.V. Record D1283).
 9.33: Contralto solo—Miss Madge Clague, "Habanera" ("Carmen"), (Bizet).
 9.37: Ballet music—Orchestra, "Meyerbeer Ballet Music" (Kretschmer).
 9.47: Soprano solos—Miss Lola Solomon, (a) "Voi Che Safete" (Mozart); (b) "Drink to Me Only" (Quilter).
 9.56: Baritone solo—Mr. Ernest Snell, "The Only Girl Alive" ("The Arcadians") (Monckton).
 10.0: Musical comedy selection—Orchestra, "Tell Me More" (Gershwin).
 10.10: Close down.

2YA, WELLINGTON (420 METRES), TUESDAY, FEBRUARY 19.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sports results to hand.
 5.0: Close down.
 6.0: Children's session, conducted by Uncle Jim.
 7.0: News session, market reports, and sports results.
 7.40: Lecturette by a representative of the Agricultural Department, "For the Man on the Land."
 8.0: Chimes of the G.P.O. clock.
 8.1: Relay from Town Hall, Wellington, of civic reception and presidential induction ceremony of the annual congress of the British Medical Association (New Zealand Branch).
 9.30 (approx.): Overture—Orchestra, "Bohemian Girl" (Balfe).
 9.40: Popular song—Mrs. H. Jackson, "Was It a Dream?" (Coslow).
 9.44: Hawaiian instrumental selection—Palmer's Hawaiian Trio, medley of popular airs.
 9.51: Humour—Mr. Jock Martin, "Shipwrecked in Kilts" (original).
 9.58: Suite—Orchestra, "Merchant of Venice" (Rosse). (1) Prelude No. 1; (2) Portia Intermezzo; (3) Oriental March; (4) Prelude No. 2; (5) Doge's March.
 10.8: Popular song—Mrs. H. Jackson, "Looking at the World Through Rose-coloured Glasses" (Malie).
 10.12: Hawaiian instrumental selection—Medley of popular airs.
 10.19: Humour—Mr. Jock Martin, "England is England, You Bet" (original).
 10.26: Musical comedy selection—Orchestra, "The Gondoliers" (Sullivan).
 10.36: Dance programme.
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—TUESDAY, FEBRUARY 19.

SILENT DAY.

4YA, DUNEDIN (463 METRES)—TUESDAY, FEBRUARY 19.

- 3 p.m.: Town Hall chimes.
 3.1: Relay of afternoon tea music from the Ritz orchestra under the direction of Mr. T. J. Kirk-Burnnand.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session conducted by Big Brother Bill.
 7.15: News session.
 8.0: Town Hall chimes.
 8.1: March—H.M. Coldstream Guards, "Liberty Bell" (Sousa).
 Intermezzo—H.M. Coldstream Guards, "Hiawatha" (Moret), (H.M.V. Record B2501).
 8.9: Bass solo—Mr. F. C. Cooper, "The Midnight Review" (Glinka).
 8.13: Recital—Miss Roberta Williams, "The Gift of Tritemius" (Whittier).
 8.18: Choir—Russian State Choir, "Storm on the Volga" (Pastshenko) (H.M.V. Record C1498).
 8.26: Contralto solo—Miss Phyllis Clare, "O Western Wind" (Brahe).
 8.30: Grand organ solos—Arnold Grier. 1. "Hearts of Oak." 2. "British Grenadiers." 3. "Home, Sweet Home." 4. "Bonnie Banks of Loch Lomond." (Zonophone Record 5087).
 8.38: Tenor solo—Mr. Allan Mitchell, "Echo" (Somerset).
 8.42: Mezzo-soprano solos—Miss Stuart Mitchell, (a) "Isla MacLean" (Mackenzie); (b) "June is in My Heart" (Vaughan).
 8.49: Military Band selection—H.M. Coldstream Guards, "Der Freischutz" (Weber) (H.M.V. Record C1335).
 8.53: Vocal duet—Miss Phyllis Clare and Mr. F. C. Cooper, "The Voyagers" (Sanderson).
 8.57: Weather report.
 8.59: Orchestral suite—Paul Whiteman's Concert Orchestra, "Suite of Serenades" (Herbert). 1. Spanish. 2. Chinese. 3. Cuban. 4. Oriental. (H.M.V. Record EB26).
 9.7: Tenor solos—Mr. Allan Mitchell, (a) "When the Swallows Homeward Fly" (White); (b) "The Devout Lover" (White).

- 9.14: Grand organ and cornet—Arnold Grier, "The Lost Chord" (Sullivan) (Zonophone Record A309).
 9.18: Contralto solos—Miss Phyllis Clare, (a) "Wait" (D'Hardelot); (b) "Three Green Bonnets" (D'Hardelot).
 9.25: Violin solo—Fritz Kreisler, "Indian Love Call" ("Rose Marie") (Friml) (H.M.V. Record DA785).
 9.29: Recitals—Miss Roberta Williams, (a) "How Bannerman Rode the Gray"; (b) "Bread and Jam" (Franklin).
 9.36: Orchestral—Philadelphia Symphony Orchestra, "Casse-Noisette" (Waltz of the Flowers) (Tchaikowsky), (H.M.V. Record D1216).
 9.44: Monologue—Frank Crumit, "No News" or "What Killed the Dog?" (H.M.V. Record EA387).
 9.48: Bass solos—Mr. F. C. Cooper, (a) "Roadways" (Lohr); (b) "Neptune" (Gordon).
 9.55: Chorus with orchestra—Light Opera Co., Gems from "No, No, Nanette" (Youmans) (H.M.V. Record C1205).
 9.59: Military Band selection—National Military Band, "The Bells of St. Malo" (Rimmer) (Zonophone Record 5102).
 10.3: Close down.

Wednesday, February 20

1YA, AUCKLAND (333 METRES)—WEDNESDAY, FEBRUARY 20.

- 3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Uncle Tom.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: March—H.M. Coldstream Guards, "Youth and Vigour" (Lautenschlang-er) (H.M.V. Record B2408).
 Orchestral—Philadelphia Symphony Orchestra, "Invitation to the Waltz" (Weber) (H.M.V. Record D1285).
 8.12: Vocal quartet—N.Z. Four, "You'll Remember Me" (Balfe).
 8.16: Tenor solo—Mr. Roy Dormer, "Grey Eyes" (Phillips).
 8.20: Humour—Mr. Dan Flood, More mirth.
 8.25: Organ and vocal—Mr. Arthur E. Wilson and Mr. Clinton Williams, (a) Variations on the hymn tune "St. George" (Elway); (b) "Ave Maria d' Arcadelt" (Liszt); (c) Baritone aria, "Lord God of Abraham" ("Elijah") (Mendelssohn); (d) "Gavotte" (Dupont).
 8.45: Vocal duet—Messrs. J. Simpson and Duncan Black, "Allah" (Alexander).
 8.49: Mezzo-soprano solo—Barbara Maurel, "Hindoo Slumber Song" (Ware), (Columbia Record 01252).
 Orchestral—San Francisco Symphony Orchestra, (a) "Caprice Viennois" (Kreisler); (b) "Coppelia Ballet" (Delibes), (H.M.V. Record D1272).
 9.0: Baritone solo—Mr. Eric Mannell, "Marie, My Girl" (Aitken).
 9.4: Weather report.
 9.6: Vocal quartet—N.Z. Four, "Plantation Medley" (arranged N.Z. Four).
 9.12: Tenor solos—Mr. James Simpson, (a) "Inter Nos" (MacFadyen); (b) "Birth of Morn" (Leoni).
 9.18: Military band selection—H.M. Coldstream Guards, "H.M.S. Pinafore" (Sullivan) (H.M.V. Record C1283).
 9.26: Baritone solo—Mr. Clinton Williams, "Bois Epas."
 9.30: Humour—Mr. Dan Flood, Still More Mirth.
 9.36: Organ and vocal—Mr. Arthur E. Wilson and Mr. C. Williams, (a) "To the Evening Star" (Wagner); (b) "Evensong" (Martin); (c) Baritone solo, "The Watchman" (Squire); (d) "Offertoire in F" (Read).
 9.56: Vocal duet—Messrs. Dormer and Mannell, "Bells of Gold" (Rae).
 10.0: Bass solo—Mr. Duncan Black, "Sohnacch Hau" (Korby).
 10.4: Dance orchestra—Paul Whiteman's Dance Orchestra, "It was the Dawn of Love" (Davis) (H.M.V. Record EA381).
 10.7: Vocal quartet—N.Z. Four, "Day is Done" (Parks).
 10.11: Close down.

2YA, WELLINGTON (420 METRES), WEDNESDAY, FEBRUARY 20.

SILENT DAY.

3YA, CHRISTCHURCH (306 METRES)—WEDNESDAY, FEBRUARY 20.

- 3 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by Big Brother.
 7.15: News session.
 7.30: Addition stock market reports.
 7.45: Talk—Mr. A. S. Drayton, managing director of Drayton Jones Ltd., "The Story of Linoleum."
 8.0: Chimes.
 8.1: Overture—Berlin State Opera Orchestra, "The Magic Flute" (Mozart) (H.M.V. Record EA464).
 8.9: Mezzo-soprano solos—Miss Lucy Fullwood, (a) "Here in the Quiet Hills" (Carne); (b) "Pluck this Little Flower" (Landon Ronald).
 8.15: Violin solo—Miss Irene Morris, "Andante" from "Concerto in D Minor" (Mendelssohn).

- 8.25: Baritone solo—Mr. E. J. Johnson, "Bedouin Love Song" (Pinsuti).
 8.29: Instrumental trio—3YA Broadcasting Trio, "1st Movement from Trio in B Flat" (Schubert).
 8.39: Recitals—Mr. R. R. Wills, (a) "My Little Rosa" (Longstaffe); (b) "Cariotta Mia" (MS).
 8.45: Orchestral—International Concert Orchestra, "La Spagnola" (Spanish Dancer) (Di Chiara) (H.M.V. Record EG15).
 8.49: Soprano solo—Mrs. W. M. Walton, "Santuzza's Song" ("Cavalleria Rusticana") (Mascagni).
 8.53: Orchestral—Philadelphia Symphony Orchestra, "Hungarian Rhapsody No. 2" (Liszt) (H.M.V. Record D1296).
 9.0: Weather report.
 9.1: Talk—Mr. G. M. Keys, M.A., Dip. Ed., Vocational Guidance Secretary, "Vocational Guidance—Professions and Commercial Work."
 9.16: Orchestral—Jack Hylton's Orchestra, "The Selfish Giant" (Coates) (H.M.V. Record C1253).
 9.24: Mezzo-soprano solos—Miss Lucy Fullwood, (a) "Starry Woods" (Montagu Phillips); (b) "Don't Hurry" (Sanderson).
 9.29: Tenor with chorus and orchestra, Aureliano Pertile and La Scala Chorus—"Merce, Merce, Gigno Gentil" (Now up the Stream Departing Float) ("Lohengrin") (Wagner) (H.M.V. Record DB1107).
 9.33: Meteorological recital—Mr. R. R. Wills, "The Weather Fiend" (In American dialect).
 9.38: Instrumental trios—3YA, Broadcasting Trio, (a) "Dialogue" (Bachmann); (b) "Spanish Dance No. 3" (Moszkowski).
 9.48: Soprano solos—Mr. W. M. Walton, (a) "Carmenia" (Lane Wilson); (b) "The Pipes of Pan" (Arcadians) (Monckton).
 9.53: Chorus with orchestra—Light Opera Co., Gems from "No, No, Nanette" (Youmans) (H.M.V. Record C1205).
 9.57: Baritone solos—Mr. E. J. Johnson, (a) "The Windmill" (Nelson); (b) "Your Land and Mine" (Breville Smith).
 10.2: Orchestral—Royal Opera Orchestra, "Carmen Ballet No. 2" (Bizet), H.M.V. Record C1424).
 10.6: Close down.

4YA, DUNEDIN (463 METRES)—WEDNESDAY, FEBRUARY 26

- 7 p.m.: Town Hall chimes.
 7.1: Request gramophone recital.
 7.40: News session.
 8.0: Town Hall chimes.
 8.1: Overture—Band of H.M. Coldstream Guards, "Pirates of Penzance" (Sullivan), (H.M.V. Record C1368).
 8.5: Presentation of excerpts from the musical comedy, "Gipsy Love" (Lehar), by the Serenaders, under the direction of Mr. T. J. Kirk-Burnand.
 Soprano Miss Florence Sumner
 Contralto Miss Dorothy Allan
 Tenor Mr. W. Harrison
 Baritone Mr. R. B. Macdonald
 Entr'actes:—Violin Solos—(a) Fritz Kreisler, "Deep in My Heart, Dear" ("The Student Prince"), (Romberg); (b) Eric Morini, "Romanza Andaluza" (Sarasate), (H.M.V. Record D1445).
 Orchestral—Philadelphia Symphony Orchestra, (a) "Chinese Dance"; (b) "Dance of the Flutes" ("Nutcracker Suite") (Tchaikowsky), (H.M.V. Record D1215).
 9.0: Weather report.
 Entr'acte: Orchestral—International Concert Orchestra, "Gipsy Love" (Lehar), (H.M.V. Record EF17).
 9.17: Waltz—Melodious Five, "White Heather" (Bennett). Selection, Melodious Five, "My Blue Heaven" (Donaldson).
 9.27: Recital—Mr. Lester Moller, "Percy on Politics" (Hayes).
 9.33: Vocal duet—Gus, Van and Joe Schenck, "Get Out and Get Under the Moon" (Tobias), (Regal Record G20336).
 9.36: March—Melodious Five, "Baron Mynchausen" (Bennett); fox-trot, Melodious Five, "My Blue-ridge Mountain Home" (Robertson).
 9.41: Tenor solo—Alfred O'Shea, "Love, Here is My Heart" (Ross), (Columbia Record 03589).
 9.44: Recitals—Mr. Lester Moller, (a) "The Thousandth Man" (Kipling); (b) "Going Out" (Milne).
 9.52: Humoresque—Australian Commonwealth Band, "Slidin' Thro' the Rye" (Hawkins).
 10.0: Male quartet—Goodrich Silvertown Quartet, "Under the Clover Moon" (Healy), (Columbia Record 01192).
 10.3: Waltz—Melodious Five, "Paradise of the North" (Bennett).
 Novelty—Melodious Five, "Don't Say 'Aloha' When I Go" (Smith).
 10.9: Close down.

Thursday, February 21

1YA, AUCKLAND (333 METRES)—THURSDAY, FEBRUARY 21.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Peter Pan.
 7.15: News and market reports.
 8.0: Chimes.

- 8.1: Overture—Berlin State Opera Orchestra, "The Beautiful Galathea" (Suppe) (H.M.V. Record C1527).
 8.9: Vocal quartet—Lyric Quartet, "Nelly Was a Lady" (Parkes).
 8.13: Instrumental trio—Auckland Trio, "Finale Trio in F" (Godard).
 8.21: Humour—Mr. A. McElwain, Some Humour.
 8.26: Waltz—International Novelty Quartet, "Cuckoo" (Jonasson), (Zonophone Record EE67).
 8.30: Tenor solo—Mr. Herbert Richards, "When the Swallows Homeward Fly" (White).
 8.34: Novelty—Bohemian Duo, (a) "Jeannine, I Dream of Lilac Time" (Gilbert), (b) "Get Out and Get Under the Moon" (Perry).
 8.42: Jazz piano solo—Pauline Alpert, "The Dancing Tambourine" (Ponce) (Zonophone Record EE98).
 8.45: Elocution—Messrs. T. Harris and J. Mackle, "The Borrowing Scene" ("The Merchant of Venice") (Shakespeare).
 8.51: Violin solo—Miss Ina Bosworth, "Liebesfreud" (Kreisler).
 8.55: Bass solo—Mr. Ernest Thomas, "King Charles" (White).
 8.59: Chorus with orchestra—Light Opera Company, "Hit the Deck" vocal gems (Youmans) (H.M.V. Record C1433).
 9.3: Weather report.
 9.5: Talk—The Announcer, "Great Authors."
 9.15: Vocal quartet—Lyric Quartet, "Lullaby" (Brahms).
 9.19: Soprano and tenor with harp and orchestra, Anita Atwater and Luis Sanchez—"Colonial Song" (A song of Australia), (Grainger) (Columbia Record 03592).
 9.26: Tenor solos—Mr. A. Ripley, (a) "The Star" (Rogers), (b) "A Memory" (Thomas).
 9.31: Humour—Mr. Alan McElwain, More Humour.
 9.35: Instrumental Trio—Auckland Trio, "Peer Gynt Suite" (Grieg).
 9.41: Novelty—Bohemian Duo, (a) "In a Little Town Called 'Home Sweet Home'" ; (b) "O, Dem Golden Slippers."
 9.48: Humorous sketch—Hebrew Two, "Happy Abe and Dismal Ike."
 9.58: Solo and chorus—Virginia Perry and chorus, "The Merry Widow-Villa" (Lehar) (Columbia Record 01173).
 10.1: Vocal quartet—Lyric Quartet, "In Absence" (Buck).
 10.5: Close down.

2YA, WELLINGTON (420 METRES), THURSDAY, FEBRUARY 21.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sports results to hand.
 5.0: Close down.
 6.0: Children's session, conducted by Aunt Gwen.
 7.0: News session, market reports, and sports results.
 7.40: Lecturette—Colonel Robert Sandall, "Uncommon Commonplaces—On the Continent."
 8.0: Chimes of the G.P.O. clock.
 8.1: Studio concert by Wellington Artillery Band, under the conductorship of Captain T. Herd, and assisting artists.
 Overture—Band, "L'Espoir d'Alsace" (Herman).
 8.8: Tenor solos—Mr. Chas. Williams, (a) "Passing By" (Purcell); (b) "The Rose and the Lily" (Schumann).
 8.15: Soprano, with chorus and orchestra, Emmy Bettendorf, "The Flying Dutchman—Senta's Ballad" (Wagner), (Parlophone record A4042).
 8.23: Vocal quartet—Lyric Quartet, "In Absence" (Buck).
 8.27: Morceau—Band, "Andante in G" (Batiste).
 Flower song—Band, "Lilies at Dawn" (Beyer).
 8.36: Bass solo—Mr. W. Binet Brown, "The Windmill" (Nelson).
 8.40: Recital—Mr. Peter Dorrian, "The Longshoreman" (Caine).
 8.46: Vocal with orchestra—Ninon Vallin, "Mignon—Connais Tu Le Pays?" (Thomas) (Parlophone Record AR1002).
 8.50: Vocal duet—Messrs. Chas. Williams and Will Goudie, selected.
 8.54: Waltz—Band, "Beautiful Blue Danube Waltz" (Strauss), (by request).
 9.0: Weather report.
 9.2: Vocal quartets—Lyric Quartet, (a) "I Don't" (Parks); (b) "How Much Wood Would a Wood Chuck Chuck?" (Linders).
 9.7: Soprano solo—Margherita Salvi, "The Barber of Seville—Il Soa Docile" (Rossini), (Parlophone record A5002).
 9.11: Selected—Band, "Il Trovatore" (Verdi).
 Descriptive number—Band, "Mountain Echoes" (Hume).
 9.22: Humour—Mr. Peter Dorrian, "A Talk on Cheese" (Jerome).
 9.29: Baritone solos—Mr. Will Goudie, (a) "Queen of Connemara" (Needham); (b) "At Even" (Franz).
 9.36: Descriptive fantasia—Band, "In Coonland" (Bidgood).
 Cake-walk—Band, "Dixie Land" (Beyer).
 9.48: Vocal Hawaiian selection—Queenie and David Kaili, "O Mi Paloma" (Parlophone record A2507).
 9.52: Vocal quartet—Lyric Quartet, "When You Played the Organ" (arr. Gatheridge).
 9.56: Spanish serenade—Band, "A Rose of Granada" (Dauzet).
 March—Band, "Conservator" (Nicholson).
 10.6: Close down.

3YA, CHRISTCHURCH (306 METRES)—THURSDAY, FEBRUARY 21.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by Uncle Hal.
 7.15: News session.
 7.30: Talk—under the auspices of the Canterbury Progress League.

8.0: Chimes.

Programme featuring English folk songs.

8.1: Rebroadcast of 2YA, Wellington.

8.6: Vocal quartet—Grand Opera Quartet, "Some Folks Do" (Foster).

Bass solo—Mr. James Filer, "Simon The Cellarer" (Halton).

8.12: Pianoforte solo—Miss Lucy Fullwood, "Valse Caprice" (Strauss-Tansig).

8.19: Contralto solo—Mrs. Anne Harper, "I've Been Roaming" (Horn).

8.23: Orchestral—New Light Symphony Orchestra, "In a Clock Store" (Orth) (H.M.V. Record C1308).

8.27: Vocal quartet—Grand Opera Quartet, "It Was a Lover and His Lass" (Morley).

8.31: Instrumental quintet—Bohemian Quintet, "Gressenhall Suite" (Cunningham Woods).

8.43: Tenor solo—Mr. Ernest Rogers, "Where The Bee Sucks" (Arne).

8.47: Cinema organ solo—Chas. W. Saxby, "Classica" (Potpourri selection) (Arrgd. Ewing) (H.M.V. Record A334).

8.55: Soprano solo—Madame Gower-Burns, "A Pastoral" (Carey).

Tenor and baritone duet—Grand Opera Duo, "Trust Her Not" (Balfe).

9.0: Weather report.

9.1: Talk—Mr. G. M. Keys M.A., Ed., "Vocational Guidance—Trades—Farming."

9.16: Quartet—Grand Opera Quartet (soloist, Mrs. Anne Harper), "Dabbling in the Dew" (Trdtl.).

9.20: Pianoforte solo—Miss Lucy Fullwood, "Prelude No. 17, Op. 28," (Chopin).

9.24: Baritone solo and quartet—Mr. J. Filer and Grand Opera Quartet, (a) "The Arrow and the Song" (Balfe), (b) "John Peel" (Davis).

9.29: Instrumental quintets—Bohemian Quintet, (a) "Drink To Me" (Trdtl.), (b) "Andante Cantabile" (Tschaiakowsky); (c) "Entr'acte and Mazurka" ("Coppelia Ballet" (Delibes).

9.39: Contralto solo, and soprano and contralto duet—Mrs. Anne Harper and Grand Opera Duo, (a) "When Daisies Pled" (Arne), (b) "I Know a Bank" (Horn).

9.44: Orchestral—New Light Symphony Orchestra, "A Hunt in the Black Forest" (Volker) (H.M.V. Record C1308).

9.48: Tenor solo—Mr. Ernest Rogers, "Drink To Me Only With Thine Eyes" (Trdtl.).

9.52: Orchestral—International Concert Orchestra, "L'Estudiantina" (Waldteufel) (H.M.V. Record EF6).

9.56: Soprano solo and quartet—Madame Gower-Burns and Grand Opera Quartet, (a) "Cherryripe" (Horn), (b) "Goodnight" (Davies).

10.2: Close down.

4YA DUNEDIN (463 METRES)—THURSDAY, FEBRUARY 21.

SILENT DAY.

Friday, February 22

1YA, AUCKLAND (333 METRES)—FRIDAY, FEBRUARY 22.

8 p.m.: Afternoon session—Selected studio items.

4.0: Literary selection by the Announcers

4.8: Studio items.

4.25: Sports results to hand.

4.30: Close down.

6.0: Children's session conducted by Nod and Aunt Jean.

7.15: News and market reports.

8.0: Chimes.

8.1: March—Orchestra, "London Scottish" (Haines).

8.7: Vocal quartet—Madame Mary Towsey's Quartet, "The Fairies were Tripping" (Taylor).

8.11: Harpsichord solo—Ignaz Friendman, "Rondo Alla Turca" (Mozart), (Columbia Record 03612).

8.15: Soprano solo—Miss Mollie Atkinson, "O, Ma Lyre Immortelle" (Gounod).

8.19: Pianoforte solo—Mr. C. A. Ferguson, "Barcarolle, Op. 30, No. 4 in A Major" (Rubinstein).

8.23: Baritone solo—Mr. John Bree, "The Happy Man" (Del Reigo).

8.27: String Quartet—Lener String Quartet, "Quartet in G Minor" (2nd Movement—Assez vif et bein rythme) (Debussy) (Columbia Record 04211).

8.35: Contralto solo—Miss Edna Peace, "Life" (Blumenthal).

8.39: Suite—Orchestra. 1. "Serenata," (Moszkowski). 2. "Hungarian Dance No. 7" (Brahms).

8.49: Musical monologue—Mr. J. F. Montague, "The Game of Life".

8.54: Vocal solo and chorus—Raymond Newell and chorus, "We're all Bound to Go" (Terry) (Columbia Record 01024).

8.55: Soprano solo—Madame Mary Towsey, "The Tryst" (Sibelius).

9.2: Weather report.

9.4: Vocal quartet—Madame Mary Towsey's Quartet, "Follow Me Down to Carlow" (Arranged Fletcher).

9.8: Orchestral—Philadelphia Symphony Orchestra, "Toccato and Fugue in D Minor (Bach) (H.M.V. Record D1428).

9.16: Tenor solo—Mr. John McDougall, "An Evening Song" (Blumenthal).

9.20: Pianoforte solos—Mr. C. A. Ferguson, (a) "Left-hand Study" (Weber); (b) "Shadow Dance" (MacDowell).

9.28: Soprano solo—Miss Mollie Atkinson, "Parted" (Tosti) (violin obligato by Miss Ina Bosworth).

9.32: Orchestral—Orchestra, (a) "Serenade" ("Eine Kleine Nachtmusik") (Mozart); (b) "Rigador" (Raff); (c) "Tarantelle" (Raff).

9.48: Recitals—Mr. J. F. Montague. (a) "The Cane-Bottomed Chair" (Thackeray); (b) "Gunga Din" (Kipling).

9.51: Baritone solo—Mr. John Bree, "How Fair art Thou" (Brahms).

9.55: Musical comedy selection—Orchestra, "Blue Mazurka" (Lehar).

10.6: Vocal Quartet—Madame Mary Towsey's Quartet, "Fair Shines the Moon."

10.10: Close down.

2YA, WELLINGTON (420 METRES), FRIDAY, FEBRUARY 22.

3 p.m.: Chimes of the G.P.O. clock.

3.1: Selected gramophone items.

4.30 and 4.55: Sports results to hand.

5.0: Close down.

6.0: Children's session, conducted by Big Brother Jack.

7.0: News session, market reports, and sports results.

7.40: Lecturette—Mr. D. McKenzie, "The Laws of Cricket."

8.0: Chimes of the G.P.O. clock.

8.1: March—Orchestra—"Tzigane" (Laconne).

Waltz—Orchestra, "Tales from the Vienna Woods" (Strauss).

8.11: Soprano solo—Miss Jeanette Briggs, L.A.B., "Regnava Nel Silenzio" ("Lucia di Lammermoor" (Donizetti).

8.15: Quartet—Ariel Singers, "The Stars that Above Us are Shining" ("Preciosa"), (Weber).

8.19: Organ solo—Sigmund Krumgold, "Indian Love Call" (Friml), (Parlophone record A2330).

8.23: Recital—Mr. Cedric Gardiner, "Opening the Pineapple Tin" (Jerome).

8.29: Suite—Orchestra, "Nutcracker Suite" (Tschaiakowsky): (1) Overture; (2) Arab Dance; (3) Dance of the Sugar-Plum Fairy; (4) Russian Dance; (5) Marche; (6) Chinese Dance; (7) Dance of the Reed Pipes; (8) Waltz of the Flowers.

8.45: Tenor solo—Mr. Roy Hill, "Quest o Quello" ("Rigoletto"), (Verdi).

8.49: Mezzo contralto solo—Miss Ngaire Coster, "Habanera" ("Carmen"), (Bizet).

8.53: Instrumental—Orchestra, repeat number.

9.1: Weather report.

9.3: Bass solo—Mr. J. M. Caldwell, "Within These Sacred Bowers" ("The Magic Flute"), (Mozart).

9.7: Vocal duet—Misses Jeanette Briggs and Ngaire Coster, "Di Conforte un Raggio Solo" ("La Mercandante"), (Vestale).

9.11: Violin solos—Edith Lorand, (a) "Liebesfreud" (Love's Sorrow); (b) "Liebeslied" (Love's Joy), (Kreisler), (Parlophone record E10537).

9.19: Tenor solo—Mr. Roy Hill, "The English Rose" (Merrie England") (German).

9.23: Piano and string—Mr M Dixon and orchestra, "Andante from Concerto" (Saint-Saens).

9.27: Soprano solo—Miss Jeanette Briggs, L.A.B., "Vissi d'Arte" (Puccini).

9.32: Humour—Mr. Cedric Gardiner, (a) "Orange Peel" (Milton Hayes); (b) "After Marriage" (Anon.).

9.39: Basso solo—Mr. J. M. Caldwell, "Vulcan's Song" ("Philemon et Baucis"), (Gounod).

9.43: Mezzo-contralto solo—Miss Ngaire Coster, "Mignon's Song" ("Mignon"), (Thomas).

9.47: Musical comedy selection—Orchestra, "Firefly" (Friml).

9.57: Male choruses—Parlophone Melody Co., "Convivial Songs" (Parlophone record A2511).

10.1: Close down.

3YA, CHRISTCHURCH (306 METRES)—FRIDAY, FEBRUARY 22.

3 p.m.: Afternoon session—Gramophone recital.

4.25: Sports results to hand.

4.30: Close down.

6.0: Children's session conducted by "Mr. Storeyman."

7.15: News session.

8.0: Chimes. Popular programme, featuring excerpts from "The Geisha" (Sydney Jones).

8.1: Re-broadcast of 2YA, Wellington.

8.10: Opening chorus, followed by bass solo—Radiolians and Mr. W. J. Richards, (a) "Happy Japan" (Sidney Jones); (b) "Jack's the Boy" (Jones).

8.17: 'Cello solos—Mr. Harold Beck, (a) "Old French Dance" (Marias); (b) "La Danza" (Rossini).

8.25: Soprano solo, followed by soprano and baritone duet—Mrs. Claris Shaw and Radiolian Duo, (a) "The Amorous Goldfish" (Jones); (b) "Kissing" (Jones).

8.30: Instrumental trios—3YA Broadcasting Trio, (a) "Serenade" (Schubert); (b) "Petit Bolero" (Ravina).

8.40: Chorus and tenor solo—Radiolians and Mr. Gregory Russell, (a) "Lamentation" (Jones); (b) "Star of My Soul" (Jones).

8.45: Sketch—Mr. George Titchener, "Different Languages" (Ilton).

8.50: Dance music—Bailey-Marston Dance Orchestra, (a) "Because my Baby Don't Mean 'Maybe' Now" (Donaldson); (b) "Just a Melody Out of the Sky" (Donaldson).

8.57: Contralto solo and chorus—Miss Mildred Russell and Radiolians, (a) "The Interfering Parrot" (Jones); (b) "Tho' of Staying too Long" (Jones).

9.4: Weather report.

9.5: Talk—Mr. G. M. Keys, M.A., Dip. Ed., "Vocational Guidance—The Work in New Zealand—its First Stages."

9.20: Chorus and bass solo—Radiolians and Mr. W. J. Richards, (a) "We're Going to Call on the Marquis" (Jones); (b) "Chin. Chin. Chinaman" (Jones).

- 9.26: Dance music—Bailey Marston Dance Orchestra, Waltz, "Over the Waves" (Rosas); (b) "Fascinating Vamp" (Nussabaum).
 9.34: Soprano solo—Mrs. Claris Shaw, "C'est Moi" (Jones).
 9.38: Dance music—Bailey Marston Dance Orchestra, (a) "In a Bamboo Garden" (Donaldson); (b) "Anything You Say" (Donaldson).
 9.46: Contralto and tenor solos—Miss Mildred Russell and Mr. Gregory Russell, (a) "The Jewel of Asia" (Jones); (b) "Molly Mine" (Jones).
 9.51: Humorous recital—Mr. George Titchener, "The Agitator" (Shand).
 9.56: Final chorus—Radiolians, "Day Born of Love" (Jones).
 10.0: Dance music—Bailey Marston Dance Orchestra, Waltz, "The Magic Violin" (Nicholls); (b) "Rag Doll" (Brown).
 Dance music by the Bailey-Marston Dance Orchestra until 11 p.m.
 11.0: Close down.

4YA, DUNEDIN (463 METRES)—FRIDAY, FEBRUARY 22.

- 3 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 3.15: Lecturette—Miss Buccleuch of the D.S.A. Ltd., "Fashions."
 3.30: Gramophone items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by Aunt Sheila and Big Brother Bill.
 7.15: News session.
 8.0: Town Hall chimes.
 8.1: Orchestral—Royal Philharmonic Orchestra, "A Village Romeo and Juliet" (The Walk to the Paradise Garden) (Delius), (Columbia Record 04181).
 8.9: Baritone solos—Mr. Arthur Lungley, (a) "Elegie" (Massenet) (with violin obligato); (b) "Inter Nos" (MacFadyen).
 8.16: Recital—Miss Madge Yates, "Admiral's Orders."
 8.20: Soprano solo—Miss Muriel Eager, A.T.C.L., "Qui La Voce" ("I Puritani") (Bellini).
 8.24: Pianoforte solo—Mrs. Ernest Drake, "Arabesques Nos. 1 and 2" (Debussy).
 8.30: Tenor solo—Mr. L. E. Dalley, "Thou Shalt Break Them" ("Messiah") (Handel).
 8.34: Violin solo—Miss Eva Judd, "Romance in G," Op. 26, (Svendsen).
 8.40: Contralto solo—Miss Irene Horniblow, L.R.A.M., "Sweet Spirit, Hear My Prayer" ("Maritana") (Wallace).
 8.44: Duet—Messrs. L. E. Dalley and Arthur Lungley, "Flow Gently Debra" (Parry).
 8.48: Pianoforte solo—Mrs. Ernest Drake, "Jardines Dans La Pluie" (Debussy).
 8.56: Recital—Miss Madge Yates, "My Financial Career" (Leacock).
 9.0: Instrumental trio—4YA Broadcasting Trio, "Londonderry Air" (Trdlt).
 9.5: Weather report.
 9.7: Baritone solo—Mr. Arthur Lungley, "O Tu Palermo" (Verdi).
 9.11: Monologue—Milton Hayes, "The Near East" (Hayes) (Columbia Record 3233).
 9.15: Soprano solos—Miss Muriel Eager, (a) "The Reason" (Del Riego); (b) "Almond Blossoms" (Arundale).
 9.22: Recital—Miss Madge Yates, "Kings" (Galsworthy).
 9.26: Duet—Mr. L. E. Dalley and Mr. Arthur Lungley, "In This Solemn Hour" ("La Forza del Destino") (Verdi).
 9.30: 'Cello solo—Mr. P. J. Palmer, "Scherzo" (Van Goens).
 9.36: Contralto solos—Miss Irene Horniblow, (a) "I attempt from Love's Sickness to Fly" (Purcell); (b) "Lullaby" (Byrd).
 9.43: Instrumental trio—4YA Broadcasting Trio, "Minuet" from "Military Symphony" (Haydn).
 9.48: Tenor solos—Mr. L. E. Dalley, (a) "The White Dawn is Stealing" (Cadman); (b) "Far Off I Hear a Lover's Flute" (Cadman).
 9.54: Orchestral—Ketelbey's Concert Orchestra, "Sanctuary of the Heart" (Ketelbey) (Columbia Record 02690).
 10.2: Close down.

Saturday, February 23

1YA AUCKLAND (333 METRES)—SATURDAY, FEBRUARY 23.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Cinderella.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: Instrumental with vocal chorus—Ipapa Troubadours, "'S Wonderful" (Gershwin) (Columbia Record 01306).
 8.5: Vocal trio—Snappy Three, (a) "She's a Home Girl" (De Sylva), (b) "Maori Eyes" (Smith).
 8.13: Instrumental trio—Auckland Trio, "Variations C Minor Trio" (Beethoven).
 8.21: Soprano and male quartet—Norah Blaney and The Ramblers, "Just Like Darby and Joan" (Leslie) (Columbia Record 01170).
 Vocal duet—Gus Van and Joe Schenck, "Skadatin-Dee" (Tobias), (Regal Record G20336).
 8.29: Humour—Mr. J. Sharpe, "How to Compose a Ragtime Song" (Hastings).

- 8.34: Banjo duos—Messrs. Higgott and Morrison, (a) Plantation Melodies (MS), (b) "Maori Melodies" (MS).
 8.42: Foxtrot—Ben Selvin's Orchestra, "In My Bouquet of Memories" (Asket) (Columbia Record 01137).
 8.46: Vocal trios—Snappy Three, (a) "Only a Rose" (Friml), (b) Piano jazz solo—(c) "Good Little, Bad Little, You" (Green).
 8.54: 'Cello solo—Miss Molly Wright, selected.
 8.59: Weather report.
 9.1: Soprano and baritone—Gladys Moncrieff and Johnny Valentine, "If You're in Love You'll Waltz" (McCarthy) (Columbia Record 01303).
 Tenor solo—Alfred O'Shea, "Love, Here Is My Heart" (Ross), (Columbia Record 03589).
 9.9: Instrumental trio—Auckland Trio, "Waltz of the Flowers" ("Nut-cracker Suite") (Tschaiakowsky).
 9.17: Humour—Mr. J. Sharpe, (a) "Marry For Gold" (Frenk), (b) "The Safety Pin" (White).
 9.25: Banjo duos—Messrs. Higgott and Morrison, (a) "Together We Two" (Berlin), (b) "Oh, You Have No Idea" (Dougherty), (c) "Cock-a-Doodle" (Johnston).
 9.32: "Columbia" dance programme.
 Foxtrot with vocal chorus—Debroy Somers' Band, "The Toy-Town Artillery" (Frederick) (Columbia 01306).
 Waltz—Eddie Thomas' Collegians, "Till We Meet Again" (Whiting), (Columbia Record 02553).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Constantinople" (Carlton), (Columbia 07002).
 9.44: Soprano and male quartet—Norah Blaney and Ramblers, "Sweet Suzanne" (Leslie) (Columbia 01170).
 9.47: Selection—Debroy Somers' Band, "Good News" (De Sylva) (Columbia 02720).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Last Night I Dreamed You Kissed Me" (Kahn) (Columbia 07002).
 9.58: Tenor with orchestra—Alfred O'Shea, "Just a Little Love, a Little Kiss" (Ross) (Columbia 03589).
 10.1: Instrumental—Paul Whiteman's Orchestra, "Jeannine, I Dream of Lilac Time" (Gilbert) (Columbia 07505).
 Waltz—Rio Marimba Serenaders "Dolores Waltz" (Waldteufel) (Regal Record G20344).
 Novelty foxtrot—Debroy Somers' Band, "Rag Doll" (Brown), (Columbia 01341).
 10.12: Monologue—Milton Hayes, "Meanderings of Monty—Is Lipstick Nourishing?" (Hayes) (Columbia 01293).
 10.16: Foxtrot (with incidental singing)—Stellar Dance Band, "Varsity Drag" (De Sylva) (Columbia 01151).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Get Out and Get Under the Moon" (Shay) (Columbia 07001).
 10.26: Tenor solo—Alfred O'Shea, "Then You'll Remember Me" ("Bohemian Girl") (Balfe) (Columbia 03613).
 10.30: Wurlitzer organ solo—Milton Charles, "Cheerie-Beerie-Be" (Wayne), (Columbia 0914).
 Waltz—Ben Selvin's Orchestra, "Ramona" (Wayne) (Columbia 01137).
 Foxtrot with vocal chorus—South Sea Islanders, "Hanalei Bay" (Alo-hikea) (Columbia 0737).
 10.40: Spoken novelty—Flotsam and Jetsam, "The Business Man's Love Song" (Hilliam) (Columbia 0995).
 10.44: Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Evening Star" (Turk) (Columbia 07001).
 Waltz—Eddie Thomas' Collegians, "The Missouri Waltz" (Logan) (Columbia 02553).
 Foxtrot—Ben Selvin's Orchestra, "In My Bouquet of Memories" (Asket) (Columbia 01137).
 10.51: Whispering solo with violin—Jack Lumsdaine, "Like a Bird That's on the Wing" (Tobias) (Columbia 01185).
 10.55: Foxtrot with incidental singing—Stellar Dance Band, "Dream House" (Cowan) (Regal G20338).
 11.0: Close down.

2YA, WELLINGTON (420 METRES), SATURDAY, FEBRUARY 23.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sports results to hand.
 5.0: Close down.
 6.0: Children's session, conducted by Uncle Toby and Aunt Gwaa.
 7.0: News session, market reports, and sports results.
 7.40: Lecturette—Mr. N. R. Jacobsen, "Athletics."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Melusine."
 8.11: Vocal quartet—Melodie Four, "Together" (De Sylva).
 8.15: Pianoforte novelty—Mr. James McKenzie, selected.
 8.20: Humour—Mr. Arthur Chalk, "It's Nothing to do With You" (Hargreaves).
 8.26: Steel guitar, violin, and piano—Kaili, Scott, and O'Neil, "Me and My Shadow" (Parlophone record A2405).
 Vocal Hawaiian selection—Queenie and David Kaili, "Ukulele Dream Girl" (Low), (Parlophone record A2364).
 8.32: Baritone solo—Mr. R. S. Allwright, "The Slave Song" (Del Riego).
 8.36: Novelty orchestra, "Il Trovatore" (arr. Black Lange).
 Waltz—Orchestra, "Il Bacio" (Arditi).
 8.46: Vocal quartet—Melodie Four, "Eileen Alannah" (Batchelder).
 8.50: Tenor solos—Mr. Frank Bryant, (a) "Linden Lea" (Williams); (b) "The Sweetest Flower that Blows" (Hawley).
 8.56: Instrumental—Orchestra, repeat number.

- 9.4: Weather report.
 9.6: Sketch—Orchestra and Melodie Four, "Reminiscences of the Plantation" (Chambers).
 9.23: Humour—Mr. Arthur Chalk, "They All Fell Out" (Edgar).
 9.29: Pianoforte novelty—Mr. James McKenzie, selected.
 9.34: Bass solo—Mr. W. W. Marshall, "Gypsy Dan" (Newell).
 9.37: Dance Orchestra—Dajos Bela Orchestra, "Electric Girl" (Helmbergh), (Parlophone record A4009).
 9.41: Tenor solo—Mr. Sam. Duncan, "Tom Bowling" (Dibden).
 9.45: Vocal quartet—Melodie Four, "Mulligan Musketeers" (Atkinson).
 9.49: Instrumental—Orchestra, popular dance novelties.
 10.0: Dance programme.
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—SATURDAY, FEBRUARY 23.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by Chuckle and Aunt Pat.
 7.15: News session.
 7.30: Sports results.
 8.0: Chimes.
 8.1: Rebroadcast of 2YA, Wellington.
 8.10: Baritone solo—Mr. J. Graham Young, "Marcheta" (Schertzing).
 8.14: Instrumental—Shilkret's Rhythm Melodists, "When You're With Somebody Else" (Gilbert) (H.M.V. Record EA336).
 8.18: Popular duets with piano and ukulele—The Joyous Pair, in a range of the latest and popular songs with improvisations.
 8.25: Instrumental—Shilkret's Rhythm Melodists, "Dolly Dimples" (Alter) (H.M.V. Record EA336).
 Male voices—The Revellers, "Mammy Is Gone" (De Sylva), (H.M.V. Record EA384).
 8.32: Humorous songbits at the piano, with patter—Mr. Jock Lockhart, "She's the Lass for Me" (Lauder-Francis).
 8.37: Instrumental and vaudeville medley—Mr. Leslie Croft, trick playing on mouth organs, also improvisations from well known operas (MS).
 8.47: Contralto solos—Miss Connie Flamank, (a) "When All Was Young" (Gounod), (b) "Christina's Lament" ("Humoresque") (Dvorak).
 8.52: Musical monologue—Mr. Campbell Brown "The Street Watchman's Story" (MS).
 8.51: Tenor solo—Mr. W. J. Trewern, "I'll Sing Thee Songs of Araby" (Clay).
 9.1: Male voices—The Revellers, "Dream River" (Brown) (H.M.V. Record EA384).
 9.5: Weather report and late news.
 9.6: Mixed voices—Light Opera Company, Gems from "Rio Rita" (McCarthy) (H.M.V. Record EB22).
 9.10: Baritone solos—Mr. J. Graham Young, (a) "Hats Off to the Stoker" (Arundale), (b) "Up From Somerset" (Sanderson).
 9.16: Light orchestral—Piccadilly Orchestra, "My Beloved Gondolier" (Tibor) (H.M.V. Record B2575).
 9.19: Latest vocal jazz duets with piano and ukulele—The Joyous Pair, in more bright popular numbers (MS).
 9.26: Jazz pianoforte solo—Pauline Alpert, "The Dancing Tambourine" (Ponce-Polla) (Zonophone Record EF98).
 9.29: Humorous songs with patter—Mr. Jock Lockhart, (a) "When I Meet McKay" (Lauder-Francis); (b) "Scraps" (Own arrangements).
 8.34: Vaudeville medley—Mr. Leslie Croft in a mixture of miscellaneous melodies (MS).
 9.42: Contralto solo—Miss Constance Flamank, "My Dear Soul" (Sanderson).
 9.46: Musical monologue—Mr. Campbell Brown, "The Caretaker."
 9.50: Comedian with chorus—Clarkson Rose, "Hippotamus" (Carlton) (Zonophone Record 5145).
 9.53: Foxtrot—Nat Shilkret's Orchestra, "The Kinkajou" (McCarthy) (H.M.V. Record EA315).
 9.56: Tenor solos—Mr. W. J. Trewern, (a) "The Last Muster" (Pontet), (b) "Then You'll Remember Me" ("The Bohemian Girl") (Balfe).
 10.0: Foxtrot—Paul Whiteman's Orchestra, "Dixie Dawn" (Trent), (H.M.V. Record EA386).
 10.4: Close down.

4YA, DUNEDIN (463 METRES), SATURDAY, FEBRUARY 23.

- 7.15: News session.
 8.0: Town Hall chimes.
 8.1: Relay of orchestral music from Octagon Theatre Orchestra, under the conductorship of Monsieur Henri de Rose (Mus.Bac.).
 8.11: Humorous Scottish songs—Mr. Buster Brown, (a) "I Like My Old Home Town" (Lauder); (b) "It's Nice to Get Up in the Morning" (Lauder).
 8.18: Whistling solo, with violin and piano—Sybil Fagan, "Honeymoon Waltz" (Fisher), (Columbia record 3901).
 Tenor solo, with violin obligato—Hubert Elsdell, "Parted" (Tosti), (Columbia record 02598).
 8.26: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.
 8.36: Popular songs—Miss Ahlers, (a) "Russian Lullaby" (Berlin); (b) "I Just Roll Along" (De Rose).
 8.43: Relay of orchestral music from Octagon Theatre.
 8.53: Male voice quartet—Goodrich Silvertown Quartet, "Who's Blue Now?" (Meyer), (Columbia record 01192).
 Xylo-rimba Orchestra, "Along Miami Shore" (Warren), (Regal record G20328).

- 9.1: Humorous Scottish song—Mr. Buster Brown, "Bonnie Leezy Lindsay" (Lauder).
 9.5: Weather report.
 9.7: Orchestral—Symphony Orchestra, "Artist's Life Waltz" (Strauss), (Columbia record 02577).
 Bass solo—Malcolm McEachern, "Sittin' Thinkin'" (Tempest), (Columbia record 0117).
 9.15: Popular song—Miss Minna Ahlers, "Nothin'".
 9.19: Fox-trot, with vocal chorus—Denza Dance Band, "Dance of the Blue Danube" (Fisher), (Columbia record 01151).
 Solo and chorus—Virginia Perry and chorus, "Merry Widow—Villia" (Lehar), (Columbia record 01173).
 9.26: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.
 9.36: Dance programme.
 11.0: Close down.

Sunday, February 24

1YA AUCKLAND (333 METRES)—SUNDAY, FEBRUARY 24.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.30: Close down.
 6.0: Children's session conducted by Uncle Leo.
 6.55: Relay of service from Baptist Tabernacle—Preacher: Rev. Joseph Kemp, Organist: Mr. Arthur E. Wilson.
 8.30: Orchestral—Halle Orchestra, "Rosamunde Ballet Music" (Schubert) (Columbia Record 04200).
 8.38: Baritone solos—Mr. Hartley Warburton, (a) "The Raven" (Schubert); "The Stormy Morning" (Schubert).
 8.46: Cello solo—Felix Salmond, "Kol Nidrei" (Bruch) (Columbia Record 04190).
 8.54: Contralto solo—Sophie Braslau, "The Erl King" (Schubert), (Columbia Record 04162).
 8.58: Chorus with orchestra—La Scala Chorus, "La Tempesta" ("Otello" (Verdi) (Columbia Record 02723).
 9.2: Orchestral—Columbia Symphony Orchestra, selection from "Faust" (Gounod) (Columbia Record 02708).
 9.10: Tenor solos—Mr. J. Moffitt, (a) "Where'er You Walk" (Handel), (b) "To a Miniature" (Brahe).
 9.17: Octet—Squire Celeste Octet, "Evensong at Twilight" (Squire) (Columbia Record 01322).
 9.21: Baritone solo—Mr. H. Warburton, "Even Bravest Hearts" ("Faust" (Gounod).
 9.25: Tenor solos—Mr. J. Moffitt, (a) "Beloved It Is Morn" (Aylward), (b) "Song Is Sweet" (San-Souci).
 9.31: Chorus with orchestra—La Scala Chorus—"Fuoco Di Fiola" (Verdi), (Columbia Record 02723).
 9.35: Close down.

2YA, WELLINGTON (420 METRES), SUNDAY, FEBRUARY 24

- 3 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 6.0: Children's Sunday service, conducted by Uncle George.
 7.0: Relay of evening service from St. Thomas's Anglican Church. Preacher, Rev. C. V. Rooke, M.A. Organist and choirmaster, Mr. W. Gatheridge.
 8.15 (approx.): Studio concert.
 Orchestral—Berlin State Opera House Orchestra, "Tannhauser" (Wagner), (Parlophone records A4036/7).
 Soprano solo—Miss Muriel Hitchings, "Ave Maria" (Kahn).
 String Quartet—Elman String Quartet, "Andante Cantabile" (Tschai-kowsky), ("Quartet, Op. 11"), and "Theme and Variations" ("Emperor Quartet"), (Haydn).
 Baritone solos—Mr. John Prouse, (a) "Propeccatis" ("Stabat Mater" (Rossini); (b) "O God Have Mercy" ("St. Paul") (Mendelssohn).
 Pianoforte solo—Mark Hambourg, "Hungarian Rhapsody" No. 11 (Liszt), (H.M.V. record, B2853).
 Contralto solos—Miss Iris Potter, (a) "Music, When Soft Voices Die" (Besley); (b) "Ships that Pass in the Night" (Haydn).
 Violin solos—Marta Linz, (a) "Hejre Kati" (Hubay); (b) "Romanza Andaluza" (Sarasate), (Parlophone record A2579).
 Vocal duet—Misses Muriel Hitchings and Iris Potter, "Arise, O Sun" (Day).
 Overture—Opera Comique de Paris, "Barber of Seville" (Rossini), (Parlophone record A2607).
 Soprano solo—Miss Muriel Hitchings, "Angels Guard Thee" (Godard).
 Selection—Creators Band, "Introduction and Minuet" ("Rigoletto"), (Verdi), and "Quartet" ("Rigoletto"), (Verdi), (H.M.V. record EB29).
 Baritone solo—Mr. John Prouse, "There is a Green Hill" (Gounod).
 Orchestral—Edith Lorand Orchestra, (a) "Prelude in C Sharp Minor" (Rachmaninoff); (b) "Liebeslied" (Weingartner), (Parlophone record A4040).
 Contralto solo—Miss Iris Potter, "Worship in the Forest" (Abt).
 Violin solo—Edith Lorand, "Danse Espagnole" (Granados), (Parlophone record A4012).
 Vocal duet—Misses Muriel Hitchings and Iris Potter, "Venetian Song" (Tosti).

March—Sousa's Band—"Pride of the Wolverines" (Sousa) (H.M.V. record EA424).
Close down.

3YA CHRISTCHURCH (306 METRES)—SUNDAY, FEBRUARY 24.

3.0 p.m.: Afternoon session—Selected studio items.

4.30: Close down.

5.30: Children's song service conducted by Uncle David.

6.15: Hymn chimes.

6.30: Special records, being a prelude to evening church service.

7.0: Relay of service from St. Andrew's Presbyterian Church—

Preacher: Rev. N. L. D. Webster.

Organist: Mr. Robt. Lake.

Choirmaster: Mr. J. Maclean.

8.15 (approx.) Overture—Philadelphia Orchestra, "Rienzi" (Wagner), (H.M.V. Records ED3-4).

Contralto solo—Miss Nellie Lowe, "O Rest in the Lord" ("Elijah") (Mendelssohn).

Band selection—H.M. Grenadier Guards, "Nearer My God To Thee" (Dykes) (Columbia 0967).

Baritone recitative and aria—Mr. A. G. Thompson, (a) "Thus Saith the Lord" (Handel), (b) "But Who May Abide the Day of His Coming" ("Messiah") (Handel).

Violin solos—Heifetz, (a) "Rondo" (Schubert), (b) "Ave Maria" (Schubert) (H.M.V. Record DB1047).

Soprano solo—Mrs. Lucy O'Brien, "Rumanian Night Song" (Lohr).

Orchestral—Philadelphia Symphony Orchestra, "Toccata and Fugue in D Minor" (Bach) (H.M.V. Record D1428).

Contralto and baritone duet—Dulcet Duo, "The Day is Done" (Lohr).

Wurlitzer organ solo—Reginald Foort, "Ballet Egyptian" (Luigini) (H.M.V. Record B2479).

Contralto solo—Miss Nellie Lowe, (a) "Slumber, Dear Maid" ("Largo") (Handel), (b) "Serenade" (Gounod).

Duet with male chorus and orchestra—Florence Austral and Browning Mummery, "Misererie" ("Il Trovatore") (Verdi) (H.M.V. Record D1302).

Soprano solos—Mrs. Lucy O'Brien, (a) "I Heard You Singing" (Coates), (b) "Land of Long Ago" (Ray).

Orchestral—San Francisco Symphony Orchestra, "Liebeslied" (Kreisler) (H.M.V. Record ED6).

Baritone solo—Mr. A. G. Thompson, "Gallilee" (Adams).

Choral with orchestra—Royal Choral Society, "Amen Chorus" (Handel) (H.M.V. Record D1135).

Close down.

4YA DUNEDIN (463 METRES)—SUNDAY, FEBRUARY 24.

5.30: p.m.: Children's song service conducted by Big Brother Bill.

6.30: Relay of evening service from Moray Place Congregational Church.

Preacher: Rev. Albert Mead.

7.45: (approx.): Studio concert of selected gramophone items.

9.15: Close down.

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Next Week's Programmes

Some Descriptive Notes

THE quartette, "It Was a Lover and

His Lass," to be sung during the English folk-song night at 3YA on Thursday, is by the old composer Morley. This song is very familiar to all in its modern settings, notably in Quilter's. It comes from "As You Like It," and as Morley was probably a friend of Shakespeare, it is quite probable that his settings were used when the plays were first introduced.

ONE of the most unique records yet produced is the "Storm on the Volga," which appears on 3YA's programme for Sunday evening. It is a recording of the Russian State Choir, and the human voices, aided by no musical or other sound-producing instruments, give a wonderful representation of Nature in an angry mood. All the noises which accompany a storm are there, the whining and howling wind, the lashing rain and the pealing thunder. It is weird. In the background is a Russian folk-song, and on this the general effect of a remarkable recording is built up.

IN 1837 Wagner, then a young man of twenty-four, read a German translation of Bulwer Lytton's "Rienzi," and determined to push ahead at once with an idea that he had had in mind for some time—that of writing an opera on the subject of Rienzi, the Roman hero. With characteristic boldness and lofty imagination he conceived a work on a grandiose scale. That spirit is reflected in the somewhat blatant, pulse-stirring Overture, which will be heard from 3YA on Sunday, February 24.

IN the popular "Vulcan's Song," to be sung by Mr. J. M. Caldwell at 2YA on Friday evening, the blacksmith god, Vulcan, who forged Jove's thunderbolts, tells why he prefers to remain in his underground kingdom, where he is lord of all. It is because when he ventured above, to Olympus, and wooed Venus, he was repulsed and made a laughing stock.

"THE Lake of Swans," Tchaikowsky's first ballet suite, a selection from which is to be played by 2YA orchestra on Monday evening, was written for performance at the Imperial Theatre at Moscow fifty years ago. In spite of the charming music, the work, as a whole, owing to the pooriness of the production, was then not very successful. Later it had the fuller success which its charm and tunefulness and its skilful orchestration well-deserved. The story of the ballet is about the love of a young knight for a maiden, whom a wicked sorcerer has changed into a swan. There is obviously room here for graceful and lyrical music, as well as for more dramatic and exciting movements. Like many other composers, Tchaikowsky

loved to seek a quiet summer retreat in the country and there to write in peace. From Moscow he used to retire for a period to the estate of his married sister, and here in 1876, just after he had completed his Third Symphony, he wrote his Swan Lake Ballet which had been commissioned by the Imperial Opera. The inspiration came so freely that he had the music of two acts ready in a fortnight.

LISZT, the composer of the "Second Hungarian Rhapsody," which will be heard from 3YA on Wednesday evening, was a great lover of the music of the gypsies of Hungary, and made a number of their tunes into Rhapsodies—a term he used, so he said, because he felt that it best expressed the epic element in the gypsies' performances. In his book, "The Gypsies and their Music in Hungary," he gives a stirring account of such performances. Most of his twenty Rhapsodies were composed on his return in 1839 from a tour abroad, on which occasion a sword of honour was presented to him by Hungarian nobles. They were piano solos, and Liszt later arranged some for piano duets, and orchestrated a few.

TWO songs from Schubert's "Winterreise" ("Winter Journey"), which takes the form of a song cycle, are to be sung by Mr. Hartly Warburton at 1YA on Sunday, February 24. The cycle is a setting of twenty-four songs by Wilhelm Müller, which Schubert composed in 1827, the year before he died. The story tells of the end of a youth's romance and he takes his lonely road in sorrow. Everything reminds him of his past happiness, yet promises no renewal of it. He dreams of May, and wakes to winter. He sees portents in Nature of the final departure of hope and of the coming of death. In "The Stormy Morning," he hails as a friend the winter storm with its wild, disordered sky, torn by lightning, for in his heart rages ever a storm of grief. "The Raven," the next song, tells of the bird of ill-omen who has kept him company all along. Does it hope to pick his bones? Very soon his journey in life will be ended. He begs the raven to be his companion until then.

TCHAIKOWSKY has left it on record that while composing his "Casse-Noisette" ("Nutcracker") Suite, which is among the happiest and most carefree of all his music, he was himself in a thoroughly depressed frame of mind. No hint of any dismal mood has found its way into the music. It was composed originally for a ballet by Dumas the elder, with the name "Histoire d'un Casse-Noisette" ("The Tale of a Nutcracker"), in 1891, and in the following year Tchaikowsky arranged the movements which are to be played next week from 2YA and 1YA.

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"—, San Diego."

IN reference to the January 4, 1929, number of the "Radio Record," concerning American stations. Until a few months ago I was using a 3-valve 3-coil regenerative set. I have since added a stage of neutralised radio frequency, built like an adapter, so that I can use it or do away with it quickly, because when there is plenty of volume (usual in winter), I don't think any set can beat a 3-valve for clarity.

On Christmas night two years ago I received station KFKX, Hastings, Nebraska. I notice in the "Radio Record" a KFKX, Chicago, Illinois. Have the call-signs been changed since, or is there another KFKX in Chicago? Another station I received was San Diego. I received music well, and often heard "San Diego calling," but I never caught his call-sign. Could you give me any information concerning this?

Other American stations I received on three valves (dect. and 2 audio) were: KFON, KGO, WBBM, and KFL, making a total of six. On four valves I have since heard KHJ and WENR on four valves.—"GRID LEAK" (Hastings.)

THE D.X. CLUB

Views and News.

[Call-signs and wavelengths are frequently changed.]

DX Results Good.

I HAVE had several splendid nights with the American stations lately. Saturday last (February 2) was particularly good, no fewer than eight Americans being logged on my 6-valve set. These were: KFOX, WENR, KWKH, session), KSL, KFRC, KNX and KGO, all on the loudspeaker, with KFOX and WENR the best. Tuesday, February 5 was another good night—no static and great volume from KFOX, WENR, KGR, KGO, KWKH, and KNX. Just for fun, I went down to the back fence, some 100 feet away, and could hear KFOX quite clearly. Last night (February 6) I heard KVOO, Oklahoma, for the first time. Very loud on the speaker. Heard the announcer say it was the first transmission with the new power of 5000 watts. This station is on 263 metres.—J. S. REES (Christchurch.)

Concerning the Z's.

ON Monday, January 28, I picked up a station operating on about 243 metres. The items came through clearly, but the closing announcement was marred by interference, the only words distinguishable were 4Z (Y)—and something about South Dunedin. Is there a station 4ZY in South Dunedin? The previous night (Sunday), a station was heard distinctly, giving bagpipe items during the intervals in 2ZM's programme. Could you identify this station? Three and sometimes four nights a week we hear a station on 2YA's wavelength, giving a mixed programme. Would this be the harmonic of our New Zealand stations or the C. A. Larsen?—"HARMONIC" (Gore).

The private broadcasting stations in Dunedin are 4ZB, Otago Radio Society; 4ZL, Radio Service, Ltd.; 4ZM, McKewen's; 4ZO, Barnett's Radio Supplies.

There is an American about 2YA's wavelength, as far as we know unidentified.

A New American.

ON Friday morning, February 1, I tuned in an American station at 12.25 a.m. This proved to be KTNT, which I have not seen mentioned by any listener yet. KTNT, Muscatine, Iowa, U.S.A. (256 metres). The volume was good, and 'phone strength about 80 to 90 per cent. readable. He gave a great deal of market news. One musical item was "Blue Skies." He announced that it was their morning session. The station was still on the air at 2 a.m. Good luck to the DX Club.—L. M. KINVIG (Wellington.)

On 1YA's Wavelength.

THIS evening (Tuesday), whilst listening to the news session of 1YA (7.45), music came through fairly loud, and could only be separated with difficulty from 1YA. I was unfortunate enough not to get the whole of the call-sign, only catching a Y and

then Los Angeles. Could you kindly let me know what station this is, and whether it was a re-broadcast or direct reception?—J. H. M. WILLIAMS (Westport.)

[On Wednesday night a station on 333 metres was heard on the speaker, and clearly identified as KHT.—Tec. Ed.]

KVOO Reported.

IN your issue of January 4, there appears a list of American stations whose reception has not yet been reported. I have to advise that on Tuesday, 5th instant, I logged one of these stations, namely, KVOO, Tulsa, Oklahoma, operating at 5000 watts on a wave-length of 263 metres. The call was distinctly heard several times before the station closed down, at 10.10 p.m., New Zealand summer time.

Volume varied from good 'phone to medium speaker—as a matter of fact I was listening on the speaker most of the time. The announcer had the breezy Yankee style of introducing the artists to the listeners, to the accompaniment of a running fire of "wise-cracks." The programme was fairly mixed, songs, dance music, organ, etc. I picked up this station again on Wednesday, 6th instant, at 1.15 p.m. local time, and was successful in just hearing the announcement "This is station KVOO, —, Oklahoma." Volume was not nearly as good as on the previous night. No attempt was made to get him later in the evening.

I should be pleased to know, through the medium of your columns, whether any other "DX" has yet logged this station.

By the way, has KFON definitely changed his call to KFOX? On Tuesday night (5th instant), I had him at speaker strength until he closed down, and it seemed to me that he was still announcing "KFON."

My set is of five valves, home constructed. The aerial is 60ft. long, with approximately 50ft. lead-in, the masts being 40ft. high.—S.J.R. (Wellington).

[It seems fairly definite that KFON is now KFOX, as several DX members have reported its reception.]

HAS anyone heard KVOO, of Tulsa, Oklahoma? This station, on 263 metres, heard at excellent strength—louder than any other American using a new 5000 watt transmitter "just out of the box" on February 6, between 8 and 9 p.m.? The programme was of more subdued type than is usual from the States. Organ, piano, and vocal items were heard. WENR, KNX, and KMOX have been fairly good lately—the first named especially. KFOX Long-Beach has been picked up once or twice also.—R. J. HARRIS (Marton).

A General Report.

THE undermentioned American stations I have logged between January 1 and to-night, Sunday, February 3. These may be of interest to my brother DX-ers. I am now working "Mogohm's" booster on my four-valve after experiencing much trouble with

finding the particular adjustments (had to put four taps on filament end booster aerial coil and same on secondary of my set R.F. transformer after pulling primary completely out) to suit my original set. The booster has made a fair improvement with volume for DX work, but I do not think I am getting the best it can do yet and in the meantime will carry on further experiments.

On phones, from dusk onwards. New Zealand times are all p.m.

January 1: KFOX, 1250 k.c. Signed off 12.13 P.S.T., when KEJK came on.

January 23: WENR (R4); CNRV (R3); KFOX (R6).

January 25: KNX (R9). Signed off 1.16 P.S.T. KFOX (R8).

January 26: KFOA, 1280 k.c. (mushy); KFOX (R6); KNX (R7); KGO (R4).

January 27: KEJK, 1250 k.c. went off 11 P.S.T., when KFOX came on for one hour until 12 midnight P.S.T., when KEJK returned to play latest records. KMOX, 1090 k.c. (R8), 7.30 N.Z.M.T., orchestral items from Hotel Coronado.

January 29: WENR (R7); KNX (R7), being rebroadcast by KWYO, as announced? KMIC signed off, 8.40 N.Z.M.T.

January 30: CNRV (R4), 7.30 N.Z.M.T., dance numbers by "National Melodians."

February 2: CNRV (R6), fading badly at times; KFOX (R6); KSL (R5); KNX (R7); KZM (R4).

February 3: KFOX (R7), 6.55 p.m. N.Z.M.T.; WLAC on midnight jam-boree (R4-5); WENR, 7.25 N.Z.M.T. Usual sign-off song (R7) fading; KGO, 790 k.c., items by "The Trocaderans," signed off 12.3 P.S.T. (R6); KZM, near 336 metres, dance numbers (R5).

I have also logged a new one to me, WGN, Chicago. I tuned in just too late and only heard a couple of telegrams acknowledged and the sign-off on 720 k.c. at 7.42 p.m. N.Z.M.T. 2YA was inclined to drown him out now and again. I have just received verifications from KNX, KOMO, WLAC, WLW, KHJ, KJR, WFLA, Clearwater, Florida.—C. V. BLUCHER (Walhupo, extreme north of New Zealand).

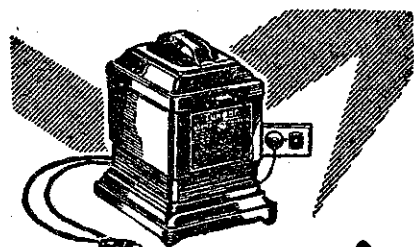
Heterodyning Nuisance.

I SHOULD like to call your attention to the nuisance being created by KHJ, Los Angeles, being on the same wavelength as 1YA, thus creating a continual howl, which I am sure you will agree is very disagreeable. Would it not be possible to alter 1YA slightly to overcome the trouble? In some places it is impossible to get any satisfaction from 1YA while KHJ is on the air.—F. TERWIN (Marohemo).

KTM, Los Angeles.

I NOTICE in the last "Radio Record" that one of your correspondents had a station called KTM, Los Angeles. I had this station to-night about 10 metres above KGO. There was quite a number of player piano music mingled with talk, and then dance music. Fading and Morse were bad, but I heard him say distinctly, "Station KTM, Los Angeles." He also mentioned some park, probably where they are located, and said that the time was 12.28 a.m., Pacific Standard Time. He came in with fair speaker strength between fades, and kept on fairly late.

KNX is the best station I get, which comes in some nights with too much volume for my speaker, which is of



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small cone type. Most of their programme is dance music and advertising their "Silver Fizz"—"which will make the roughest stuff on earth taste like a million dollars."

WENR is a good second. Your correspondent thinks his slogan is "The Voice of Service," but it sounds to me like "The Voice of the Sloux." KGO and KFON sometimes come in well, but cannot be depended upon, while KHJ sometimes bids fair to drown IYA. Can any reader tell me the station which heterodynes sometimes with 2BL (not JOAK)?—"CIRCUIT" (Pahiatua).

Americans Heard.

IN a recent issue of your valuable "Record" you gave a list of American stations which had been heard in New Zealand, and also a list of other high-powered Americans, which to your knowledge had not been heard in New Zealand. Well, on Thursday, January 31, at 11.50 p.m. approx, I heard on loudspeaker, volume fair, W.L.W., Cincinnati, Ohio, gramophone music and then speaking about the flu, which apparently is prevalent in the States. He plainly announced his call and time—50 minutes after 6 a.m. His location on my set a six-valve, was just two notches above 2YA, Wellington. KNX, California, comes through good every night, and also the Japs. I thought perhaps this information might be useful if you have not already heard of the reception of WLW, Cincinnati, Ohio, before this.—HECTOR R. HAYWARD (Wairaki).

New Zealand Broadcasters.

PERHAPS some member can tell me the name of the Christchurch station which I heard last evening (Tuesday, 5/2/29), operating on 242 metres, and using 50 watts output. His last two items prior to closing at 11.15 p.m. were "Oh, Doris" and "Toy Town Artillery."

To-night on 208 metres I logged a station using the call 2ZQ. Plenty of volume, but fading was very pronounced and rapid. Some of his items were:

8.21 p.m.: "Hallelujah Blues"

9.55 "It Goes Like This."

10.15: "Just Like a Melody out of the Skies."

10.45: Closing down.

Can anyone tell me the locality of this station?

I am in receipt of a verification from 4ZO Dunedin, in which he states my report is the most distant received, the next most distant report coming from Pahiatua. Auckland DX should get this station, as he comes in here at good speaker strength. He gives his hours of transmission as follows: Daily except Sunday, 12 noon to 1 p.m. and 5 to 6 p.m.; Fridays, 10 p.m. to 12 midnight. Wavelength, 277.8 metres; 1080 KC, power 7½ watts. On the dial just below 22M. I have not heard KFOX since Monday, 28/1/29, when he closed at 9.55 p.m. WENR was very loud to-night. I have found the DX corner a great help in logging new stations.—"JAKEMAN" (Huntly).

Station 3ZC operates on 250 metres, while 2ZQ is a private Masterton broadcaster.

Letter From WENR.

IN this week's "Record" you publish a letter received by W. G. Sturgess, Christchurch, from Mr. E. H. Gager, chief engineer of WENR. As I have also received a letter from Mr. E. H. Gager, which seems to be of a later date than the previous one,

I am sending you a copy, which will explain why 9XF has not been heard so frequently. Hoping this may be of interest to DX listeners.—J. A. CALLAGHAN (Rakaia.)

DEAR Radio Friend:

Thank you for your report and comments on the transmission from our new 50,000-watt transmitter, which operates under the call-letters WENR and 9XF.

This station is located on a 40-acre plot of land, three and a-half miles south of Downer's Grove, or about 23 miles south-west of Chicago. This station was constructed at a cost of approximately 500,000,000 dollars (£120,000,000), by authority of the Federal Radio Commission, and was ready for operation on April 1, 1928. Since that time, the Federal Radio Commission has restricted the use of this station to daylight hours at a reduced power of 5000 watts.

On previous test programmes, this station has been heard in every State in the United States, every province in Canada, Alaska, Cuba, Mexico, Hawaii, Australia, and New Zealand, so that we know that it is able to furnish good service to the people in a large proportion of the United States if we are given the authority to use it at its full power. Under the new allocations, WENR has been assigned to a frequency of 870 kilocycles (344.6 metres), sharing time with station WLS, with power restricted to 5000 watts. Under this plan, station WLS is to be given five-sevenths of the time, while WENR is restricted to two-sevenths of the time. We feel that this restriction is unjust, and that we should be allowed to use full power, and should be given more time on the air. Very truly yours,

GREAT LAKES BROADCASTING COMPANY,

E. H. GAGER,

Chief Engineer.

Wireless Pictures

Marconi's New System

FOR some time the transmission of still pictures has been an accomplished fact. In England, the Fultograph system has been used quite successfully, but there has been a difficulty in that the pictures take some time to transmit, and it is doubted that the result will be permanent. Realising these limitations, Senator Marconi has been developing a new system, and a cable message has just come to hand stating that the written messages were successfully transmitted on short-wave by the beam wireless system between New York and Somerset.

The announcement adds that the transmission has exceeded all previous results achieved in the field of picture transmission. A system differing greatly from any other, whereby Marconi's are now able to transmit two images eight inches by ten across the Atlantic in twenty minutes, has been evolved.

It is stated that there are still certain difficulties to be overcome before there is practical perfection.

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.

To Suit the Views of Listeners.

WITH reference to arguments re B class stations receiving a portion of the revenue derived from license fees, I maintain that if the B stations put over programmes equal to the YA stations, then they certainly deserve support. Your contention is that the more money the main stations receive the better programmes they can provide. What do you mean by better programmes? If you mean higher-paid artists I agree with you, but if you mean more popular items, then I seriously doubt it. I was listening to a programme from 2ZM the other evening, and in my opinion it was a better programme than any IYA has put over for months. Another instance is the programme given by Begg and Co., broadcast by 2YA. This was one of the best I have listened to, yet I understand the artists were members of the firm. In a review of the past year, one contributor to the "Record" stated that there was too much classical music. I would suggest the following plan to find if this is so: Give a list of the different classes of items put over by the stations, such as humour, elocution, orchestral, guitar music, etc., and ask listeners to give the different classes marks in their order of popularity. This is something like your recent competition, but here is the difference. Your competition really resulted in placing the items in order of popularity rather than showing which types of music were preferred. For instance, the vocal gems' number received few votes because the item was unknown. However, the main point is: were this competition carried out would the Broadcasting Company abide by the decision of the listeners or would the company ignore it? Competitions or rather referenda of this kind are useless unless the decisions are carried out. In conclusion, I say either make sure the YA's are giving entire satisfaction or give the B stations some support.—"NORTHLAND-ER" (Whangarei).

Southland's Trouble.

CONGRATULATIONS to the company for the excellent programme. They show their popularity by the number of licenses issued, but why the few from Southland? Is it that they are Scotch, or have no money? I think not. Personally I believe that if the company put in, say, a 1000-watt station, they would treble those licenses in a very short time—the service must be at fault. I know that if it were not for 2YA I wouldn't be bothered with radio, and I know several of the same mind, and so it is no doubt with Southland.—"HAWERA."

Afternoon Sessions Appreciated.

I WAS very surprised to read in a letter signed "L.G. (Wellington)," that the afternoon session was very little availed of. This is absolutely wrong, so far as a number of your country listeners are concerned. In the back country, where marketing and much visiting (which is the way

housewives in town spend their afternoons according to the letter referred to), is out of the question. It is just lovely to turn on 2YA or any other YA station, thus turning the afternoons into real happy hours instead of the dull ones they otherwise would be. No, we really cannot spare our afternoon session. The children's session is also much enjoyed. It would be a shame to cut down the children's hour. It would be a splendid thing for the pupils if the Government correspondence school, Wellington, if lessons were occasionally given over the air, and trust some day this may be made possible.—E. E. SHRIMPTON (Spray Point).

B Stations.

I HAVE read much on the above subject, and in my opinion I think it a fair deal, if the B stations situated away from the YA's, should receive, say, half of the licenses from crystal sets which are in operation in their respective districts, but that they should be at least 50 watts, so that others outside the district where they are could derive some music on their valve sets. Also, why should they not advertise for firms? The newspapers do. Personally I fail to see why wireless advertisements should make an article dearer. The firms would sell more, and, of course, the same would apply to newspapers.—"LISTENER" (Hawera").

G-o-o-o-o-o-d Night.

I HAVE often been tempted to write and voice my appreciation of the splendid programmes, at various times, put over the air by 2YA, but my object in doing so now is to tell you that after listening in the other evening while the "Master Oscillator versus Crystal" test was on, we noticed a decided improvement in the clearness of that same gramophone record number which they changed over to crystal control. We have a home-made crystal set using two pairs of ear-phones, and get 2YA remarkably well at all times. While writing, I should like to tell you how disappointed not only ourselves, but other "radio fans" here were that Miss Copplestone's swim was not put over the air. We understood they were going to broadcast it. There are many popular artists whom we have not had the pleasure of hearing over the air for some time.

The Petone Black and White Entertainers were out on their own, and we are eagerly looking forward to their next concert, which, we hope, will not be in the too-distant future. In conclusion, I should like to say the announcer of 2YA deserves very many bouquets, not for his announcing alone but for the "stunning" G-o-o-o-o-o-d nights he gives when closing down. Wishing the R.B.C. every success—ignore the growlers—and carry on your good work.—E. M. McKENZIE (Kai-koura).

TO avoid fouling at the masthead, a large shell insulator will often give better results than a metal pulley.

The Importance of a Good Earth



CONSIDERABLE proportion of the wireless receiving sets used to-day have their performances impaired by the fact that they are not properly earthed. There is a prevailing impression that any kind of water-pipe—or even a gas-pipe—makes a satisfactory earth, whilst many of those who use a buried earth plate of one kind or another are content to put a piece of metal with a wire attached to it into a hole dug in some odd corner, believing that they have done all that is necessary. As we shall see in a moment, water-pipe earths may be unsatisfactory, gas-pipe earths usually are, (besides being illegal), and buried earths depend for their goodness or otherwise upon a number of important considerations.

What is the Earth?

FIRST of all, perhaps, we had better see what is meant in electrical parlance by the term earth. If you take a piece of string a yard or so in length, put your foot on one end of it, and move the other rapidly about, wave forms will pass down the string. One end, that upon which your foot rests, is fixed, and the string shows its greatest variations from the straight line at the end held by the hand which is moving it to and fro.

Oscillating potentials behave in very much the same way in a collector system consisting of an aerial and earth with a coil between them. Electrically the term "earth" means zero potential and corresponds to the fixed end of the string. If the earth connection is as nearly perfect as may be one end of the aerial coil is at earth potential and practically the whole of the oscillations corresponding to the movements of the string then take place across the aerial coil. When this is so the maximum signal strength is obtained in the wireless re-

Ground Connections for all Conditions

(By "R.W.H.")

ceiving set. The grid of the first valve is receiving the greatest possible voltage changes and the valve is, therefore, able to do its work effectively.

But suppose that there is a high resistance between the low potential end of the aerial coil and the earth connection what will be the result? Only a portion of the voltage changes will occur across the aerial coil, the rest taking place across the resistance. It follows that the voltage changes ap-

Water-pipes as Earths.

NOT by any means do all water-pipes make good earths. I have seen earth leads connected to pipes which, on examination, turned out to run simply from cisterns to taps. These are usually hopelessly bad. The only kind of water-pipe that can make a good earth is what is known as the "rising main," that is, a pipe in direct connection with the underground system. In this case we have a metal

THE summer months have brought more forcibly before every set owner the need of a good ground connection. Correspondents almost weekly comment on different types they have tried, quite often with remarkable success. It pays to experiment, and to those interested in radio reception the following article is very suggestive.

plied to the grid of the first valve will be smaller than they ought to be and that signal strength will suffer. We can at once see why it is important to keep the earth lead as short as possible; any wire, whether straight or wound into a coil, possesses both resistance and inductance, hence the longer the earth lead the greater will be the oscillating potentials along it, and therefore the greater the loss to the receiving set itself. Clearly, too, the lead must be of heavy wire in order to keep down the resistance. Remember that though a resistance may have a small direct current value its oscillating current value may be very much higher.

pipe containing always a column of water. If the joints in the pipe are bad from an electrical point of view the water is there to bridge them. But there is difficulty in making a really satisfactory connection for a wire to such a pipe. Water mains are usually of iron, a metal to which it is exceedingly difficult to solder. The only really satisfactory method is to clean a portion of the pipe until it is quite bright and then to fix the earth lead to it by means of a firmly-clamped clip.

No water-pipe, however, should be accepted as the perfect earth until experiments have been made in other directions.

Gas-pipes are thoroughly bad since they contain no conducting column and their joints are often sealed with a compound which has a high electrical resistance. In addition there must always be a certain element of danger in making use of them for the purpose and most gas companies rightly prohibit the practice.

The Buried Earth.

WE next come to the buried earth, which is excellent so long as care is taken to see that it is put in a suitable place. Don't imagine that every part of the soil is always a good earth contact. It isn't! In many places the upper layers of the soil

consist largely of gravel, which allows moisture to percolate very easily, and in fine weather soon becomes quite dry. Dry gravelly soil may have a very high electrical resistance. An earth connection buried in it may, therefore, lead to surprisingly bad reception results.

A case in point came the way of the writer a couple of years ago. A friend who was the owner of a very good receiving set complained that he could hear nothing but the local station and not very much of that. Since the aerial and the set itself were above reproach, we decided to investigate the earth. On inquiring, I was told that this consisted of a copper plate buried some three feet deep close to the house. We dug down to it, the soil proving to be, as I expected, of a gravelly nature. We then deepened the hole and about a foot further down came upon clay. Immediately the earth plate was placed in contact with the clay signal strength from the local station increased by at least 50 per cent., and no difficulty was found in receiving a number of other transmissions. Clay is a moisture-laden substance which is ideal for earth connection. If you want good results, let your motto be get down to clay.

When a Good Earth is Impossible

IT may, however, happen that the gravel stratum is so deep that it is impracticable to sink a hole right through it for the earth connection. There are two possible alternatives. The first is to discard the earth connection altogether, and to make use in its stead of a counterpoise. The counterpoise is really a second edition of the aerial, suspended six feet or so above the surface of the ground and just as carefully insulated. In some instances (particularly where interference from trams, electric railways, and so on is a nuisance) the counterpoise may give better results than an earth, and generally speaking it makes for rather greater selectivity. It has, however, one great drawback; it means more wires in one's garden. A simple form of counterpoise which is sometimes effective may be contrived by stapling down fifteen or twenty yards of insulated wire under the carpet in the room in which the receiving set is situated. The wire should be arranged more or less in spiral form. This device, however, will not answer very well in rooms of an upper story.

The second tip is one that will be found useful in many localities. Fix in your mind's eye an imaginary line

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on the ground immediately under the aerial. Five or six feet on either side of this make narrow, shallow trenches running the whole length of the aerial and parallel with it. They can be made quite easily with the point of a pickaxe. In these bury lengths of the bare cabled wire generally used for aërials, connecting the ends of the wires together close to the house. To the junction of the two wires fix the end of the earth lead. The triple joint should be soundly soldered by "sweating" the wires together. Any plumber will undertake the job if it is beyond your own powers.

This form of earth has many great advantages. Once the wires are buried they are entirely out of the way and will require no further attention for years. In wet weather they act as a true earth, since moisture-laden soil is a good conductor. In dry weather very little loss of efficiency is observed, for even if the soil becomes desiccated the wires have a counterpoise effect. In fact many who have put this hint into practice have found that they no longer have such a huge difference, as once was the case, between dry weather and wet weather signal strength.

In Clay Soils.

GIVEN clay soil at a reasonable depth one of the best forms of earth connection is an ordinary seven-pound biscuit tin whose labels have been

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scrubbed off. An earth lead of seven-stranded wire can be soldered to it at as many points, thus ensuring a good contact. The tin is buried at a depth sufficient to ensure contact with clay and an iron pipe long enough to reach a foot or so above the surface of the soil is placed within it. A few small holes may be drilled in the tin. When the earth is in position the mouth of the pipe protrudes from the ground. In dry weather water can be poured into it. The water percolates through the holes drilled in the tin, moistening the surrounding clay and ensuring a good contact at all times.

It is, however, of no use making a first-rate earth plate unless you assure yourself that the contact between it and the low potential end of the aerial coil is as good as it can be. There may be a high resistance between this point of the coil and the aerial terminal of the set if thin wire is used for the connection or if proper joints are not made. Other possible points at which resistance may occur are in the earth wire itself, if this is of too small gauge or between it and the receiving set should there be a dirty or loose connection at either end of the lead-in tube.

It often pays to experiment with earths of different kinds if one is anxious to obtain the best results from a receiving set designed for long-distance work. Don't be content with any kind of earth connection put in haphazard. Try the water-pipe, the buried earth, and the counterpoise. It is most interesting to compare the results obtained by these different systems, and often it is found that one of them gives a surprising improvement both in the quality of reception and in the number of stations added to the log.

A De Luxe Earth.

AN earth—a de luxe type—that experiment has shown to be remarkably efficient may be installed in the following way. To a copper plate measuring some four feet by two a strap of copper tape long enough to reach to the terminal of the lead-in tube is riveted. It must be riveted, and not soldered or brazed, in order to preclude all possibility of electrolytic action. The plate is buried vertically beneath the aerial. The connecting strap must be kept well away from walls and so on, a distance piece provided with an insulator being used if need be. The strap should also be taut, so that it cannot sway in a wind. To ensure a low resistance contact the earth plate is packed round with coke or some similar moisture-holding material.

For all kinds of earth plate the riveting tip is a good one for soldered connections are not to be relied upon underground, and there is no doubt that they do give rise to electrolytic action owing to the presence of several dissimilar metals at the joint. In some very acid soils biscuit "tins" or other iron earth plates are destroyed very rapidly, and rivetted copper is much to be preferred.

ALTHOUGH, theoretically, the anode bend method of detection is capable of giving better quality than the grid leak method of detection, the latter is very much more sensitive.

CUTTING a crystal in two and using the new bright surface instead of the old dirty one will often result in a great improvement in crystal set reception.

Using Fixed Condensers

MOST amateurs have one or two spare fixed condensers on hand, but not everyone knows that a great many sets would greatly benefit by the addition of a ".001." The idea is that in condenser-controlled reaction sets (popularly called "Reinartz reaction") the reaction condenser should have a fixed condenser of about .001 mfd. in series with it, to prevent H.T. shorts.

To insert the condenser, first of all examine the connections to the reaction condenser. In most sets you will find that one of its sets of plates is connected to H.T. positive (possibly via reaction coil), and the other set of plates is connected to the filament wiring. All you have to do is to break one of these leads and connect to condenser in series. In other words, cut the lead and take one of the ends to one side of the fixed condenser and the

other to the other side of the fixed condenser.

There will be no alteration to reaction effects, etc., but now, if the reaction condenser plates are accidentally shorted, no damage will result from stray H.T.

Technical Tips

VALVES of the high magnification type generally make extremely good detectors in short-wave sets.

L.F. TRANSFORMERS, L.F. chokes, and similar highly inductive windings, should not be placed close together, and their cores should be arranged at right angles to one another.

BE sure to give your valves the correct grid bias, as failure to do this results in imperfect reception, and an unnecessary strain upon the H.T. battery.



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Testing Condenser Insulation

FIXED condensers are worse than useless in a receiver unless their internal insulation is sound. This is specially important in H.T. battery shunting condensers, and those who have electric supply mains available can test any doubtful condensers in the following way. Cut one of the leads to a lamp, leaving the other lead intact, and connect the ends of the

cut lead to the terminals of the condenser. The lamp and condenser are then in series, and when the switch is put on, the lamp should not light if the condenser dielectric is sound. Any fixed condenser should be able to withstand safely the 220 volts of the mains, so that no damage will result from the test. In the event of a fault in the dielectric, and a consequent contact between two adjacent plates of the condenser, the lamp will light, acting as a safety resistance,

RADIO DIRECTORY

What to Buy and Where

CITIES

ALTONA & HAMMARLUND-ROBERTS SETS.	Johns, Ltd. Chancery Street, Auckland.
ATWATER-KENT RADIO	Frank Wiseman, Ltd. 170-172 Queen Street, Auckland
BREMER-TULLY RADIO	Superadio, Ltd., 147 Queen Street, Auckland.
BURGESS RADIO BATTERIES,	All Radio Dealers.
CROSLEY RADIO	Abel, Smeeton, Ltd., 27-29 Customs St. E., Auckland.
CROSLEY SETS	Lewis Eady, Ltd., Queen Street, Auckland.
FERRANTI RADIO COMPONENTS	A. D. Riley and Co., Ltd. Anzac Ave., Auckland, and all leading dealers.
GREBE RADIO	Howie's, Dilworth Building, Custom st., Auckland
MULLARD VALVES	All Radio Dealers.
PREST-O-LITE. Car and Radio Battery Service	L. J. Purdie & Co., Ltd. 97 Dixon Street, Wellington.
RADIOLA RECEIVERS and Expert Radiola Service.	Farmers' Trading Co., Ltd., Hobson Street Auckland.
RADIOTRONS AND MARCONI VALVES	All Radio Dealers.
T.C.C. CONDENSERS	A. D. Riley and Co., Ltd. Anzac Ave., Auckland, and all leading dealers.

COUNTRY TOWNS

ANCHORADIO, BREMER-TULLY, RADIOLA, BROWN-ING-DRAKE, AND ATWATER-KENT RADIO	Radio House, Hamilton G. S. Anchor, Manager.
GREBE, ROGERS, CROSLEY, RADIOLA AND KING SERVICE	E. Dixon and Co., Ltd., Hawera.
CROSLEY RADIO	J. C. Davidson, Main Street, Pahiatua.
CROSLEY RADIO	F. H. Jellyman, Ltd., Devon Street, New Plymouth.
CROSLEY RADIO	D. A. Morrison & Co., Victoria Avenue, Wanganui.
PHILIPS VALVES AND APPARATUS	All Good Radio Dealers.
SIEMENS BATTERIES, RADIOLA DEALER AND SERVICE	G. C. Carrad. 140 The Avenue, Wanganui.

Improving Radio Reception

Points that are Usually Overlooked.

LOUDSPEAKERS of the horn and cone types suffer a gradual loss of efficiency where the output leads of the speaker are wrongly connected to a set with no output filter. Under these conditions the steady anode current of the last valve tends to demagnetise the magnets of the loudspeaker unit. This results in weaker and weaker signals as time goes on, and it may be some time before you realise what is happening.

It is then generally too late to reverse the connections and the only thing to do is to return the unit to the agents who, in most cases, will repair the damage for a small charge. The same thing, of course, happens to the 'phones if wrongly connected to the receiver, and, if possible, they should be compared with another pair known to be in good condition.

Saving the Speaker.

AN improvement which is well worth while making in all sets where the last valve is a power valve is to substitute choke bypass output for direct output to the loudspeaker. This modification consists of a special output choke, wired in the anode circuit of the last valve, one side of the loudspeaker being connected to one end of this choke through a 2-mfd. fixed condenser, and the other side to L.T. negative. Full description of this was given last week.

This obviates all risk of leakage when the loudspeaker leads are extended to other rooms and, there being no direct anode current through the loudspeaker windings, the magnets cannot be demagnetised. The efficiency of the output system is also considerably improved.

Important Accessories.

THE importance of such accessories as H.T. and L.T. batteries is apt to be overlooked. Too often the efficiency of these accessories is taken for granted and the receiver blamed for poor results and defective quality. The B battery is more often than not the source of such troubles, due chiefly to its high internal resistance producing low-frequency instability and even oscillation at audible frequencies. The internal resistance of dry batteries increases considerably as they become run down, and is sometimes quite high even in wet cell and accumulator batteries due to one or more defective cells.

It will, therefore, repay you to overhaul very thoroughly all your batteries and sources of power supply, replacing dry B batteries by fresh ones, preferably of large capacity (heavy duty). Search carefully for and replace cracked or leaky containers in wet and accumulator batteries, and clean up any busbars or terminals which have suffered corrosion through creeping of the electrolyte.

When testing your B batteries with a voltmeter it is as well to remember that a cheap instrument may give very misleading readings. Such a volt-

meter might take quite a considerable current, more than the total plate current of your receiver, and certainly more than is good for the battery. Under such excessive load the voltage of the B battery, as measured by the voltmeter, is much less than its actual value when working under normal conditions.

Whether you decide to instal a new B battery or not, it is essential to go over every B wander-plug, cleaning them up, and, where necessary, gently prising apart the split pins so that they fit firmly and soundly in the battery sockets. I have known of cases where insecurely fitting wander-plugs have been responsible for some queer and erratic faults.

The same attention should be given to all battery connections with the view to obtaining clean and firm contacts at all points of attachment to the battery, whether A. B. or C.

In the majority of cases the filament current supply will be derived from accumulators and the principal attention required here will be to the terminals and connecting lugs. These should be removed, any corroded parts scraped clean, and when replaced all terminal parts should be well smeared with vaseline. As in the case of B batteries, it is just as important to ensure a sound contact at the points of attachment.

Your Battery Leads.

FOR preference, leads to the accumulator should be fitted with substantial spade terminals, thus making quite sure of a large area of firm contact. Before the winter season commences it is well worth while having your accumulators overhauled at a recharging station, where expert attention can be given to any faults which may be present.

When you are feeling more satisfied about the general health of your batteries, it is as well to examine all the battery leads as a final precaution. These are quite important connections and should not be made with haphazard lengths of any wire which comes first to hand. The best wire for such leads is high quality flex of generous gauge, soundly insulated and covered. In any case you should examine each battery lead to see that the insulating covering has not deteriorated.

Neglected Terminals.

THE attachment points at the receiver end should also receive the attention of a piece of fine emery paper. Very often the leads to the set are made to terminals right at the back of the cabinet where they remain neglected and forgotten. Under these conditions the amount of tarnish and corrosion which can take place is surprising.

All this dirt must, of course, be removed, and terminals and the ends of battery leads brightened up with emery paper, following up with a light smear of vaseline, which prevents further corrosion, and actually improves contact, despite the fact that it is itself an insulating substance; exactly how it does it is still something of a mystery, but the fact is a well-established one.

The "Signal" Crystal Set.

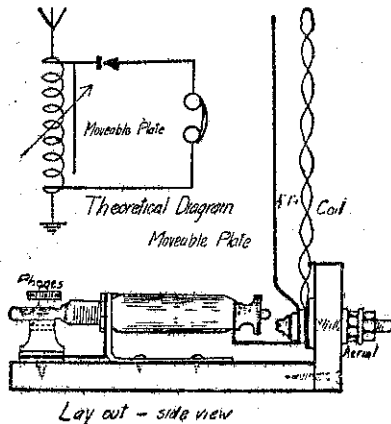
THIS crystal set was designed after a series of experiments, with the object of simplicity, clarity, and volume from the local station. It is suitable for local reception, either as a simple crystal set or with valve amplification. The tuning is accomplished by means of a copper disc moved over the face of a spiderweb coil, which, once adjusted, needs no further attention.

The coil is wound upon a former, and to suit 2YA a 60-turn coil is required; to find a coil suitable for other stations, divide the wave-length by 7. This gives the number of turns in a coil, suitable for a standard 100ft. aerial and lead-in. The former is made of a disc of wood or metal 1½ in. diameter with 2½ in. or 3 in. nails set radially around its circumference, like spokes in a cart wheel, any odd number, 9 to 15, may be used.

The wire, used, 24g. d.c.c., is wound in and out the nails until the required number of turns has been put on, and then the wire must be held in place by tying with strong thread where the wires cross, or fixed with celluloid cement before removing the former.

The Tuning Disc.

THE tuning disc is cut from sheet copper, 26 or 28 gauge, the same diameter as the coil, leaving a lug on one side to fit on the aerial screw.



The tuning is affected by the distance that the copper disc stands away from the face of the coil, which should be from ¼ in. to 1 in. If the disc will not swing over the face of the coil, bend it away or remove a few turns from coil; if the loudest position is when the disc is full over, bend it closer until maximum volume is attained; move the disc with a piece of wood, not the hand, when tuning. The diagram shows the side view, with the theoretical diagram inset.

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Our Crystal Corner

By "Galena"

The base board is 4 in. by 4 in., and the back piece 4 in. by 2 in.; they can be made out of 3-Sin. rimu, rubbed over with linseed oil and shellaced, or, better still, is 3-Sin. "Sindanyo" or other insulating material.

The writer runs a medium size loud-speaker with this set and one valve, 9 miles from 2YA.

A Novel Set.

A CORRESPONDENT, Mr. R. Garlick, has sent us a description of a novel crystal set. For this, the usual components are necessary, to wit, 4 terminals, a crystal, quarter-pound of D.C.C. wire, quarter pound of 32 enamelled wire, a 2-inch former, and a 3-inch former. The set is loose coupled as the two sizes of wire and formers would suggest.

The first task is to wind the coils on the 3-inch former. Wind on 40 turns of the 22 wire. There is no need to space wind the wire when it is cotton covered, so that this should present no difficulties. When wound on neatly and tightly, remove the former, and on the 2-inch former wind 75 to 90 turns of 24 D.C.C. wire. This, as before, will be close wound.

A box is then taken (the writer used an Epsom salts box), and on each end of the box four holes are drilled, so that a line between each pair crosses at right angles. The holes on the vertical plane are 3 inches apart, while those on the horizontal are 2 inches apart, that is, the respective diameters of the two coils. These are drilled similarly on the other end.

Through these, string is threaded so that a cage of four wires is made in the box. Upon the inner pieces of string, which are 2 inches apart, slip the coil of fine wire and solder a piece of heavier wire about 10 inches of, say, 22, on to each end. Now over the top of this coil and on the remaining two pieces of string, which are 3 inches apart, slip the remaining coil; pass the ends through the lid of the box to terminals marked "aerial" and "earth." This completes the primary winding.

Take the two ends of the finer wire, that is, the secondary, and pass them through the top of the box. One end passes to one side of the crystal, the other side of the crystal to a phone terminal. The other phone terminal connects with the free end of the secondary wire. This completes the set. The set is tuned by moving one coil in relation to the other.

Of this set the writer adds: "I can get really good phone strength at 2½ miles from 3YA, but I do not know the range of the set. I have heard it said that some listeners have heard 2YA here in Christchurch. There is plenty of room for improvement, and I would like to hear results which listeners get from this set."

In passing this set on to readers, it may be added that the loose coupled style, of which this is a variation, is usually more selective than the tight coupled, though seldom delivers the same volume. However, for anyone in-

terested in sets, this should make a very interesting and novel experiment.

Full-Wave Rectification.

"E.C." (Christchurch) writes complaining of poor results. His trouble seems to be similar to that of "Puzzled" (Wellington), who was answered in Vol. 11, No. 27.

Certain specific questions are asked:

1. What should be the respective positions of one detector be to another? Answer: That is immaterial, but keep the leads short.

2. Can you account for greater volume on one crystal than on another. Answer: It appears as though one crystal is more efficient.

3. Should I get much more volume from the speaker at, say, 1½ miles from a station, with a forty-foot aerial than I would at two miles with a

READERS in difficulty, or who feel they are not getting the best from their crystal should send in their difficulties. They will be discussed in the Corner, that is providing they are not too particular to one case, when they will be replied to by post. If an owner has found a circuit he considers superior to the usual, send it in and if worth publishing it will be passed on to others. Remember, address all inquiries "Technical Editor," and mark the letters "Crystal Corner."

twenty-foot aerial. Answer: Providing both aerials point to the same direction and are the same length—Yes.

4. Would a horn speaker be suitable? Answer: Yes, if it is not too large.

5. Would an aerial 60-feet high one end and 40-feet high the other end, give much more volume than one 20-feet high each end and the same length? Answer: It should—Yes.

6. As I want to make my earth wire as short as possible, would the following be an advantage. (my present earth is connected to the water pipe, which is about 9ft. from set): I intended putting an old copper, well down in the earth, filling it with coke and leaving a pipe above the ground to pour water down. This copper is to be connected to bare copper wire, which would run along under the ground and connect to the water pipe,

still under the ground. Then the lead it would be connected to the copper and be brought in through the window. The distance between copper and the water pipe would be 10 or 15ft. Would this give both the benefit of the copper earthing and the water pipe earthing in one, or would one be robbing the other? Answer: The earth should be more efficient than the present one, but see our article on "Earths."

The correspondent remarks that the dials work on 60 and 100, so that it appears that turns have to come off the coil controlled by the condenser whose dial reads 100.

Choice of Components.

IN this respect the amateur is very liable to err. So many components are on the market at most attractive prices that the young enthusiast who wishes to put his crystal outfit on to a loud-speaker, is inclined to under-estimate the value of good components. Cheap components injure tone more than volume, although the latter certainly suffers.

Transformers afford one of the most outstanding examples of the difficulties that beset the purchaser of cheap parts. A little while back, it was quite safe to say that a small transformer was a poor one, but to-day this can no longer be said with any degree of truth. Already, some very fine transformers, which are quite diminutive in size, have appeared on the market, and are giving the greatest of satisfaction. Particular among these are the Philips and Mullard type with silver wound primaries. These transformers are by no means cheap, but are well worth the extra expenditure. However, at the price paid for these, one has a wide choice of good transformers, and the constructor should always consult a reliable dealer whose advice he may quite profitably take before purchasing this component.

The coming season, too, will mark the advent of very many fine but low-priced transformers. If the young constructor will watch advertisements, he will see that many of these are now on the market.

The effect of a small transformer is to spoil the tone of the set. Besides this they have a very short life, so that it really pays both from the point of view of tone and economy to purchase the better type transformer.

The ratio very often worries the young amateur. For valve sets the usual ratio is about 3½ to 1, but in amplifiers for crystal sets where only a limited volume is to be handled, the ratio is not so important. So long as the curve of the transformer is flat or relatively so, a ratio of 6 to 1, or more, can be quite profitably used. In addition, this higher ratio helps to step up the output. The curve of the transformer is usually published by all reliable makers, so that the dealer should be able to show the young enthusiast just what his transformer is capable of doing.

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Notes and Comments

By
"SWITCH"

THE ALLAN WILKIE CO'S broadcast from the Grand Opera House, Wellington, last Friday evening, was an outstanding success. Every word of the two scenes of "The Merry Wives of Windsor" was heard distinctly by "Switch," who must compliment 2YA's technical staff for the excellence of the relay.

CIRCUMSTANCES prevented the writer from attending the New Zealand swimming championships at the Te Aro Baths last Saturday, but a view of the baths was obtainable from his balcony. The writer's loudspeaker reproduced the 2YA broadcast of the swimming events, and so it was interesting to see what was happening while listening to a very complete description by radio.

THE enterprise of 2YA, Wellington, in having its own reporter to "cover" the big 3-mile swim in Wellington Harbour for the Kellerman Cup, was much appreciated. It was made possible for 2YA to broadcast a description of the race before the first newspaper reporting the swim was selling on the street. The 2YA report was thorough, and had quite a professional touch. This is the sort of enterprise which makes broadcasting popular.

"SWITCH" has a bouquet to throw at the director of 3YA, Christchurch, for the "old-time" night last week. This is the kind of programme which even the younger generation enjoy.

THE Rev. Frank Gorman, the "Singing Parson" who appeared on the vaudeville stage in Wellington, some years ago, and also toured in the drama, "The Silence of Dean Maitland," is now broadcasting from 3LO, Melbourne. He is singing anything from jazz to grand opera. He has as a partner Miss Sadie McDonald, who sings well, and is a gifted violinist.

THE transmission by 2YA, Wellington, has been super-excellent lately, the tone and volume being all that could be desired. Still, "Switch" had to listen to complaints from two listeners, who said that the tone of 2YA was wretched. An inspection of the grumblers' sets was made. In one case, the "C" battery was tested, and found to be exhausted. In the other case, no "C" battery was used at all, although, the type of valve and "B" battery voltage required $4\frac{1}{2}$ volts bias.

LISTENERS in and around Wellington have lately been obtaining a fair amount of entertainment from the Australian stations after our own have closed down at night. The loudest is still 2BL, Sydney, with 2FC, Sydney, and 2GB, Sydney, third. Of the Japanese, "Switch" receives JOHK with the greatest volume. Static has been mild, considering the time of the year.

WITH the approach of autumn, Wellington broadcast listeners will be turning their thoughts to long-distance reception. Distant stations once located should be "logged," so that they can be found again without much twisting and twirling of dials. Many multivalve sets have dials on which the call signs of various stations can be pencilled. This method is the best, but those who have dials upon which it is not possible to write, can use a note-book for a log.

THE pursuit of long-distance stations has its attraction and few listeners with multi-valve sets do not sometimes engage in this diversion. One of the main difficulties in finding long-distance stations is the phenomenon of fading. On some nights many stations have long cycles of fading, and if one tunes on to the wavelength of a station previously "logged," it requires patience to hang on until sufficient time has elapsed for it to recover from a protracted fade.

SOME listeners are obsessed with the desire to construct accessories for their sets where it is not practicable or profitable to do so. A listener showed the writer a letter from a friend, who desired data for making a "B" battery charger, and also the correct mixture for the powder for inserting in the distilled water of the charger. These chargers can be purchased complete for about 15s., and the boracic powder for same goes with them. Various attempts made locally to substitute for the proper powder commercial boracic powder and certain mixtures, have proved a failure.

ANOTHER Wellington enthusiast has spent much time endeavouring to construct an electric gramophone pick-up, but although he displayed considerable ingenuity, it turned out a failure when tested, in comparison with a commercial article. The pleasure some folk obtain from constructional work compensates them for the time and patience expended,

but there is a good deal of avoidable disappointment, which is the result of attempting the impossible.

A FEW years ago, some Wellington "experimenters" wound their own audio transformers, and rather good jobs they made of them. These home-made transformers were better than most of the imported articles, but since then commercial manufacturers have made wonderful strides in the construction of audio transformers. The writer chanced to hear an old-time home-made audio transformer pitted against one of the latest imported transformers. Various frequencies were checked up, and the one-time efficient home-made article proved sadly inefficient as compared with the high-class imported article. How time changes things!

IF any listener desires to test the "A" and "B" voltages, his valves are getting, the following should prove interesting:—The voltmeter used to show whether the filament voltage to each valve is correct, should be connected across the two F terminals of the valve socket. The meter to measure the plate voltage on the detector valve should be connected between the "B" terminal on the primary of the transformer, and the filament positive lead. If the connections are made correctly, a multi-reading meter may be used. Such meters are available. There will be little current drain by the filament meters, but after obtaining a reading with the plate voltmeter, it should be cut out of the circuit.

A STUBBORN howling in a friend's loudspeaker puzzled him for days. He tested everything in the circuit of his set, excepting his dry "B" batteries. He was advised to put a voltmeter across them after they had been operating for a few minutes. He protested that the batteries could not be run down, as they were only two months in use. However, he yielded ultimately, and found they were beyond human aid! Of course, they should have lasted three or four times longer if originally efficient, but they were of a "cheap" make.

POWER-LINE leakages around Wellington are now not often sufficiently severe to interfere with long-distance reception, but there are still two or three areas in which they still break out at times. The duration of these leakages is, fortunately, seldom longer than ten minutes or thereabouts, and may be heard only once or twice in an occasional evening.

JACK ELLIOTT, the English champion boxer, now in Melbourne, having been persuaded by his opponents in recent fights to take a temporary rest from the ring, he has devoted his spare time to de-

scribing the Melbourne Stadium events. He has a distinctive style and an Oxford accent, and it is most refreshing to hear this sort of thing: "Dear me, how these two fellows hate each other! There will be murder done here to-night. There's a blow for you! This man will knock the other fellow's head clean off his shoulders. What? No, his head is still on. He missed, or I'm sure he would have killed the other poor chap." Yet, while this may be "refreshing," it is not a good way of describing a boxing contest, and we New Zealanders would not enjoy it, even when expressed with an Oxford accent.

LET the aerial down periodically, and clean the soot from the insulators. Soot is carbon, and is a good conductor. Don't expect a frame or loop aerial to work on a crystal set. And make sure that your earth connection is really so. Often a small fixed condenser of .0001 mfd capacity, in series with the aerial lead, will improve selectivity, and it cannot do any harm. Make adequate provision for the earthing efficiently (outside the building) of an outside aerial when a storm is in the vicinity. Do not be scared that your aerial is an attraction to lightning. On the contrary, a properly-earthed aerial is a certain protection to a house during a thunderstorm. Remember that all around you are overhead power lines and telephone wires which are seldom known to suffer from lightning discharges.

DO not run your aerial over a public highway, because the authorities will assuredly demand its removal. Never erect over power lines or telephone lines. If a gale brings your aerial down not only will there be a firework display but it will cost you good money. There is no need to use very heavy insulators—use rather a string of smaller ones. At the same time, do not forget that insulation of the aerial is of paramount importance. Include in the supports of the aerial a spring at each end (of the spring mattress variety), especially if a tree supports the aerial at one or both ends. A balance weight on the aerial halyard will keep the aerial taut under all weather conditions by allowing for contraction and expansion of the rope. A clothes line wire halyard is the best.

A New South Wales listener, writing to the press, places the position very aptly with reference to some people's growlings. He says:—"The majority of people with decent radio sets are quite satisfied with the programmes as they stand, and it appears to me as if most of the complaints come from people who are the owners of worthless sets or are too ignorant to realise the difficulties of arranging a programme for some weeks ahead. If they would only stop to think that the programmes are arranged to suit the requirements of thousands of listeners, and no two persons' tastes are alike, they would realise how egotistical they are."

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Children's Sessions

AT 1YA.

TUESDAY, FEBRUARY 19.—Here's Uncle George, and also Miss Dorothy Griffiths, who brings with her a happy little band to entertain the Radio Family with songs, recitations, and sketches.

WEDNESDAY.—To-night brings Uncle Tom with his opening chorus and closing chorus, and an hour of good cheer in between.

THURSDAY.—As well as Peter Pan, Mrs. Carte-Lloyd will be at the Studio with some clever little people, who will give an attractive programme. Listen-in on the tick of six o'clock.

FRIDAY.—Nod, Aunt Jean, Gramophone Man and cousins all present this evening, to make the Children's Hour a happy and bright one.

SATURDAY.—Welcome to Uncle Pat once again—Uncle Pat, with splendid stories and birthday greetings, and cousins with songs and recitations.

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

AT 2YA.

MONDAY, FEBRUARY 18.—Uncle Jeff will be present with a puzzle and a song, and four little cousins with songs, violin, recitations, and pianoforte solos. Joyce, Eva, Dulcie, and Maurice are the names of these cousins.

TUESDAY.—Uncle Jim will have a story and greeting for to-night, and the pupils of Miss Alice Duff will present a jolly little programme of music.

THURSDAY.—Aunt Gwen will send greetings over the air, and will tell all about the fairies. And then little Peggy and Rosie will play pianoforte duets. Cousin Marjorie will play, too, and Cousin Helen will sing a song about Fairyland.

FRIDAY.—Big Brother Jack will give the birthday greetings, and then the pupils of Mrs. Percy Woods will entertain the radio family. Cousin Zac and his steel guitar will be there, too, with his cheery music.

SATURDAY.—Uncle Toby and Aunt Gwen will read the bedtime stories to-night, and send radio birthday cheer. Cousin Gladys

will have songs, recitations, and mouth organ solos.

SUNDAY.—Uncle George will conduct the Children's Song Service to-night, assisted by the Cambridge Terrace Congregational Sunday School Choir, under Mr. Reynolds.

AT 3YA.

MONDAY, FEBRUARY 18.—To-night Scatterjoy will tell you interesting things all about the ornaments that are worn by the natives in different lands; by the North American Indians, by the Zulu of South Africa, the Aborigines of Australia, and by the Maoris of our own country. Songs, recitations, and whistling solos by the Melody Maids.

WEDNESDAY.—Big Brother, with his stories for the boys, and cousins Myra, Bruce, and Betty helping with songs and recitations.

THURSDAY.—This is Uncle Hal's night, and we have a group of new little cousins to help with songs and choruses.

FRIDAY.—Our Mr. Storyman's night—so we are all eager to get the earphones on, and the loudspeakers tuned in. Cousins Freda, Maurice, and Heather helping.

SATURDAY.—Have you all tuned in on Happiness to-night? If not, then hurry up, and don't miss Chuckle and Aunt Pat, and Gerald and Rene. The merriest hour of the week this time.

SUNDAY.—Children's Song Service, with Uncle David in charge, and the hymn singing by the little ones from St. Andrew's Presbyterian Sunday School.

AT 4YA.

TUESDAY, FEBRUARY 19.—Mr. Young's Concert Party was coming to 4YA last year, but Christmas and the holidays got in the way. Brother Bill heard them at one of their concerts. Can they sing, recite, and play? My word! You certainly ought to hear themselves. Big brother Bill will have some stories about queer animals, too.

FRIDAY.—Miss Anita Winkel has been preparing a delightful little musical fairy story, and her pupils will give it from 4YA to-night. There will be other good things, too. Aunt Shiela, Big Brother Bill, the radio postie, and some really lovely

same man had occasion to speak over the powerful American broadcasting station KGO. By the next New Zealand mail he received a letter and a request for settlement of the five-year-old debt from his one-time friend, now a "DX" enthusiast, whose radio ramblings had induced him to leave work in the afternoon to search for Yankee broadcasters."

KGO and Maoriland

THE following story has been "released" by the publicity director of KGO, Oakland, California:—"When in New Zealand some years ago a young man borrowed money from a Maoriland friend. A few days ago the

Ten Little Radio Valves

Ten little radio valves
Standing in a line;
One bumped his little pip,
Then there were nine.

Nine little radio valves
Working rather late;
One broke his union hours,
Then there were eight.

Eight little radio valves
Reaching out to Heaven;
One hit a shooting star,
Then there were seven.

Seven little radio valves
At oscillating tricks;
One met Captain Eckersley,
Then there were six.

Six little radio valves,
Very much alive;
One burst his extra grid,
Then there were five.

Five little radio valves,
Shaking at the core;
One touched the L.F. choke,
Then there were four.

Four little radio valves,
Near the plus H.T.;
One went a bit too far,
Then there were three.

Three little radio valves,
Schenectady trying to woo;
One howled a bit too much,
Then there were two.

Two little radio valves,
Programme nearly done;
Speaker found the tuning note,
Then there was one.

One little radio valve
Australia trying to get,
Died of much reaction,
Then 'twas a crystal set!

—J.V.H.

From the Programmes

TWO cembalo solos, "Le Coucou" and "Le Tambourin," will be presented by 2YA on Monday evening. A cembalo, or dulcimer, was the prototype of the pianoforte, the strings being set in vibration by small hammers held in the hands. It was most likely the bell-like tone of the wire strings when struck by the hammers of the dulcimer that attracted to it the name or cymbal or cembalo. The dulcimer, with keys added, first became the clavichord. In course of time the first two syllables were dropped and cembalo was used to designate the keyed instrument, just as 'cello at the present day frequently stands for violoncello.



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Short-wave Jottings

MR. A. P. MORRISON, of Brooklyn, writes:—

Another new German station heard this week occurred Friday, February 1. Call sign, DHC; location, Nauen, Germany; wavelength, 26.20 metres; power, 20 kilowatts.

From information received from Philips Lamps, Ltd. (N.Z.), the station I reported hearing in my last week's notes, operating on 16.88 metres, their call-sign is PHI, situated at Huizen, Holland.

The following item of interest to S.W. listeners is from a late edition of "Science and Invention" magazine: Rebroadcasting a radio "echo."

In an experiment carried on by the General Electric Company, phonograph music was sent across the Atlantic, back again, and rebroadcast. The signal was first sent out from Schenectady over short-wave station W2XAD on 21.96 metres. This was picked up at Chelmsford, England, on a short-wave receiver and fed into the short-wave transmitter 5SW, which sent its signal back to Schenectady on 24 metres. Here it was picked up by another short-wave receiver and retransmitted by station WGY on the 319 metres wavelength.

It was a decided novelty for broadcast listeners to listen in on the radio "echo" after it had twice crossed the Atlantic Ocean. The experiment was carried on between the hours of 11.30 and 1 p.m., E.S.T. The signal, when rebroadcast, was noticeably free from static and interference, due to the fact that it had been transmitted on the shortened wavelengths. The engineers in charge have succeeded in sending over WGY's wavelength the English rebroadcast of their own short-wave station output successfully a number of times. My log for the week is as follows:—

Friday, February 1.

6.45: 7LO, South Africa, could just be heard at R5.

7 a.m.: 5SW a lecture was in progress, the signals coming through about R6.

7.30 p.m.: DHC, Nauen, Germany, duplex telephony test with PK2ME, Sydney. This test was one of the best duplex tests I have heard so far. The test began thus: "Hello, Hello. Nauen calling. Hello, Hello. 1 2 3 4 5 6 7 8 9. Hello, Hello, Sydney. We will play music. 2ME come on," etc. And a little while afterwards, "2ME calling. Hello, Hello, Nauen. Here is Sydney. Hello, Hello." "Hello, Hello, Sydney. Yes, this is Nauen; what is your time now?" 2ME replied, "It is now 6 p.m., Sydney time." DHC replied, "It is now 9 a.m. here in Germany, and it is very cold, about 26 deg." Some comments were made about snow. DHC said, "Do you hear me a little better than yesterday? Your signals are very low. Could you give me a little more power?" 2ME increased power. Nauen replied, "That is a little better. Could you talk a little in the German language?" He said, "I cannot understand you; your power is very low" (2

little more strength from 2ME). Nauen replied that that was much better, and asked how great was 2ME's power in kilowatts and how great was your sender.

2ME replied, "12 kilowatts." Nauen replied, "Thank you," and "We are sending to you with 20 kilowatts. Can you tell me how great in kilocycles is your wavelength. Hello. Will you speak a little louder? Hello. Yes. I cannot understand you. Please will you speak a little louder? Hello, Sydney. I do not hear you."

"Yes, Sydney," 2ME replied, "10520 kilocycles," "one moment," said Nauen. "Hullo Sydney, our wave is 26.20 metres, please will you tell me, will we continue next week? What do you say to telephony in the morning, Hullo, Hullo, Sydney."

"Yes, that is great, our conversation is good. Hullo, Hullo, Sydney, yes, Nauen speaking" (at this part of the transmission another announcer spoke and I think probably this speech was coming from Berlin per telephone line to D.H.C. studio).

"Hullo, Hullo, here is Berlin, Hullo Sydney, are you English or Australian born, are you a European or born in Australia" (I did not hear the reply to this; very amusing for all that.) "Hullo, Sydney, I cannot understand you, one moment, please. Hullo, your voice is very bad now, I think we will finish now and continue to-morrow, Monday, at 7 a.m., G.M.T. Hullo, Hullo, I will read for you, yes, yes, Nauen speaking, we will continue in the morning at 7 a.m. G.M.T., I cannot understand you, will you speak a little louder."

Nauen asked 2ME if they would send through a cablegram to their receiving station at Nauen.

"Hullo, Hullo, Sydney; yes, thank you, good-bye," and here the transmission concluded.

Both stations were at good strength; 2ME, R8, and DHC, R7 to R8. The German station spoke very plainly, of course, sometimes not in the best of English, and while DHC was not speaking to Sydney you could hear them talking about the studio and talking to one another.

9 p.m.: W2XG on word test, R8.

10.15 p.m.: ANE, Java, was on the air, but was silent when I picked them up.

Saturday, February 2.

4 p.m.: PCJ, Holland, was heard, the best I have heard him for some time; strength was from R6 to R8, and some very enjoyable music was heard.

6.15 p.m.: On 31 metres a foreigner was heard with one or two items of music and speech was in the French language, but I failed to get his call letters; he was only heard for 15 minutes; strength at R7 to R8.

7 p.m.: RSR, Germany, was heard with a great deal of talk, but not music; signed off at 7.20 p.m.

8 p.m.: DOR, Germany, 41 metres, talking much, at R8.

12 midnight: ANE, Java, playing records, R7.

Amateurs heard: ZL2AW, Wellington, and ZL3AF, Christchurch.

Sunday, February 3.

3.15 p.m.: W2XAF was at R4. I listened to them again at 4 p.m. and they were on with their usual dance programme; strength increased from R7 to R8 before closing down. KOKA was very weak in the afternoon, so did not trouble them much.

6.15 p.m.: KDKA, Pittsburg, was heard with their special programme to Commander Byrd and comrades, sending messages, also musical and vocal items. One good item was by a scout, Mr. McDougal, a song, "On the Bonnie Banks of Clyde." He also told some Scotch stories and afterwards sung one of Harry Lauder's songs. KDKA mentioned that their signals were being well received by the City of New York, a radio being sent from them, and also stated if any of the Byrd expedition wished to send a message per radio they would be only too pleased to rebroadcast it for them. The messages sent to the expedition are many like this one:—"Dear John,—Many thanks for your letter. Best of luck. Hoping you are well. Love." This transmission concluded at 8.20 p.m. New Zealand time.

Monday, February 4.

6.45 a.m.: Foreign station heard on 37 metres, but was not strong enough to get call. R5 to R6.

7 a.m.: 3LO, Melbourne, 31.6 metres; usual programme; strength K8.

9.30 p.m.: RFM, Russia. This station has fallen back in strength again and was only R6 this night.

11 p.m.: PCLL, Holland, was heard playing records, R7 to R8.

Tuesday, February 5.

6.30 a.m.: 7LO, South Africa, was too weak to listen to; R4 and with 5s.w. I did not trouble.

8.20 p.m.: DHC, Nauen, Germany, was conducting another test with 2ME, Sydney. Strength was good from both stations; R8.

9.15 p.m.: RFM, Russia; very weak, R6.

Wednesday, February 6.

Did not listen-in this morning.

7.30 p.m.: DHC, Nauen, Germany. Another test with 2ME. I listened-in to the whole of this test and it was even better than the other tests I have heard from them. They concluded at 8.55 p.m.; both stations at R8 to R9. 2ME was subject to a little fading.

10.45 p.m.: 2ME conducted a duplex test with ANE, Java. ANE, who was R7, and 2ME, R8 to R9. ANE conducted another duplex test with PCLL, but I did not listen for this.

WHEN a counterpoise earth is used, it must be insulated just as carefully as an aerial.

AN old curtain rod, hammered to a point at one end and drilled at the other end to take terminals, will make an extremely good earth.

Two Telephone Tips

QUITE a large proportion of the unpleasant body capacity effects of which so many shortwave enthusiasts complain are brought about by the connection of the head telephones directly into the plate circuit of the note-magnifying valve. There is always a certain leakage of high frequencies through the rectifier, and its effects are particularly marked upon the short waves. These stray high frequencies make their way through the note-magnifying valve or valves and so into the telephones. When the head wearing them approaches the tuning controls weird effects are sometimes produced. It may also be found that either the set will bowl or an incoming transmission will disappear if the telephone receivers or their cords are touched.

When the telephones are connected between the plate of the output valve and high tension positive they are, so to speak, up in the air. In other words, they are not earthed directly. Now, it is quite easy by means of a filter circuit to alter this state of affairs, and it is a very great advantage to do so, particularly on wavelengths below 20 metres. Here is the way in which it is done. Connect the plate of the output valve to high tension positive through a low-frequency choke. Connect the plate also to one contact of a fixed condenser with a capacity of from 1 to 4 microfarads and take a wire from the second contact of this condenser to one of the telephone terminals.

The second telephone terminal is connected to earth. Besides materially reducing capacity effects the system has two other important advantages. In the first place the telephones are relieved of the totally unnecessary strain of carrying the direct current that flows in the plate circuit. And this brings us to the second advantage, that it no longer matters which telephone lead is connected to which terminal.

The second point about telephones concerns sets in which the high tension current is derived from the mains. Generally speaking, it is not advisable in such cases to use head telephones unless a properly designed filter circuit or output transformer is incorporated. Without these there is always a liability to a severe shock if certain parts of the battery eliminating apparatus are touched whilst the telephones are being worn.

ANTI-SULPHURIC paste, which is obtainable quite cheaply, is an excellent preservative of a wooden accumulator-carrying case and is very useful for floors and cabinets, etc., where the accumulator is standing.

Printed and published for the New Zealand Radio Publishing Company at the registered office, Wakefield Street, Wellington, of the Wellington Publishing Company, by Archibald Sando, of 47 Freyberg Street, Lyall Bay, FRIDAY, FEBRUARY 15, 1929.