

THE RADIO RECORD

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WELLINGTON, FRIDAY, MAY 17, 1929.

Broadcast Music of Coming Week

"'Tis the deep music of the rolling world,
Kindling within the strings of the waved air—
Aeolian modulations."
—Shelley.

Bⁿ
Bolton
Woods

A Long Career.



HENRY VIEUXTEMPS was born in Belgium in 1820, and died in Algiers in 1881. He was one of the foremost of French violinists, and toured Europe and America with great success. He made his debut at the early age of eight years, and was from that time on and off the stage until 1873, when his retirement was enforced by paralysis. He was solo violinist to the Czar, and violin teacher at the St. Petersburg Conservatory from 1846 until 1852. He wrote a number of works for violin, and violin and piano.

The studio orchestra at 1YA will play Vieuxtemps's "Reverie" as violin solo with orchestral accompaniment (soloist, Miss Ina Bosworth), on Thursday, May 23.

Beethoven's Rival.

A PUPIL of Mozart, Haydn, Salieri and Clementi Johann Hummell, was said to rival Beethoven in improvising at the piano. He was a great friend of the composer, and though they quarrelled once, they became friends again during Beethoven's last illness. He was born in 1788, and in 1824 wrote a "Piano School" advocating a new method of fingering. He composed quantities of piano music, and several Masses. He was at one time chapelmaster to Prince Esterhazy, and while there conducted Beethoven's Mass in C.

The 1YA Studio Trio will play "Rondo," from Hummell's Trio Op. 35 on Friday, May 24.

Music in Nature.

ONE of Liszt's most successful descriptive pieces is his "Rustling Woods." Exquisite in the play of light and shade, and lovely in the suggestion of the pleasant sounds of the forest, it is a fine example of its type of musical picture, and like most of Liszt's works, is bristling with technical difficulties. It employs every device of the pianist and all the resources of the piano to produce the effect the composer intended. Liszt's own playing of his compositions of this character was, we are told, something unapproached by any other contemporary pianist, so graphic and poetic did he make them.

"Rustling Woods" has been chosen by Mr. Eric Waters as his pianoforte solo at 1YA on Friday, May 24.

A Czech Mix-up.

"THE Bartered Bride" is the second of eight operas written by Smetana on national subjects. Begun in 1863, it was completed in 1866, and is undoubtedly his masterpiece. The opera is not planned on a large scale, but is perfect as regards proportions, and as a national poem, it reflects rural Bohemia and the Czech character, just as clearly as the passion and the picturesque qualities of the Spanish are reflected in Bizet's "Carmen."

The story deals with the pretty peasant girl, Marenka, who is not allowed to marry her lover as he is a poor unknown orphan. The professional village match-maker arranges her marriage with Vasek, who stutters very badly, and is next door to an idiot. Vasek is prevailed

upon to sell the contract, and in the end it appears that the purchaser is no other than Marenka's lover.

The 1YA Orchestra will play the Overture to "The Bartered Bride" on Saturday, May 25.

American-Indian Music.

CHARLES Wakefield Cadman's "Four American-Indian Songs" were the first result of his interest in the music of the Indians. He received his musical education entirely from American teachers and held various posts as musical critic and church organist. He has travelled much as lecture-recitalist, being assisted in recent years by an Indian mezzo-soprano, Princess Tsianina Redfeather. His lecture on American-Indian music was given in 1910 in Paris and London. His compositions are numerous, but not all are in the category of Indian music.

The Melody Four and Orchestra will give the Song Suite, "Four American-Indian Songs," at 2YA on Saturday, May 25.

Critic and Composer.

BORN at Copenhagen, Charles Kjerulf gained wide notice as a critic and as a composer. He wrote several biographies and an autobiography in two volumes, which gives a vivid description of musical life in Copenhagen. His interest in the theatre gave impulse to the composition of several operettas. He also wrote music for several dramas, and translated Bellman's Swedish Songs into Danish. He died at Elsinore in 1919.

—Continued on page 2.

Broadcast Music

(Continued from Cover.)

Miss Evelyn Robinson, contralto, will sing "Last Night," by Kjerulf, at 2YA on Monday, May 20.

An Illustrious Englishman.

"COME If You Dare" was one of the songs in H. Purcell's "Masque of King Arthur," the words of which were by Dryden. It was first produced in 1691. Henry Purcell was born in 1658 and died in 1695, at the early age of thirty-seven. Most of his songs were published after his death in "Orpheus Britannicus: a collection of Ayres, composed for the theatre, and on other occasions, by the late Mr. Henry Purcell, London, printed for Frances Purcell, executrix of the author, 1697."

"Come If You Dare" will be sung by Mr. W. Bradshaw and chorus at 3YA on Friday, May 24.

One of the "Five."

CESAR CUI, who ranks with the best of modern Russian composers, was by profession a military engineer, being a recognised authority on fortifications. He composed operas, songs, chamber music and orchestral music. One of his most popular works is his "Orientale." Plaintive, but exceedingly sweet, a sad little song runs through this wonderful piece of Oriental tone colour. It is said by some to be a little maid bewailing her faithless lover, and by others to be a woman singing of her longings and hopes. However, whatever the picture intended to be conveyed, it is a charming composition.

The studio orchestra at 3YA will play "Orientale" on Wednesday, May 22.

Haydn on Mozart.

"I DECLARE to you, before God and on the faith of an honest man, that your son is the greatest com-

poser that ever lived." These were words addressed by Haydn to the father of Mozart. Unfortunately this young man died at the early age of thirty-five. Reading his letters it is interesting to note that in contrast to his lighter moods, there was a deep undertone of seriousness. He was always assuring his father, in his letters, that he was attending church, and on one occasion wrote: "Friends who have no religion cannot long be my friends." At this time he was still very young, and he wrote the greater number of his masses before he was twenty-three.

The 3YA Studio Orchestra will play Mozart's "Ave Verum" on Wednesday, May 22.

"Gentlemen! The King!"

THE National Anthem dates from about 1742, when it appeared in a collection of songs entitled "Harmonia Anglicana." It has been pointed out that the tune is in the form used for the galliard, a lively dance in triple time. Dr. John Bull wrote such a galliard and it is thought that the hymn was founded on this. It was first sung at Merchant Tailors' Hall on July 7, 1607, by the gentlemen and children of H.M. Chapel Royal, when King James I was present at a dinner given by that company on his escape from the Gunpowder Plot. There have been many claims put forth for the origin of the "National Anthem," but this is now generally accepted as the one which can give the best proof. It is said that Charles Lamb, the essayist, on one occasion, said that he has such a bad ear for music that he could not tell the difference between, "Pop Goes the King" and "God Save the Weasel"!!

The Valencia Quartet will commence the Empire Day programme at 3YA with Elgar's arrangement of "God Save the King."

"Incomparable Artists."

ANTONIN DVORAK first went to London to conduct his Stabat Mater in 1884. He came over from Prague at the invitation of the Novellos, and was tendered a reception by Henry Littleton, the head of the firm. During the evening the famous tenor Edward Lloyd sang "Songs My Mother Taught Me." The rendering was so wonderful that the composer wept, and later, after the performance of the Stabat Mater, when Madame Patey created a sensation with the wonderful "Inflammatus," he remarked: "I reckon myself fortunate to have had my music sung by two such incomparable artists as Patey and Lloyd."

The 3YA Trio will play an arrangement of "Songs My Mother Taught Me" on Monday, May 20.

Almost a Benediction.

CHOPIN'S "Nocturne in F Sharp" is full of details of ravishing beauty. It has an almost Oriental atmosphere, as one writer says: "The palm and the cypress, the rose thicket and the great stars burning low in the southern sky." The opening melody occurs at the end, and its indescribable calm touches one like a benediction.

Miss Edith Harry has included this Nocturne in her numbers from 4YA on Tuesday, May 21.

A Great American.

EDWARD McDowell is one of the greatest composers that America has the privilege of claiming as her own. His musical education was received chiefly abroad, and the influence of the various masters under whom he studied, and his enthusiasm for certain composers, is reflected in his music. He gave considerable study to the folk music of America, especially to the music of the American Indians. His compositions seem more beautiful the more they are heard, and they well repay a familiarity that comes of repeated hearing. He was born in New York in 1861, and died in Peterboro, New Hampshire, in 1908.

Miss Edith Harry will play McDowell's "Etude in A Minor" at 4YA on Tuesday, May 21.

A Cumberland Huntsman.

JOHN PEEL was a famous Cumberland fox-hunter. He was over six feet tall, and whenever fox-hunting was toward, he would be seen striding along in his long grey homespun coat, with leather breeches and a tall hat, and with his hunting horn in his hand or to his mouth. "Ranter and Ringwood, Bellman and True" were the names of Peel's dogs, and they are Cumberland dog names to this day. One night John Peel was visiting his friend John Graves, and as they sat talking they could hear the old granny upstairs singing a child to sleep to an old, old song, "Bonnie Annie." Graves' little daughter could not catch the words and asked her father what they were. He hardly knew, so he sat down there and then and wrote some verses in praise of his old friend.

Then he sang them through and John Peel smiled with pleasure, but the tears came too, as he thought of the friendship and love that lay

Appreciative Correspondents

Notes from Recent Letters

CORRESPONDENTS in writing to us for advice frequently express their appreciation of the service rendered and of the "Radio Record" in general. Their remarks are always appreciated as are the few complaints we receive. The latter are as welcome as the former, for by their tone we can tell what is wanted and what is not wanted. Taking it that the remarks are just in passing, they rarely find their way into press, but the following are a few of the very many remarks that have been addressed to us recently.

H.J. (Mangaweka) closes by remarking: "Before closing I wish the 'Radio Record' every success it can possibly get, as I will not be without it so long as it is published."

Another correspondent: "Thanking you for your notes, with special mention for your 'Finer Details' section."

H.A. (Wainuku), in writing to "Questions and Answers," commences: "I am writing to express my hearty appreciation and thanks for your splendid paper, which is always full of interesting and instructive articles and news. When I became a subscriber I knew practically nothing about radio, but now I feel quite confident that I could make up any set described in your pages, so clear and concise are the instructions."

"PUSH-PULL" (Wellington) writes:

"While writing to your paper for information regarding wireless construction, I might mention that I have found the 'Radio Record' a great help, not only as for the programmes, but also for general information in the interests of radio listeners. I have built from several articles in your valuable paper, and I must say they have been very successful. I have constructed the following:—Five-valve shielded Browning-Drake (with push-pull amplifier) wet B batteries, a 6ft. exponential horn, output filter, and several small items such as fuses, etc. I cannot understand anyone who owns a receiver not taking the paper, as I could not do without it. In fact, I have every number since I first bought a radio set two years ago, and I am constantly hunting through them for information about something. I could not part with one of them."

behind the writing of the verses. The verses became very popular and the choir-master of the Cathedral at Carlisle, not far away, got hold of them and wrote a piano accompaniment to the old tune, and it was sung all over the world.

The Majors Quartet will sing "John Peel" at 4YA on Friday, May 24.

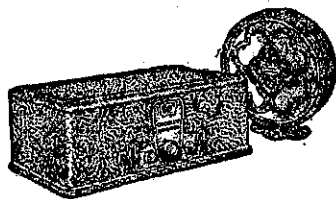
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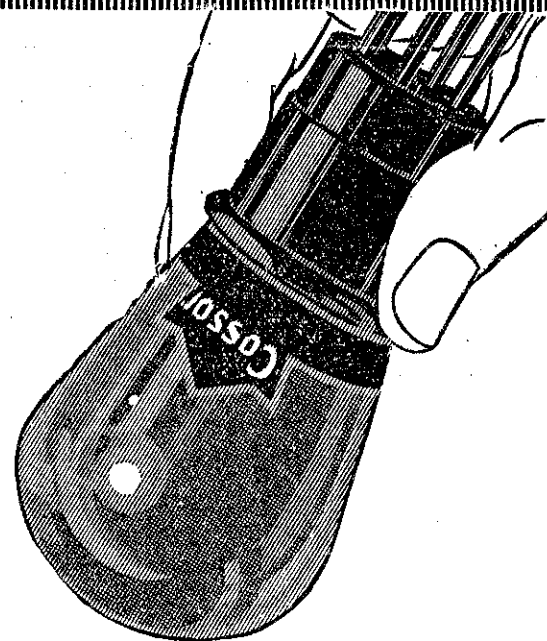
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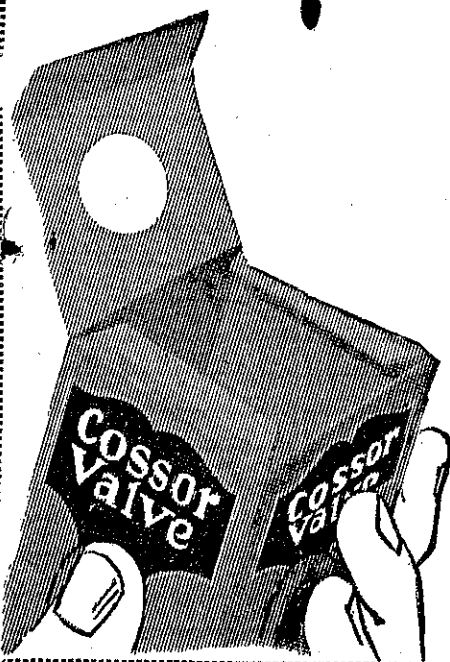
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Static Eliminator**Is It a Hoax?**

ON the appearance of the striking announcement from Invercargill that an inventor there had managed to succeed in his effort to provide a device for eliminating static from radio receiving sets, we telegraphed to an Invercargill correspondent asking him to get in touch with the inventor and give us full information of the allegedly successful device.

Our correspondent is a competent newspaper man, well skilled in the art of locating "persons wanted." After several days' inquiry amongst patent agents, local radio enthusiasts, and all likely sources, our correspondent informs us that he is quite unable to locate the inventor of the alleged static eliminator. Discussion of the so-called invention has been entered into with local wireless enthusiasts, and the consensus of opinion is that the matter is impracticable. It is even hinted that the thing is a hoax, more especially as the inventor has failed to give the least indication of the nature of his apparatus.

At this stage, we make no statement whatever as to the invention. We issue, however, a specific invitation to the inventor to come forward and give the radio world some details of his invention.

After the original announcement was made, an Invercargill paper published the following matter. Careful reading of this, however, leaves us very nearly as wise as we were before, and we, with listeners, still await details of the invention.

A further step in introducing to the world a local man's invention, which is claimed to eliminate static and interference in wireless sets, was taken on Saturday, when a gentleman enabled the inventor to patent fully the idea.

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Women as Announcers

EXPERIENCE in Australia emphasises that women are not suitable as full-time announcers. In all the capital cities, a large proportion of the programmes is taken from outside concerts and entertainments, besides sporting grounds of all kinds. The inevitable result is that the service is frequently dislocated. Some boxer is knocked out half-an-hour before he should be, and the announcer suddenly finds a gap of perhaps 30 minutes in the programme. He probably has half-a-dozen artists in the studio, and with these and a good deal of showmanship, he manages to fill in time. This has been found work for men rather than women. Although some of the sessions conducted exclusively by women have been very successful, there seems but little chance of any full-time appointments being given to women announcers.

In conversation with a "Times" reporter, the fortunate inventor, while wishing to remain anonymous for the present, gave a general idea of the difficulties to be solved.

"In modern radio communication," he said, "the limitation to the distance that can be covered satisfactorily by a given transmitting station is imposed entirely by the inability of the receiving station to distinguish a signal, music or speech, from disturbing noises from other transmitting stations and from atmospherics. Weakness of the received oscillation by itself is not a limitation, for this can be amplified as much as desired after cutting out the amplification of disturbances and atmospherics by means of one of the devices. The most difficult disturbance to be coped with is that due to nature—the so-called static, stray or atmospheric. Some interferences are due to electro-magnetic waves radiated by charges such as those practically employed in spark radio transmitters. Others are due to gradual charging of the antennae from electric charges in the air such as are carried by snow-flakes, followed by sudden charges of high-tension cables. This is the true static and is eliminated by another device.

"Radio receivers frequently interfere with each other," he continued. "The modulation of the transmitter oscillation by the voice prevents harp tuning of the receiver. It is in this respect that the device is most revolutionary. It can nevertheless be placed in any set on the market. By a successive series of treatments, the waves finally reach the speaker in an absolutely clear reception, all static having been cut out."

Why Incomes are Unequal**Another W.E.A. Lecture**

THE next series of lectures arranged by the Dunedin branch of the Workers' Educational Association, and delivered from Station 4YA, will begin on Tuesday, May 21, at 7.30 p.m., when Dr. Fisher, Professor of Economics at the Otago University, will speak on, "Why Incomes are Unequal."

Among the inhabitants of a besieged city, or a group of shipwrecked mariners on a not too desert island, it would soon be agreed that the only sensible plan for husbanding the limited supplies of food and other necessities that were available would be to ration them as accurately as possible according to the varying needs of the members of the group. This was indeed roughly the plan which was adopted in England and other European countries to meet the real or threatened food shortages of the war period. It did not always work smoothly, but the idea behind the plan was clear and sensible enough. When we are no longer at war, when we have been rescued from our desert island, or when the siege of the city has been raised, we usually give up the idea of rationing, or of distribution according to needs. The plan involves a great deal of difficult calculation, and interferes with our natural desire to decide for ourselves what we are going to buy; in normal times therefore we distribute our national income on principles quite different from those which have been suggested.

Perhaps the most striking consequence of the adoption of these principles is the market inequality of income.

It is highly important that we should understand the causes of this inequality, the results, both good and bad, which flow from it, and the connections which exist between inequality and the social and political problems of our day, for if we agree as most thoughtful people do that we would on the whole be better off if the national income were distributed rather less unequally than it is we shall have a better chance, if we understand the causes of inequality, of reaching our objective without inflicting upon ourselves more serious damage than we are attempting to remove.

Economists of every shade of thought have nearly all been agreed that it would be a good thing if wealth were distributed less unequally than it is. Even Robert Malthus, who is famous for his gloomy views about the pressure of population growth, and many of whose opinions would to-day be regarded as hopelessly reactionary, declared in 1798 that "the present great inequality of property must certainly be considered as an evil, and every institution that promotes it is essentially

American Reception**A Touch of Home**

IN an American paper appeared the following:—

Question: Have you any information regarding the New Zealand stations, their schedule, which are most readily received, power, etc.? New Zealand is my native land, and I would very much like to tune in on the stations there.—E.H.W., Santa Barbara.

Answer: There are four which may be heard, but only one with any degree of regularity. This is 2YA, at Wellington. It is a 5000 watt, while the others operate on but 500 watts. 2YA has been coming through in good shape from shortly after midnight, our time, until he signs off, which, as a rule, is between 1 and 2 a.m. The New Zealand stations of consequence are:—

1YA Auckland: 500 watts; 333 metres; Monday silent.

2YA Wellington: 5000 watts; 420 metres; Wednesday silent.

3YA Christchurch: 500 watts; 306 metres; Tuesday silent.

4YA Dunedin: 500 watts; 463 metres; Monday and Wednesday silent.

You understand, of course, that you must have a very good receiver and be in a favourable location for trans-Pacific reception. Even under these conditions, the best that can be expected is to recognise a few musical selections and to understand a few announcements. But I'll guarantee that it will give a New Zealander a thrill.

bad and impolitic," though he doubted whether governments could actively interfere with adv. tage. Marshall, the most influential English writer on economics in recent years, and whose work was characterised by an almost excessive caution, said that "the drift of economic science during many generations has been with increasing force towards the belief that there is no real necessity, and therefore no moral justification, for extreme poverty side by side with great wealth." But until fairly recently there have not been many satisfactory attempts to work out a theory of inequality of income as a whole. The best general explanation is to be found in Edwin Cannan's "Wealth," especially chapters XI and XII. A more elaborate and useful study is "The Inequality of incomes," by Hugh Dalton, once on the staff of the London School of Economics, and now representative of a London constituency in the House of Commons. The most persuasive account of the evils which flow from inequality is to be found in Bernard Shaw's "Intelligent Woman's Guide to Socialism and Capitalism."

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Radio Round the World

MR. ALFRED O'SHEA, who gave two or three recitals from Sydney recently, was singing his farewell item when a listener some distance from Sydney tuned the singer in through Station 2BL. He then switched over to 2UW, and was surprised to hear the announcer there announce the broadcasting of a record by Mr. O'Shea. His surprise was greater when he heard the song on the record, which proved to be the very song the tenor was rendering at 2BL. Although the listener heard Mr. O'Shea himself singing from 2BL, and a record made by him coming from 2UW, the transmissions did not synchronize.

Writing of his impressions in Europe, an Australian prominently interested in radio development says: "The trouble here is that the various Continental broadcasting stations are trying to shout each other down with greater and greater powers, until one wonders where it is all going to end. Our 5KW stations in Australia shrink very much when one looks round and sees what is going on here. Thirty-five k.w. is not considered out of the way. Fifty k.w. sets are being built in Germany, and now Rome, not to be outdone, is arranging for a station of 100 k.w.; so is the Irish Free State, and I hear that Sweden contemplates the erection of a 100 k.w. station at Stockholm."

THE airship Graf Zeppelin performed its last trial flight in the series arranged by the "Deutsche Versuchsanstalt für Luftfahrt" on February 18. It is understood that during these tests, which were carried out for scientific reasons, the new short-wave wireless installation on board the Graf Zeppelin was tried out. The new equipment is of the very latest design, and, I am told, is specially suited to the requirements of the airship. The Zeppelin's

forthcoming Mediterranean cruise will, it is stated, begin on March 26. Subject to authorisation by the countries concerned, it is proposed to follow a route via the Rhone Estuary, in France, and thence over Corsica, Italy, Greece, Asia Minor, and the African coast.

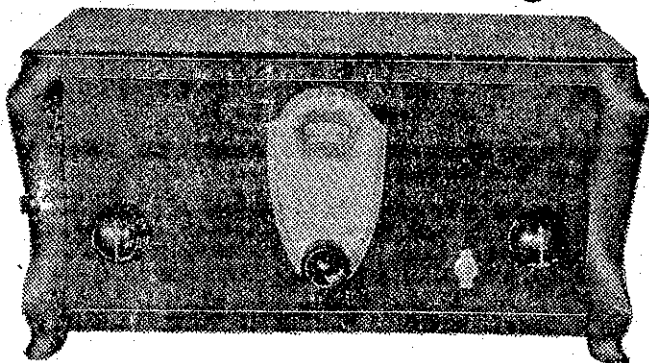
LOUD speakers have been installed in Parliament. The microphone is near to the speaker, who uses this installation in order to speak over the noise. But, we are informed in a French journal, it is at Brussels that this installation is made.

"**I SHALL** not be surprised," says the "Home Writer," if the producers of talking films go to the B.B.C. for their "stories." The appeal of a 'talkie' must depend largely on its 'audible drama,' its appeal to the ear as well as the eye. Broadcasting has been working for five years towards the perfection of drama which appeals to the ear, and there are a number of radio plays which, while possessing this quality, contain also sufficient physical action to make ideal scenarios for sound pictures. A small beginning in this direction has been made already. At the time of writing, Sinclair Hill, of the Stoll Company, is busy at Wembley on a 'talkie' version of Vivian Tildmarsh's broadcast play, "Mr. Smith Wakes Up."

IMPORTANT broadcasting developments are reported from Italy. The E.I.R.R. have acquired a large piece of land near the Piazza Mazzini, Rome, where a building devoted to broadcasting is to be erected. This will contain a number of studios, as well as the technical equipment required for transmissions, and administrative offices. The largest studio will be approximately 72 by 45 by 36ft. in size; there will be four smaller studios, two of which will be reserved for talks and lectures. Sanction has also been given for the construction of a new high power station to be situated near Rome about 25 km. from the city. This station is to have a power of 50 k.w. (aerial). It will be put into operation during 1929. Provision is also being made for a short-wave station near Rome. With an aerial power of 12 k.w., it will be designed for frequencies between 12,000 and 3750 k.h. (25 and 80 m.). The station will transmit normally on two wave-lengths, and for this reason will be equipped with two aerials; the higher wavelength to be used for medium distances, and the lower for long distances—for instance to the Italian colonies in East Africa.

THE plans of the new station at Louvain, which is to be erected for the new Roman Catholic Flemish Society and for Radio-Belgique, having been completed, the actual work has been started. A double aerial will be erected one side of which will be used by the Catholic Flemish broadcast to carry messages, concerts, lectures, etc., chiefly in Flemish or Dutch, and the other side by Radio-Belgique for broadcasts in the French language. It is expected that the Flemish broadcast will at first work on a power of from 7½ to 10 kw., which will later be increased to 15 kw., while the present Radio-Belgique power will also be considerably increased.

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SHORT-WAVE STATIONS HEARD ON "ULTIMATE"

U.S.A.: KDKA, Pittsburgh; WBOP, Syracuse; W2XAF, Schenectady; W2XAD, Schenectady; W2XI, Schenectady; W2XAW, Schenectady; KGO, Oakland. Canada: CNRW, Winnipeg. France: St. Assise, Paris. Holland: PCW, Eindhoven; PHL, Huizen; PCL, PCJ, Amsterdam. Dutch East Indies: P4E, Java. England: 5SW, Chelmsford; G2NM, Caterham. Germany: DBC, Nauen. Siberia: RFM, Vladivostok. Russia: RFM, Moscow. Japan: JHB, Fukuoka; VPD, Suva. Australia: 2MB, Sydney; 3LO, Melbourne. New Zealand: 3ZC, Christchurch.

Ball and Walker, Wyndham; G. W. Woods and Co., Winton; E. C. Elliot, 18 Nelson Terrace, Timaru; Brehaut Bros., Timaru; Hillman Bros., Blenheim; George S. Phillips and Co., Carterton; W. D. Ansell, Masterton; Rees Radio Service, Hastings; K. A. Nash, Dannevirke; Gramophone and Radio Co., Dannevirke; S. F. Stevens, Takapau; Swan Radio Co., Gisborne; W. J. Sinclair and Co., Gisborne; R. G. Law, Stratford; Everybody's Motors, Taumarunui; Turnbull and Jones, Auckland and Hamilton; R. Wilson and Co., Ltd., Taihape; J. D. Jackson, Ngaurawahia; J. A. Malcolm, Huntly; C. J. Fleming, Travelling Representative East Coast and Poverty Bay; Taneatua; Morris and Goukridge, Dargaville; W. A. Wilton, Mangonui; I. J. H. Snelgar, Kaitia; Superadio, Ltd., Auckland; Harringtons, Ltd., Auckland; Federal Radio House, Auckland.

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N.Z. RADIO PUBLISHING CO., LTD.,
P.O. Box 1082, WELLINGTON.

WELLINGTON, FRIDAY, MAY 17, 1929.

SIXTY THOUSAND LISTENERS THIS WINTER.

AN optimistic note is struck by our Auckland correspondent in his notes this week. He states that Auckland dealers are enjoying a particularly good demand for radio apparatus, that renewals of licenses by old listeners are maintaining a high level, and that in addition large numbers of new listeners are being enrolled. So satisfactory is the position in general that Auckland dealers are anticipating a steady expansion throughout the winter, and one at least goes on record as holding the view that an increase of approximately 50 per cent. on the present total is feasible by the end of the winter.

THIS is an encouraging note to strike. It is in that atmosphere that expansion takes place, and this note from the northern city may be taken as a refreshing lead by the rest of the Dominion. The Auckland Radio Society recently formed is putting a great deal of vigour and enterprise into its work, and is encouraging the development of an aggressive pro-radio atmosphere. This enterprise is a fit accompaniment to the progressive spirit being shown by the Radio Broadcasting Company in introducing steadily improved programmes, new voices of quality, and enterprise in coverage of public events such as the opening of the Waikato Winter Show and the long-distance relay from Invercargill to Christchurch. With the effort made to provide a suitable coverage of public events, as well as maintaining the musical programmes at full strength, the broadcasting service will certainly take rank as something to which every person of standing should be a contributor. The striking thing about broadcasting is this: that each extra 30s. raises the general standard. When the revenue is £40,000 per annum, each licensee participates for his 30s. in a £40,000 service. When the broadcasting revenue is £60,000 per annum, then for the same money the listener receives a vastly improved service. It is, therefore, very important, even from the selfish point of view, that each listener should endeavour to enrol others; for, by so doing, he is directly serving his own ends by making it possible to enjoy better and better service.

SCEPTICISM must attach to the message from Invercargill that a local inventor there had managed to evolve a successful static eliminator. We recall elsewhere the measures we took to secure full information of that device on the announcement being made. Our correspondent in Invercargill, after diligent inquiry, has found

Mullard
THE MASTER VALVE

Embodies all improvements
known to Valve Manufacturers.

himself quite unable to locate either the inventor or the invention, nor can he secure from the Patent Offices any indication as to such a device having been registered. In the circumstances, suspicion attaches to the announcement until the inventor, whoever he is, comes forward and receives that merit of fame and financial reward to which he would be entitled on substantiation of the claims made. If the thing is a hoax, we cannot imagine what good purpose has been served by giving publicity to the extravagant statements made. If, on the other hand, the inventor, whoever he is, has achieved a genuine success, we specifically invite him to make good the claims advanced.

"The Dover Road"

A Three-act Comedy from
1YA

THE Auckland Comedy Players, under the direction of Mr. J. F. Montague, will present this brilliant comedy at 1YA on Wednesday, 22nd instant, the performance, with orchestral interludes, taking up the whole evening.

"The Dover Road" is undoubtedly one of Milne's best plays. The central idea is a quaint and original one—that of the wealthy Mr. Latimer, who has a house on "the Dover Road," to which runaway couples, taking that road, are inveigled, and kept for a week in order that they may discover each other's shortcomings before it is too late. The situations are full of the most delicious comedy, and the dialogue is, as might be expected from Milne's pen, witty and brilliant. It is comedy of a high order, and in the hands of Mr. Montague's company of players it should prove a striking success. The cast will be a very strong one, and will include a number of new players who will lend additional interest to the production.

A 3YA Relay

Installation of Mayor and
Councillors

STATION 3YA carried out a very interesting relay when it broadcast the installation of the Mayor and councillors of Christchurch. Very great interest had been taken in the Christchurch municipal elections, and on the night of the installation the Council Chamber was crowded. 3YA listeners who could not attend were privileged to hear all that went on.

Radio in Gisborne

FOLLOWING on the visit to Hastings and Napier by Mr. J. Ball, editor-announcer of the Broadcasting Company, an invitation has been received from the Radio Society of Gisborne to visit that town. This invitation has been accepted by the Broadcasting Company, and arrangements will be made for Mr. Ball to meet the radio dealers and listeners of Gisborne early in June.

Popular Radio Inspector

Mr. A. W. Head
Farewelled

MR. A. W. HEAD, radio inspector for the Post and Telegraph Department, Christchurch, has been notified of his transfer to Awarua, Bluff, where he will be superintendent of the wireless station. On Monday evening prior to his leaving for the south the Radio Society gave a send-off in its rooms to Mr. Head.

Mr. D. McMahon, an officer of the Post and Telegraph Department, and now at the Wellington radio station, succeeds Mr. Head in Christchurch. The function was a fine tribute to the popularity of Mr. Head and to his efficiency as a radio inspector. His duties have mainly consisted of inspecting amateur radio stations and enforcing the payment of licensing-in license fees. He has been a very active official, keenly interested in radio and all pertaining thereto.

During his term as radio inspector in Christchurch—a matter of slightly over two years—he has seen the number of licensed listeners grow from a few hundred—600 odd, so it was stated at his valedictory gathering—to the present satisfactory total of thousands.

'Varsity Play to be Broadcast

SATURDAY, the 18th inst., 1YA will broadcast at approximately 9.30 p.m. a portion of the annual play to be given by the University Students' Association at St. James's Theatre. The following Friday, the 24th, an earlier scene will be broadcast at approximately 8.45 p.m.

Relay from Timaru

ON Monday, June 10, 3YA will carry out a relay from Timaru. The occasion is a concert to be presented by the Orchestral Society. It is an excellent combination, and the best of Timaru's vocal talent will assist.

SYDAL DID IT!

Customer: "My wife has very badly chapped hands and nothing seems to do them any good." Chemist: "Have you tried Sydal?" "No, I think not." "Well try it." Next day the customer calls to say "Sydal did it." For chapped hands Sydal is a one-night remedy. 2/- everywhere.

To Improve Radio No Rush of Complaints

THE general invitation we issued to listeners in our article last week when discussing the action of the Electrical Federation has not brought a flood of correspondence. As a matter of fact, at the moment of writing (Saturday morning), the only letter we have received is a very long one from Mr. R. Leslie Jones, a well-known and enthusiastic exponent of views on radio. Although it may be a little early to draw conclusions, it would seem that the comparative silence of listeners indicates a considerable degree of satisfaction with the programmes and transmissions as now obtaining. It is undoubted that had general dissatisfaction existed, listeners would have voiced their feelings freely apart from our specific invitation to do so.

The views of Mr. Jones run to three closely-written foolscap pages, and must necessarily be condensed. Mr. Jones attributes the advance made by the Broadcasting Company to the "considerable shaking up" emanating from many quarters. As an ordinary listener-in, he confesses that much improvement has been made, although personally he had complained bitterly at times about transmission. There were periods when transmission was all that could be desired, and lately he had noticed a decided improvement. Mr. Jones accepts the view that many valve set owners in Wellington may have overloaded their sets, but apart from that he considers much trouble has been due to "rotten loudspeakers."

In connection with programmes he could not express satisfaction. Many were good, but at the same time many were "rotten." In some cases performers treated the public to songs which were a scream and a farce, the said songs being only suitable for male voices, whereas a female attempted them. He considered that the class of performer could be improved by a more liberal scale of payment—"wedding cakes could not be purchased at the price of plain cakes."

The fault of artists failing to appear best on the air was not entirely due to the Broadcasting Company. These artists might show up fairly well on trial auditions, but go to pieces when put before the microphone. That, of course, irritated listeners and created complaints. The best part of the programmes were the gramophone records.

The dealers were quite entitled to organise to improve radio as they paid a substantial license fee. Finally, Mr. Jones suggested that the chief engineer of the Radio Broadcasting Company, Mr. Bingham, should reside in Wellington, in contact with the most important of the YA stations. He appreciated that radio was a boon to all, and wished to see radio installed in every home possible. It was the cheapest form of entertainment.

Station 2YB Greatly Appreciated

STATION 2YB is meeting a felt want in Taranaki, and it is plain that its inception will mark a definite expansion of interest in that province. The schedule now in operation is as follows:—

Sunday, 6-7 p.m.: Children's service, conducted by Uncle David.
8.15-10 p.m.: Concert programme.
Monday, 8-10 p.m.: Concert programme.
Wednesday, 7.30-8 p.m.: Sporting news and information. 8-10 p.m.: Concert programme.
Saturday, 2.30-5 p.m.: Sports relay.
7-8 p.m.: Sports results and talks.

2YB Heard in New South Wales.

A REPORT from Bowral, New South Wales, reports receiving of 2YB, New Plymouth, on the opening night. This is the first report from overseas.

N.Z. Radio Listeners' Guide

Splendid Demand

THE 1929-30 edition of the "New Zealand Radio Listeners' Guide" was put into circulation last week, and is already meeting with a very satisfactory and enthusiastic demand. Dealers report strong sales and repeat orders have come to hand from many retailers. General satisfaction has been expressed with the excellence of the production and the welcome information contained in it from the technical point of view. Listeners who are interested in the technical and service side of radio, as well as other necessary data necessary to get the best out of one's set, are advised to secure a copy early.

Church Broadcasting 4YA Advisory Committee Appointed

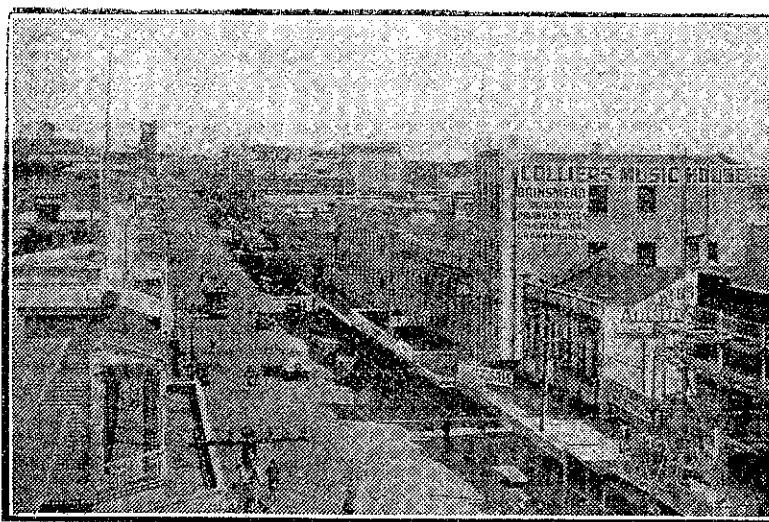
IN furtherance of its public relations scheme, the Radio Broadcasting Company of New Zealand inaugurated the first of the Public Relations Committees in Dunedin at a meeting of church delegates on May 6. The following representatives attended and unanimously decided to form a 4YA church service advisory committee:—Archdeacon Fitchett (Anglican), the Revs. E. S. Tuckwell (Baptist), H. E. Bellhouse (Methodist), A. Mead (Congregational), W. D. More (Church of Christ), George Miller (Presbyterian), Captain Chandler (Salvation Army), J. Ball (editor-announcer, R.B.C., N.Z., Ltd.), and S. J. Hayden (station director, 4YA).

For the purposes of the conference, Mr. J. Ball, who attended as the company's representative, was elected to the chair, and stated that it was the opinion of the Broadcasting Company that the question of church broadcasting and attendant matters required the advice and consideration of a specially qualified nature which only a committee of church representatives was in a position to give. The operations of the committees in Auckland, Wellington, and Christchurch were outlined, and after discussion it was decided, on the motion of Archdeacon Fitchett, that the company's proposals should be adopted, and that the conference should form itself into a committee. The Rev. E. S. Tuckwell was elected to the chair for the ensuing twelve months.

After discussion it was decided that the following number of services per annum for the respective denominations be recommended to the company: Anglicans, 10; Presbyterians, 10; Methodists, 8; Baptist, Congregational, Church of Christ, and Salvation Army, 6 each. The decision of the committee will result in the Salvation Army regularly broadcasting its services for the first time in New Zealand.

The Rev. Mr. Tuckwell said he considered that the broadcasting was filling a very great function in providing the churches with an opportunity for reaching those people who were either unable to or did not attend the actual services. He expressed the opinion that the committee, in conjunction with the Radio Broadcasting Company, would materially react to the benefit of listeners in so far as the handling of church matters on the air was concerned.

which the Auckland Association is affiliated, is to aid, foster, and develop in every way possible the secondary and manufacturing industries that are and may at any time be established in the Dominion, and these talks have been arranged with a view to giving the community a better idea of the methods used in the manufacture of the various articles.



This view shows the situation of 2YB in the top floor of Collier's Music Warehouse. This is a very central and admirable situation, and the North Taranaki Radio Society and radio listeners in general are indebted to Collier's Music House for the co-operation and assistance afforded by use of this splendid site.

Series of Valuable Lectures

From 1YA

TALKS on the New Zealand manufacture of everyday commodities will be given with the co-operation of the Auckland Manufacturers' Association on alternate Thursdays from May 23, at 7.40 p.m.

On Thursday, May 9, a talk was given on "The Manufacture of Sugar,"

and this will be followed by talks on manufactures in which sugar is mainly used, viz.:

May 23, 1929—"Confectionery."

June 6, 1929—"Biscuits."

June 20, 1929—"Jams and Preserves."

Following these talks will be others on such subjects as "Leather" and "Leather Goods," "Wool and Woollen Goods," "Coal and Coal-tar and By-products," and, in fact, most of the useful commodities manufactured in the Dominion, and should prove of great interest to listeners.

One of the main objects of the New Zealand Manufacturers' Federation to

"FADA Still the Standard of Radio Reception"
Sole N.Z. Distributors: THE NATIONAL ELECTRICAL & ENGINEERING CO., LTD.
AUCKLAND, WELLINGTON, CHRISTCHURCH, DUNEDIN, HAMILTON, WANGANUI, TIMARU.

Auckland Notes

(By Listener.)

MR. W. J. MEREDITH, our most popular football announcer, returned to the microphone at Eden Park on Saturday, and, in his description, made the most of a highly exciting game. His return to football announcing will be hailed with delight by thousands of listeners.

IT is stated locally that regular facilities for land-line relays between Auckland and Wellington will be available in about three months. Then, it is hoped, Auckland may return the compliment paid us by 2YA, and send south a programme which will show just how we specialise in entertainment by radio in the north.

THERE is very general satisfaction here at the prospect of big developments of relay work. Not only the city, but the whole province is to hear the official opening of the Wai-kato Show, now the most important dairying function in the Dominion. A progressive policy of this kind cannot fail in bearing fruit.

NOW what is going to happen regarding the Municipal Band relays? The new City Council will again consider the radio fate of the finest band in New Zealand, and, if the wishes of the general public are considered, we shall again have those Sunday and Wednesday evening treats that are appreciated far beyond the confines of New Zealand.

THE figures of the first tally of licenses for 1929 have been very well received here, but even more encouraging are the reports from members of the radio trade, who generally remark upon a pleasing activity in business, especially in receivers of good quality. A gentleman who may be regarded as having his finger upon the pulse of radio business confidently

anticipates 60,000 licenses before the end of the winter.

ON Saturday evening 1YA rebroadcast 3LO, Melbourne, and gave us the pleasure of hearing the last three rounds of the Leckie-Wilson boxing contest. The writer had been tuned into Melbourne for some time before the rebroadcast eventuated, and found the Victorian station very faint. Yet, when 1YA picked it up, and put it on the air again, the result was an eloquent tribute to the receiver used by the station, and the way in which the reception was amplified. There was but little static, and every word was distinctly audible. Most enjoyable, too, were the instrumental items from Melbourne which preceded the fight description. Well done, 1YA.

THE Auckland Radio Society is decidedly alive. On Thursday next it has arranged a special concert to be given, gratis, to all interested in radio. The concert will be given in the Lewis Eady Hall, and from there will be relayed to 1YA. Most of Auckland's leading artists will appear, and there will also be a demonstration of a "talkie" picture machine, and finally a dance. A society which shows the enterprise that the newly-established Auckland body is displaying deserves the support of all listeners. It is out to assist broadcasting, not to make a futile effort to damn it. As a result, its drive for a big membership is progressing favourably, and there should be a big accretion to the society's roll after Thursday evening.

SO insistent are the demands for another "Night of Convivialities" that there is no question regarding the instantaneous appreciation of the novelty which 1YA provided last week. There is a promise that further entertainment nights of a similar type are to follow. Our programmes are certainly brightening up, though there is a feeling that some performers have outworn their welcomes at the microphone.

Sugar

Lecture at 1YA

THERE is no article in such everyday use as sugar. Therefore the lecturette given from 1YA on May 9 by Mr. Arthur Fairburn, of the Colonial Sugar Refining Company, Limited, was interesting. Although the subject covers a vast range of industry, from the growing of the cane to the placing of refined sugar on the breakfast table, Mr. Fairburn showed himself capable of compressing it adequately and interestingly into the space of 15 minutes. With a brief description of the method of growing the cane and an outline of the operation of harvesting the crop, which ranges from 20 to 80 tons per acre, Mr. Fairburn passed on to describe the process in the mill. Here the cane goes under a row of heavy revolving knives, called the "leveller," and passes on to a preliminary "crusher" or "shredder." These processes are designed to present an even feed of shredded cane to the rollers. These rollers take the form of a giant mangle, consisting of heavy grooved horizontal iron cylinders 5 to 7ft. in length, and 28 to 36 inches in diameter.

The crushed cane is next saturated with limed water, which assists the extraction of the sugar from the cells of the crushed and shredded cane. The juice as it comes from the rollers looks like muddy water, and in this form contains the equivalent of 10 per cent. of the crystal sugar eventually attained, 86 per cent. water, and 4 per cent. impurities held in solution. The cane at this stage has served its purpose, and is fed to the furnace as fuel, the ashes eventually passing back to the land as fertiliser.

Separation is carried out by process of filtration and evaporation. Stage by stage unwanted water and impurities are removed, and a thick syrup evolved. In this form the sugar reaches the refinery at Chelsea. With specially conserved water the sugar is then melted and put through a further series of refinements. The final stages are for the brown liquor, heavily saturated with sugar, to pass through huge tanks containing granulated bone charcoal. This charcoal, or char, removes nearly all the impurities and allows a practically colourless liquor to emerge. Boiling under vacuum leads up to the final separation of the crystals under centrifugal force. These centrifugals revolve at the very high speed of 600 to 1000 revolutions per minute, and drive the liquor or syrup through the perforated sides, retaining the crystals in the interior. These crystals form the white sugar. The final action is to scrape the sugar crystals out, dry the mass under hot air, and pass the sugar through graders ready for packing.

At every single stage chemical control is maintained. There is no waste in the industry, every particle of the cane being put to use first and last. Apart from its use as fuel, cane fibre is made into wallboard with great insulating properties. It is also used as base for fibrous plaster, and even artificial silk may be made from it. Motor spirit is extracted from molasses, and finally the CO₂ gas given off in distillation is used by aerated water manufacturers.

A Distinguished Celloist

SINCE his return to New Zealand three months ago, Claude Tanner has been broadcast on several occasions by 2YA, creating widespread interest, and appreciation of his refined style and flawless technique. He has proved himself an artist of exceptional ability, his complete command over his instrument, beautiful gradations of tone and musical insight being most marked. At



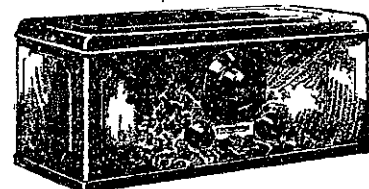
—Andrews, photo.

the early age of 22 he had the unprecedented honour of being appointed Sub-Professor of the Royal Academy of Music, London, where he was successful in securing the L.R.A.M. degree and the highest honour obtainable at the Academy, "Honourable Mention." Claude Tanner has had many varied and interesting experiences during his travels in Europe and North and South America. On one occasion in Lisbon he wished to purchase certain cello music. He was unable to make the assistant understand his indifferent Portuguese or Spanish, so he tried with French with very little success, when to his amazement she said "Do you speak English?" and turned out to be a London girl married to a Portuguese. No doubt there will be many more occasions when Claude Tanner will be heard over the air.

THE radio station which is to be opened at Point Barrow, Alaska, is thought to be the most northerly in the world. One of its functions will be the emission of reports which will be used for forecasting the weather in the U.S.A. This will be a startling advance for Point Barrowites, as hitherto the only means of making contact with the outside world has been by dog-sledge, or by sea during a few weeks in the summer.

FRESHMAN

ALL-ELECTRIC RADIO



Model Q (as illus.), £29 with valves.

ROYDS-HOWARD CO., Chch.

Sovereign's Birthday

Monday, 3rd June

Monday! That means a week-end holiday. What to do? Cheap rail fares for everyone, from and to any station, from Thursday, May 30 to Monday, June 3 provide the solution. Enjoy a pleasant holiday change at very low cost.

GO BY RAIL---THE SAFE, SURE WAY

Hawke's Bay Notes

(By XYZ.)

OF course there is only one real outstanding feature to comment on in this week's notes, and that is the news from Invercargill that a solution of the static problem has been found. Everybody's talking about it, but honestly one can't say that everyone believes it. In fact, one radio enthusiast sportingly offered to purchase for the writer, free, gratis, and for nothing (even if it cost him £100) one of these discoveries, provided the claim turned out to be really true. That's an indication of how the news is accepted up here, although everyone hopes (even the man who made that promise) that it will be OK. If it turns out trumps a new era is opened for broadcasting reception, and provided it can be marketed at a reasonable figure, then all radio fans will join in acclaiming the southern inventor a friend for all time. In the meantime we all wish him the best.

CERTAINLY, this district would have appreciated a static eliminator over the past few weeks, for it is a long time since atmospherics have played up so badly. With such conditions, it is hardly likely that there is any boom in radio business, but those who have the "bug" are an optimistic crowd, and each night finds them switching on in the hope that "things will be improved on last night." When it is found to be even worse (and such has recently been the case), one is excused for getting a bit down in the mouth. Still, "to-night" may be OK, and we'll tune in to-morrow night if it isn't.

CONGRATULATIONS to the performers of 1YA with their "convivial evening." Everyone seems to have thoroughly enjoyed that. The appreciation of this was in marked contrast to the feelings with which the broadcast of the Wellington Symphony Orchestra was received. Even the most ardent lovers of good music had more than they wanted that night. No one can deny, of course, that it was a brilliant orchestra, but the programme was too "heavy." To make things worse, reception that night was not good, and more than one party of real musicians (to the actual knowledge of the writer), cried "quit" and turned the dials.

LAST Wednesday night, the members of the Hawke's Bay Radio Society turned out in good force to visit the Napier Radio Club in Napier. The visit was very enjoyable, and an interesting demonstration on amplifiers and pick-ups was given by Messrs. Alward and Harris. The visitors from Hastings voted it a jolly fine evening, and now that they have been started these exchange visits will no doubt be continued.

THERE are a number of local listeners who have not yet renewed their licenses, but in numbers of instances this is purely oversight, and really few listeners seem to have heard the over-the-air announcements urging the renewal last month. In fact, two licensees asked the writer when they had to renew. They were quite sur-

D.X. Notes

Is It a New Station?

CAN you or any of the readers of "Radio Record" tell me where station W.F.J.M. is situated? I tuned this station in on Sunday last (April 28) at 2.35 p.m.; it absolutely roared in. The volume was easily R8-9. The voice of the announcer was unmistakably American. He called, "Hullo, D.I.O. Hullo, D.I.O. Send us another report." This announcement was made three times in twenty minutes. The music was as clear as a bell. I tuned W.F.J.M. in on about 25 mcfres. He closed down at 2.58 p.m.—"PUZZLED" (Palmerston North).

More Americans.

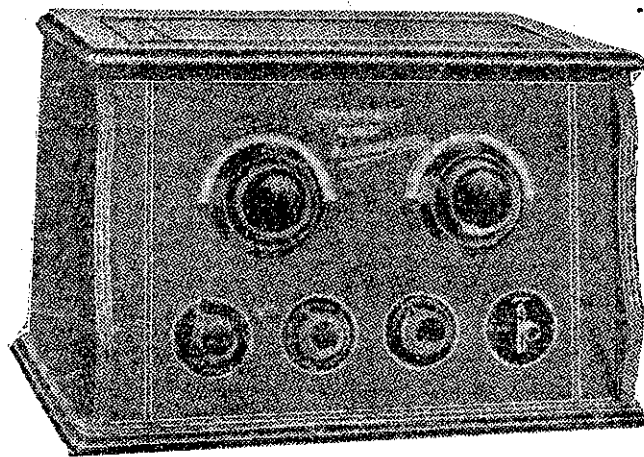
I HAVE not been doing much logging lately, but I have added the following stations:—KDVL, Salt Lake City, March 21; KOIN, Oregon, 28th; KRLD, Texas, April 7; KFVD, Culver City, Cal., May 1, with four valves. The last stations I have had verified are: WMAQ, KNX, KSL, KFKB, KMIC, KGO. One of the letters I received was stamped with the 1d. New Zealand stamp I had enclosed in my letter. My log is now: 16 New Zealand, 16 Australian, 5 Japanese, 2 South Sea Islands, 33 American. The following is an extract from a letter I received from KSL:—"... You were listening to our Saturday night feature—the KSL Coyote Club, 'It's our night to howl.' It is for that reason that you heard so much howling. We employ the hours from midnight to 2 a.m. Mountain S.T., and have a general good time. We call it the Coyote Club because the animal after which it is named is a very gifted howler, and his howls are by no means uncommon to this western country. It is suggested, however, that you not use the howls we create as an example of a coyote's efforts. Any sort of howl seems to serve us here."—KAUSPANKA (Hastings).

Canadian Licenses

THE Canadian Government is in receipt of more than a quarter of a million dollars as the contribution of listeners to the Federal coffers through the medium of their one-dollar tax, though it is believed that this by no means represents the number of radio sets that are in operation throughout the country, owing to the belief that many are being used for which no license fee has been paid, in some instances owing to ignorance of the Government requirements as to registration. It is intimated that in the very near future the annual "drive" and investigation of license certificates will be instituted, with a view to having the records brought up-to-date. The funds derived from the payment of this tax are applied to improvement of the radio service, one of the branches of the Government service being the operation of radio interference cars, manned by experts charged with the duty of investigation of local sources of interference.

prised to learn that their 30s. was overdue, and that the R.B.C. had freely reminded listeners when it was time to renew. In both instances they were expecting a notice of advice when the period for renewal arrived.

England's Wonder Receiver!



—Burndept's EMPIRE SCREENED FOUR

Made by Burndept's, the largest Radio Receiver manufacturers in England. Four-valve Screened Grid All-wave Receiver with Gramophone Amplifier. Three sets in one. 100 per cent. as a broadcast receiver. Superb Short-wave Power Amplifier for gramophone pick-up. Magnificent tone, wonderful distance-getter. Shipments arriving regularly.

Read what one Empire Screened 4 owner has to say:—

"The Burndept is a wonderful Set, and in my humble opinion cannot be beaten by any. To-day we picked up Berlin at good loudspeaker volume, and have had California, England and Canada, as well as all Australasian stations. I can certainly recommend the Empire Screened Four to anyone wanting the very finest in Radio Equipment."

And another:—

"After about a month's trial I should like to express my entire satisfaction with the 'Burndept' Empire Screened Four Receiver I purchased from you.

The tone and reproduction of all notes, high and low, are practically perfect. There is no doubt that the 'Burndept' and 'Celestion' Speaker are a great combination.

On the short-wave I have picked up so far, the following stations around the world: California, Pittsburg, Holland, Germany and England, have all come in, and at times the volume is tremendous for such a distance.

I have heard a few Sets, but have never heard one approaching this, and that is the opinion of all who have heard it.

I trust the British Sets will come into their own at last."

Some exclusive agency territory still open to Dealers.

N.Z. Factory Representatives:

SPEEDING LIMITED

Box 462	AUCKLAND.
Box 1581	WELLINGTON.
Box 922	CHRISTCHURCH.
Box 516	DUNEDIN.

Relay Appreciated.

A CORRESPONDENT G.W.S. (Stockton) writes.—I would like to express my appreciation of 1YA's relay of the band concert from Wellington last Sunday night. Although the other YA stations are nearer than 1YA, I get this station best, and it is the steadiest. In my opinion, they are the most consistent with good programmes.

Dinner Music.

IF any listener complains at not getting sufficient variety, now dinner music has been introduced, they should give up radio. Broadcasting has gone forward by leaps and bounds since 2YA was first on the air. Reception down this way has been almost unbearable during this last fortnight, static being prevalent. Last night 7ZV, Hobart, was better than he has been for months.—SATISFIED (Westport).

Band Relay.

ON Sunday, April 28, I tuned in 2YA and heard the announcer say that they were relaying their band programme from the Opera House, and that 1YA was relaying over the telephone wire from 2YA. I tuned both 2YA and 1YA to compare the two, and was surprised to find that 1YA came in just as strongly, and we are of the opinion that the tone of 1YA was much better. As a rule 2YA comes in louder than any other station.—BEGINNER (Matiere).

Service Appreciated.

H.F.A.R. (Alexandra) writes: The YA stations are doing great work, and

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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.

from what I can hear in this district are very much appreciated. Personally I would sooner listen to them than any of the Australian stations. Our favourite is Wellington, and Mr. Drummond's "Good night" is never missed if we are listening in. Good luck to the "R.B.C." and may it continue to put over as delightful programmes as it has done this last season.

Too Much Stock News.

I WOULD like to suggest that 1YA did not waste so much time over reports of local (especially Westfield) stock sales. To-night I have heard a report by three different stock firms on Westfield sale, and although I am a farmer it is most boring. Surely one report is enough. Prices quoted to-night by the three firms are almost exactly alike. I have nothing to complain of in the programmes of music, etc., but I think your hour of news and reports could be very much improved upon. The prompt report of big wool sales during the season is of great interest to farmers who only get papers once or twice a week. Yet I didn't hear any report of Napier sales last season. The barometric pressure, etc., reports may be needed by shipmasters, but are certainly of no interest to farmers or settlers. All I have heard cut it out till that part is past.—G.M.N.

Praise and Blame.

I WISH to record my appreciation of the dinner sessions which you have so kindly put on the air, and the programmes for the same are very good music. In reference to the programme

which included the 2YA Revue Company, I trust that that sort of stuff will not be tolerated again, as it was of very poor quality. I had interested some of my friends in wireless, and I invited them to spend the last Friday evening with me to further their interest, and they were well satisfied with the programme till this nonsensical stuff came on. I must admit myself that after listening to many concerts in various parts of the world during my experience I have never heard such matter, and I trust better performances will be given in future.—GOOD ENTERTAINMENT.

Power of 2YA.

FOR some weeks 2YA reception by crystal users in Wellington has been very poor, and many users have spent time and money in erecting new aerials, buying new crystals, etc., in a vain attempt to improve matters. Many have given up the effort, and have put their sets aside. A statement is now being circulated to the effect that the trouble is the result of an effort on the company's part to improve reception for valve sets and that such effort has sacrificed crystal users in the interests of those who can tune into other stations if they wish. Would you kindly advise whether there is any truth in this rumour? It certainly seems strange that so many have experienced the same trouble at the same time, and none has been able to overcome it, and this naturally lends weight to the above rumour.—K.S.G.

Another correspondent writes: While I am on the job, would it be possible for the company to make a statement when they contemplate pruning the power of any of their stations? By doing this, it would save the average listener needless expense of new valves, batteries, etc., in the erroneous belief that they were worn out. I am too old a listener to fall for that, but I know of new chums who have fallen. I refer, of course, to the drop in power of 2YA. Up to a few weeks ago it was possible to get 2YA here day or night with the filaments turned just on; now it is necessary to drive the set full out, and then the power is not equal to Cinderella of the South.—G.C.C. (Nelson).

[We understand that there has been no change in the power of 2YA which is still transmitting at its full rated

capacity, namely, 5000 watts. This is the Western Electric rating, the Geneva rating being 7500 watts. The different methods of rating have probably been the cause of some confusion.—Editor]

Stops Not Wanted.

B. W. Friis writes:—"I enjoy programmes very much; the dinner music is good, but I do not like the 10-minute stops. I object to the points, etc., from various stations after the 7 o'clock weather report. I consider important news should come first. Reception up here is very good. Wellington is the best summer station; Christchurch the best winter station. 1YA is often choked by Arapuni interference.

Billingsgate from 1YA.

I NOTICE that one of your correspondents, Mr. George Nicholls, of Collingwood, raises an objection to the dialogue in a play recently presented at 1YA. He objects to what he is pleased to term the "Billingsgate" in the play. I suppose that so long as there is broadcasting we shall have this kind of listener writing to make such ridiculous and unmeaning complaints. The play to which this Collingwood gentleman objects was one of the two first-prize winners in the recent one-act play competition, in which the judges were: Rev. J. W. Shaw (a Presbyterian minister), Mr. F. E. McCallum (an experienced and capable amateur actor), Mrs. Alice Carr-Tibbets (a cultured lady, who is herself a writer of plays), and myself—with many years of experience of stage work of all kinds. Surely these people are better judges than this correspondent of what is a suitable play for broadcasting purposes. The play was written by a young lady, Miss Betty Kerr, of Timaru, and is undoubtedly a fine dramatic study. I am sure Miss Kerr will be greatly astonished to learn that Mr. George Nicholls, of Collingwood, does not approve of her play because of its "Billingsgate" language, and no doubt the Rev. J. W. Shaw will be equally surprised. As a matter of fact, the play does not contain one word of "Billingsgate," and obviously Mr. George Nicholls, of Collingwood, does not know what the word means. It is a clean, powerful play, with nothing in it to which any ordinary reasonable person could take the slightest objection. If Mr. Nicholls is so solicitous about the children's moral welfare—and who can blame him for that?—why not confine their listening in to the children's session, which is given for the young folks, and not keep them up till such a late hour?—J. F. MONTAGUE (Auckland).

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THE value of radio to those who live lonely lives "out back" is expressed in this correspondence:—

"I take the privilege to thank your company for the splendid programmes that we receive over the air from the four stations. The townspeople cannot conceive what a blessing radio is to us who are isolated in the back-block country; it has changed our lives altogether. For two years a night has hardly elapsed without radio, but, of course, when static is bad we have to close down. From both Auckland and Wellington we get good daylight reception. The Sunday evening children's service at Auckland we have never missed since they commenced, and they come in always very well.

"Our farm where we have lived for about 23 years is in a very isolated district on the sea coast, about half-way between Farewell Spit and Kahurangi

Our Greatest Pleasure.

I MUST tell you of our greatest pleasure. It happened last night when "Rigoletto" was so ably explained by Mr. Drummond, and the volume with which the records were reproduced brought out their great beauties. The singing of the artists was a perfect dream of pure delight, and one was lost in contemplation of the marvellousness of all the details. The recording was so well done that each voice stood out in its proper place, the music was so balanced that the listener was entranced with the flood and combination of melodies that were so well timed that they did not clash, no notes were overlapped to the detriment of any, and the voices were glorious, whilst the music thrilled us as we have not been thrilled for a long time. 2YA's transmission was loud and clear—perfection itself. But, why was such music placed on so late? Last time I nearly missed it by falling to sleep before it started. I therefore suggest that 2YA make a feature for one night in every week of grand opera. Then one could reserve that night by hook or by crook, and make an effort to get one's friends along to hear the quality of radio. Critics who know what is really music will thus be given real pleasure. If sporting and "jazzers" are to be catered for by 2YA, then I submit that the listeners who want real music should also have a share of the week's programme, and not have their favourite food sandwiched in between any old stuff, making the atmosphere poor and degrading the tone. With Mr. Drummond to explain the plot of the operas, we can rely upon hearing each word, and, understanding what the music represents, we the more enjoy the listening. Another thing is the selection of the more tuneful operas for a start. The selection of the German, though quite all right, is, I think, too heavy for the untrained taste. Many people would become grand opera listeners if the atmosphere was considered a bit more. We could "hear to hear" "Rigoletto" every night without tiring of it.—GRAND OPERA.

lighthouses. Before living here we had good opportunities of church, music and entertainment. After being isolated from these privileges for about 21 years, you may be sure we welcomed the radio.

"It was a mystery and still is a mystery how we can hear such a variety of splendid music and entertainment brought right to our fireside. We could relate of splendid evenings spent with the radio going, of splendid songs we have heard, and of the very fine music by the orchestras and the various bands.

"We are also very fond of the organ, especially the music played by Mr. A. Wilson, at Auckland, and the Taranaki Street Methodist Church at Wellington. We have our own favourite singers and performers and we have very pleasant thoughts of some of the songs we have heard and of the singers, but perhaps it would not be wise to mention names here.

"Then we are interested in the news. Now we get news direct, whereas at one time it used to take over a week to reach us. At present we are anxiously awaiting any news that may be broadcast relative to the Southern Cross.

"No doubt radio covers a large field of amusement and useful information. I think that we enjoy best the simple old-fashioned songs and music. No doubt the high-brow that is often referred to by writers to the 'Radio Record' is very good when sung, but I think that often they are attempted by singers that would be received much better if they sang something that they could reach more easily instead of straining to get D or F flat. Often they just manage to reach B flat.

The records put over the air are very pleasing; no doubt we get some of the best singing from the records—they are just splendid. And the foxtrots give pleasure to many people, and I have noticed that a station given to fading, when giving a series of foxtrots records does not fade. But sacred music is our special favourite, and I think that most people must agree that sacred music is by far the best both for the broadcast singing and also by the records.

I remember now some very beautiful items of sacred music broadcast from the various church services, also at the Sunday night sessions at the studios, and I sincerely hope that you will still continue the Sunday church services and the sacred music from the studios on Sundays. These services are so very much enjoyed by us as it brings back memories of our younger days when we took part in the church and school services. They must be a great blessing to many isolated in the outlying districts. I see sometimes a writer to the "Record" complaining about too much of this kind, but I hope that your company will still continue Sunday church services.

I have often thought it would be such a pleasure to look through the studio and see how the different artists are arranged for performance, and have a look at our friend and benefactor, "Mike." I would like to meet some of the performers, although we have not seen them they seem like old friends, especially the announcers. We are indebted to them for the correct way to pronounce words that have been difficult to pronounce. I am very fond of Maori songs and music, and I hope that very soon another Maori concert can be arranged from 2YA.

General Manager's Mailbag

Interesting Correspondence from Listeners

Value to Farmers.

"I HAVE just heard from IYA that Kingsford Smith and party have been found," writes one keen listener signing himself "Te Pirri Hau." "As an old Australian prospector, I have seen some of the country they are in. On several occasions I have been miles from anywhere—at the back of beyond—in the Golden West, which, by the way, is my native State. An Australian is pretty resourceful. I have subsisted on 'possum which I trapped. If one cuts out the flanks there is no taste of gum leaves, and the flesh resembles chicken. Snakes are very good eating, provided one does as the Binghi does, kill him (but don't let him bite himself). There are also swan berries, and other edible fruits in these tropical jungles which are full of marshes that would bog a duck. No doubt the aviators found something to eat—if Binghi was friendly, especially if one asked for some nalgo, which is aboriginal for food in the West. Anyhow, we're very much rejoiced at the news.

"I don't presume to teach you your business, but I would like to suggest that the news session should be extended to enable us farmers in the backblocks to be up-to-date with the news. The farmers' best hours to listen-in are at night. You give us market reports, races, etc., which cater for a lot of fans, but the silly idea of the racing clubs to exclude radio from their courses is a penny wise and a pound foolish one. The announcer saying he is broadcasting IYA from somewhere in the vicinity of Ellerslie is very humorous in this utilitarian age, something like a comic opera in the racing world. Now, sir, farmers get

only one or two papers a week, and radio is the only solace the cow cockle has when he has finished extracting the lacteal juice from Strawberry and Company. Since we installed a set we are in touch with the outside world. (To-night the seven devils of static are out on the loose, and the reception all round is very poor.) The farming community would go for more radio sets if New Zealand and Aussie news were enlarged, for we can hear the YA's where the Aussie stations are inaudible."

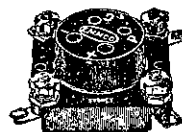
Different Tastes.

"IN writing to thank you for your invitation to visit one of the broadcasting stations, I must thank you also for the enjoyment I and many others have derived from the possession of a receiving set," says a listener. "I had much trouble to persuade the rest of the family to get rid of an expensive gramophone and invest in a receiving set, but I should have much more trouble to persuade them to revert to a gramophone. Having many differing tastes for entertainment even in my own family, I find no difficulty in satisfying them all by tuning in to one or other of the New Zealand stations, hardly ever bothering about Australia at all, even though my set is capable of receiving them perfectly."

Varied Programmes.

"I think the R.B.C. is to be complimented on the excellent varied programmes that we have the pleasure of listening-in to, and also for the very generous way that they have catered for the license-holders outside of the published programmes. Wishing the R. B. Company all success..."—Extract from another letter."

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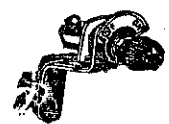
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Coil Length.

R.F.B. (Wellington): Yes, your coil should tune to the band mentioned.

Transformer Ratio.

"K.A.D." (Kelburn) asks whether $2\frac{3}{4}$ —1 is the correct ratio for an inter-valve transformer.—Yes.

Microphonic Detector.

"LICENSE NUMBER 129,250" has been troubled with a microphonic detector (A415). He is using a three-valve short-wave set with two A415's and one B406.

A.: The amplification is too great, and feed-back is the result. Try A409 in place of 415.

Impedances Not Matched.

"F.W.S." (Auckland) finds that by using two 605's in push-pull he cannot prevent blasting.

A.: It appears that the impedance of the valves is not matching that of the speaker (a magnetic cone). Try two 603's with greater grid bias.

Amplifier Circuit Wanted.

"A.J.H." (Napier) asks for details of amplifier and wave-trap.

A.: A good amplifier was described by "Pentode" in our issue of November 2, and a combined wave-trap, detector, and crystal set described in November 9.

Choke Specifications.

WOULD a tapped tickler serve the purpose of a choke in a short-wave set? writes "J.E." (Wellington).

A.: No; very many more turns would be required. A tickler has usually about 25, a choke nothing less than 100.

Questions and Answers

The circuit recommendations are a .0005 condenser for tickler control. Would a .00035 be suitable?
A.: Yes; though .0005 would be slightly better.

Transformer Particulars.

"A.V." (Christchurch) wishes to obtain particulars of a transformer input 220 to 250 volts, output 22, to 435 volts, providing a filament winding of 1.5 volts, 2.25, and $7\frac{1}{2}$ volts, and C voltage. He asks would a transformer for 250 volts coupled to an American transformer of 110 volts be practicable?

A.: The correspondent will find that the question of transformers has been dealt with very fully in an article in the "Radio Listener's Guide," entitled "Small Power Transformers, from A to Z," and "Building a B Battery Eliminator." As to the latter part of the question, No.

The same correspondent asks where stallo may be obtained.

A.: It can be obtained ready cut from almost any dealer, but Johns, Ltd., Auckland, carry extensive stocks.

The Question of Wireless Aerials.

A CORRESPONDENT has written, asking if his aerial passing over electric mains, is permissible.

A.: Regulation 5HA (1) states: "Wireless aerials shall not, without the consent of the licensee for the supply of electricity concerned, be erected above or below wires used for the supply of electricity, or sufficiently near to such

wires to permit of contact with them should either class of wire break or become detached from its support, or its support fall."

So it does contravene the regulations.

Biasing R.F. Valves.

"C.E." (Nelson) inquires whether there is any advantage in biasing the R.F. valves of a 2-R.F. Browning-Drake?

A.: Other than reducing the "B" current, there is little advantage, unless it makes the receiver slightly more selective.

The correspondent suggests: "I have a circuit diagram showing the connections thus: The frame and moving plates of the condensers are insulated from the shield and the ground end of the coil comes to the moving plate. Grid bias is applied between the moving plates and 'A-,' with the negative to the moving plate and the 'C plus' to the 'A-.' There is a 1 mfd. condenser from the moving plates to the ground or 'A-.' Would this affect the tuning range of the coils and condensers?"—No.

2ZF, Palmerston North.

"J.A.B." (North Auckland) wishes to know the nights 2ZF is on the air. He states that when tuning in last Wednesday night he accidentally logged him and wondered who it was until the announcement was made. He heard one or two items very clearly on the speaker, but then they faded. Sunday night he could hear them faintly on the headphones.

A.: Station 2ZF, Palmerston North, operated by the Manawatu Radio Club, power 20 watts, wavelength 285 metres, broadcasts Sundays and Wednesday nights.

Centre Tapped Primary.

AN inquirer from Roseneath, Wellington, who is contemplating constructing a transformer described in the "Radio Listener's Guide," has to work from the 110 volts power. He wishes to know the adaptations to be made.

A.: In our Questions and Answers page in Volume 2, Number 40, this problem was answered for a correspondent. It may be remarked in addition that great care must be exercised in thoroughly insulating each half of the primary winding from the other half, particularly the finish of the first and the commencement of the second. These are carrying the full voltage potential, and if not thoroughly insulated one from the other, a short circuit will result.

Trouble with Morse.

"SUBSCRIBER" (Central Otago) complains that he is troubled with morse on practically the whole of the broadcast band.

A.: The disturbance is evidently caused by either a ship or an amateur. In the case of the former the trouble will cease when the ship is far enough away. If the correspondent can read morse or has a friend who can read morse, he should identify the station and lodge his complaint to the district telegraph engineer.

Heterodyning 3AR.

"COULD you tell me the station which causes a whistling with 3AR Melbourne," writes "Satisfied" (Westport).

A.: In all probability it is WDAE Florida, operating on the same wavelength, viz., 484 metres.

The same correspondent inquires: "Would a short aerial give as much volume and less static than a long aerial?"

A.: It would collect less static, but the signal strength would be much reduced.

Elementary Points.

"L.W." (Lower Hutt) writes: "Hearing the announcement over the air that advice would be given to beginners in the matters of care of sets, etc., I am asking the following questions:—

"1. What would be the necessary height of an aerial in this district to bring in the Australian stations?"

A.: Logging outside stations is a combination of three factors. The set and the operator's skill, the aerial and the earth, and atmospheric conditions. The correspondent does not state the type of set he is using, but a three-valve set with a good aerial should bring in these stations on the loudspeaker. Aerials were fully dealt with in our issue of December 14, and again in the "Guide."

"2. Would an ordinary piece of water pipe form a good earth, and what is the required length?"

A.: Yes, it would be quite satisfactory if from 4ft. to 6ft. in length, but see also our special issue December 14, for further particulars.

3. Would a 3 or 4-valve regenerative set be a good proposition in the matter of price, economy, and purity of tone?

A.: Yes, an excellent proposition. A set such as this is capable, usually, of bringing in Australian or even Japanese stations. Judging by our advertisements, 3 and 4-valve receivers will be very popular this season. Watch our "Laboratory Jottings" for reports.

4. Can you refer me to any Wellington firms who make a speciality of supplying reliable kit sets?

A.: Yes, glance through our advertisements. Several are displayed in shop windows.

5. Are dynamic speakers better than the horn type, and can they be worked from an ordinary set?

A.: Yes, they are superior, but are more costly, both initially and in operating, though if a good amplifier is used with the set the cost amply repays in quality.

6. Are the new power operated sets better in purity of tone than the battery operated ones?

A.: Generally speaking, yes, as greater voltage can be applied to the power valves.

The 2-R.F. Browning-Drake.

"C.S.B." (Christchurch) has not had a great deal of success with the 2-R.F. Browning-Drake, the difficulty being with the neutralisation. He proposes altering it according to the specifications in the "Radio Listener's Guide," and asks the following questions:—

1. Using two 609 valves in the R.F., how many turns should be wound on the slotted primaries used with a secondary with a 24in. former?—A.: About 23.

2. What method of reaction control do you recommend, and will you give instructions for fitting it. I have not room to fit a controlling condenser."

A.: The moving coil can be used as was described in connection with the four-valve Browning-Drake, described on pages 71 to 73 of the "Guide."

3. Is the R.F. choke between the tickler and the first audio transformer of the same proportions as the other two, and if I decide to purchase the R.F. chokes should I specify the sizes?

A.: All R.F. chokes are of practically the same specifications, and so it is not necessary to specify more than "R.F. choke" when ordering.

4. Which would you recommend—the 2R.F. Browning-Drake or the adapted screen grid Browning-Drake?

A.: If simplicity of operation rather than selectivity is desired the screen grid is preferable. Selectivity combined with distance getting is the outstanding feature of the 2-R.F. B.D., but it is rather more difficult to tune than the screen grid set. See our article in this issue.

Note: Constructors who contemplate constructing the two stage R.F. Browning-Drake as described in the "Radio Listener's Guide" should note that the filament end of the secondary of the first radio frequency transformer should

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Controlling Filament Current.

NOTICE in the "Record" that one or two correspondents complain of the volume not increasing when the rheostats are turned further on. Perhaps my experience regarding the same complaint will be of interest to some of our fellow-readers. My three-valve set is controlled with three rheostats, with the result that the volume would not increase beyond a certain degree whether full on or just on. I simply extracted the third rheostat from the set, that is, the one governing the power-valve, and behold, the slightest touch now increases the volume splendidly.—T.D.H. (North Auckland).

Dry Cells for A Battery.

VERY many receivers which use not more than three valves, are provided with dry cells as A batteries, and the question often arises, "Are these profitable?"

There are certain conditions under which dry cells may be used with advantage as A batteries. If the valves require little filament current, they are quite suitable, but where the valves require a fair amount from the batteries, they are very expensive items. To ascertain whether dry cells should be used or not, examine the cartons which have accompanied the valves. The characteristics of the valves will be given, and these should be searched for filament current. This will be given as a decimal. Add the total for the valves used by the set and if this exceeds .2 dry cells should not be used unless in series parallel. Twice the number of cells will be necessary. Divide these into two groups and connect each group in series as usual. Now connect the two positives of each group and the two negatives of each group to A positive and A negative of the set.

It will be found that this will be the most satisfactory method to employ where the filament draw is between .1 and .2. Other than this, accumulators should be used, and frequently recharged.

A Burnt-out Transformer.

THE reason for a "burnt-out transformer" is sometimes very difficult to track, but the following interesting experience of a Wellington radio expert throws a great deal of light upon this very common cause of trouble.

be attached to "A—" of the second R.F. valve, not "A+" as shown. The lay-out diagram is correct.

Concerning a One-valve Set.

"J.P.B." (Petone) has constructed a one-valve all wave set, and although he can get several stations off the 'phones is unable to get Wellington off the loudspeaker, though, he states, the original specifications claimed Australian stations on the loudspeaker.

A.: A one-valve set rarely brings a local station on to a loudspeaker unless it is a very sensitive one, and this is no doubt what was used when the original test was made. The additional audio stage should give good results. If the local station only is required at good speaker strength a crystal detector with two valves as amplifiers will give the best results.

A Corner for Beginners

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 individual 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 portable set persisted in producing a crackling noise which nothing seemed to cure. The radio service man in his endeavour to locate the trouble removed the audio transformers and rebaked them to exclude moisture, yet this did not make much improvement. A damaged bypass condenser was replaced and a potentiometer repaired, yet the crackling continued every time the set was turned on.

A test with a milliammeter showed that there was no current on the first radio frequency valve, which pointed to a defect in the radio frequency transformer. This was taken out, examined, but at first nothing was disclosed. The wire was submitted to a magnifying-glass test, and a thin coating of white deposit could be discerned on the insulation of the wire. This was sufficient to hold the moisture, probably imparted by the steam of the sealing compound or from the hands of the manufacturers as they wound the coil (if at all wire were passed through any hands). The winding was stripped and rebuilt with fresh wire—the trouble ceased.

A Wavetrap Test.

L.P. (Wellington) writes: I have a very old model two-valve receiver and my son frequently insisted the set would without a wavetrap cut out 2YA and pick up other stations. Last night at about 10.15 p.m. I decided to finally settle the argument by testing the set, which uses only one valve of a type now off the market and probably as old as the set itself. The latter not only cut out 2YA completely, but with 'phones actually brought in the very humorous broadcast description from 2BL rebroadcasting from the Sydney Stadium of the boxing match between Gardiner (12st.) and Mason (11st. 6lb.), these two having been substituted in place of Smith (South Africa) and Roberts (Newcastle) owing to the indisposition of the latter. I

201A valves I found it impossible to neutralise.

On finding it would not neutralise I employed the split primary principle, with the result the set now works perfectly. If you were to publish in your valued paper the characteristics of the valves used in the set made and tested by "Megohm" it would help any other set builder who contemplates building the 2 R.F. and save a lot of annoyance to the neighbour listener.—[16,000 ohms.]

Neutralisation.

IN a neutrodyne employing two R.F. stages, there is no point in carrying neutralisation too far on both valves. If the valve just previous to the detector is very slightly deneutralised, not enough to make the receiver oscillate, the set becomes far more sensitive. If the set does burst into oscillation when searching on the lower wavelength band, the first valve, being neutralised, will prevent radiation.

Useful Tips.

WHEN charging accumulators from the mains or other source of electric supply the positive of the cell is always connected towards the positive of the supply.

GENERALLY speaking, it is most unwise for any unskilled person to tamper with the electric-light mains, as serious damage can be done by shock and by fire.

WHEN soldering at a gas stove, do not forget that the best way of holding the iron in the gas flame is to arrange a duster on the stove, upon which the handle of the iron can be rested in any position.

have always been able to pick up one or more Aussies, summer or winter, at night, but have never before tried to do so while 2YA was on the air. To me the above seemed a marvellous performance.

Neutralizing the 2 R.F.

G.C.C. (Nelson) writes: I have read with interest during the last few months your replies to correspondents re the neutralising of the 2 R.F. Browning Drake. The replies were all the more interesting to me as during that period I was building the 2RF in my spare time. The set is now finished, and is built exactly to Megohm's specifications in every detail, and using

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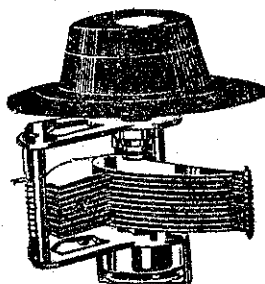
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Next Week's Features

1YA Features

THERE will be a relay of the service conducted in the West Street Church of Christ by Pastor Campbell on Sunday evening. An excellent studio concert will follow, the contributing local artists being Miss Cecelia Duncan, Mr. Roy Dormer, and Mr. Eric Mannell.

Madame Cora Melvin and Mr. Norman Day, the Tauranga artists who occasionally perform at 1YA, will be singing there again on Monday evening, May 21, appearing in both duet and solo items. Mr. Day's numbers will include "Mandalay." Miss Phyllis Hazell will sing three operatic numbers, one of which will be "Hanabera," from "Carmen." Operatic solos will also be sung by Mr. George Barnes. There will be recitations by Miss Maisie Carte-Lloyd, the talented elocutionist. Instrumental music for the evening will be provided by Miss Molly Wright, the Studio Trio, and by relays from the Majestic Theatre, where the orchestra is under the baton of Mr. J. Whitford Waugh.

ON Wednesday evening the Auckland Comedy Players, under Mr. J. F. Montague, will present "Dover Road," a three-act play by A. A. Milne.

An interesting debate figures on Thursday evening's programme, when Messrs. Vernon Drew and F. W. Barker

will discuss the pros and cons of "That Sport is Playing Too Great a Part in Modern Life." This subject should give the debaters full scope to display their elocutionary and humorous powers, and will no doubt be looked forward to by all listeners. On the musical side of the programme, Miss Norma Calder, mezzo, is making



Miss Mavis Spiller, a mezzo-soprano well-known by listeners to 3YA.
—Steffano Webb, photo

her initial appearance before the microphone, and will sing, among other items, "Willow Song" (Sullivan), and "I Am Longing for the Spring" (Morris). Mr. Walter Brough's baritone voice will be heard in "A Son of the Desert" (Phillips), and "The Great Awakening" (Kramer). Popular orchestral selections will be played by the studio orchestra, and the programme will conclude with dance music at 11 p.m.

THAT popular vocal combination, "The Olympians," will contribute a classical programme of quartets and solos on Friday evening, including "Swansea Town" (Holst), "Roundelay" (Gideon), "Smuggler's Song" (Kernochan), "Gloriana" (Mallinson), and "Edward Grey" (Sullivan). The Studio Trio will play instrumental selections, while Mr. Eric Waters will give a piano solo, "Rustling Woods" (Liszt). Mrs. Daisy Basham, with Mr. William Gemmell, will continue her scenes of short lecture-recitals on "Half Hours With the Great Composers," her subject for this evening being "Offenbach."

A SPLENDID variety programme will be presented on Saturday evening. Several new artists will make their official bow to Radioland: Mr. Dan McKivett, humorist; Mr. Raymond Harding; ukulele player and vocalist; and Mr. Clarence Paine, elocutionist. Mr. Paine will be remembered by his clever work from 4YA, Dunedin, and his transfer to Auckland will be an acquisition to 1YA's list of

artists. Also appearing on this programme will be Miss Edna Langmuir, whose versatility will be displayed in vocal, elocutionary and piano items, while Mr. F. T. Nash will perform solos on his "musical saw." Orchestral selections will be broadcast by the Studio Orchestra, and the evening will conclude with dance music at 11 p.m.

2YA Items

THE service to be conducted in the Taranaki Street Methodist Church by the Rev. T. R. Richards will be broadcast on Sunday evening. Following the church broadcast the concert to be given by the Wellington Municipal Band in His Majesty's Theatre will be relayed.

ON Monday evening a programme of outstanding merit will be presented. The artists will be Mr. Barry Coney, of Auckland (baritone), Miss Isabel Cooper (soprano), Miss Evelyn Robinson (contralto), Mr. Eric Rishworth (tenor), and Mr. Cedric Gardiner (elocutionist).

MR. BARRY CONEY, who will sing the operatic aria, "O Thou Palermo," and Alfred Hill's "Waiata Maori," is well-known throughout New Zealand, and especially to listeners-in to 1YA. Miss Evelyn Robinson, a rising young contralto, has chosen for her items Kjerulf's "Last Night," "Five Eyes," and "There's a Big Lot of Sunshine." Two numbers from Schubert's Song Cycle "The Mill," namely, "Wandering" and "Whither," together with Roger Quilter's "Drink to me only with Thine Eyes" and Reynold's "Ah, how delightful the Morning," will be sung by Mr. Eric Rishworth. The soprano soloist, Miss Isabel Cooper, will delight listeners with Tosti's popular "Serenata," and two charming little songs by Drummond, "L'Envoi" and "If I Lost the Stars."

On the instrumental side of the programme an outstanding item will be a duo for two pianos, played by Messrs. Gordon Short and Mat. Dixon. The item they have chosen will be a waltz by Arensky.

Special interest will attach to the elocutionary numbers on Monday evening. Mr. Cedric Gardiner will recite recent 2YA Poetry Competition, "Odysseus," by Mr. A. R. D. Fairburn, of Auckland, and also the third prize humorous poems, "Mr. and Mrs. White Hold Hands," by Miss Betty Kerr, of Timaru.

TUESDAY evening's programme will be of a bright popular nature. The contributing artists will include Mr. E. W. Robbins (tenor), the "Co-Optimists" (entertainers), and Messrs. Edward Silver and Billy Hart (singers of popular songs). Mr. W. McLean, first violinist of the 2YA Orchestra, will, by request, play "Good-bye" by Kreisler.

ON Thursday evening the Wellington City Salvation Army Band, under the conductorship of Mr. Scotney, will, with the assistance of the Lyric Quartet, Miss Monica Malfroy (mezzo-soprano), and Mr. E. A. Sargent (entertainer at the piano), provide an interesting and varied programme. The band's items will include the "Red Shield" march (which item was played at the opening of 2YA by the same band when under the conductorship of the composer, Adjutant Goffin), the selection "Love's Manifestation," meditation "Wareham," and a national selection entitled "Scotland," arranged by the conductor of the band. Bandsman B. J. Dutton will play as a cornet solo the well-known ballad "The Song that Reached my Heart."

Concerted numbers by the Lyric Quartet will be "Spin, Spin," "Mammy's Little Sunny Boy," and "Aloha-Ae." Mr. Charles Williams (tenor) will sing "The Desert Queen," by Hartwell Jones, and Mr. W. Binet Brown (bass) "When the King Went Forth to War." Mr. Will Goudie (baritone) will sing several numbers from his repertoire, and Messrs. Will Goudie and W. Binet Brown will sing the duet "Tell her I love her so." A charming little ballad by John Ireland, "If there were Dreams to Sell," together with "Trees," by Rasbach, and Hermann Lohr's "Just in the Hush Before the Dawn," comprise the solos to be sung by Miss Monica Malfroy (mezzo soprano). Mr. E. A. Sargent, the popular entertainer at the piano, will provide the humour of the evening.

On Thursday evening Mr. Barry Coney will make his second appearance at 2YA. He will sing "Adeline" (by O'Connor Morris) and "The Carpet" (by Sanderson).

THE vocal items on Friday evening will be given by members of the Philharmonic Quartet. The items comprise the following:—"Under the Deodar" (from the "Country Girl"), "Toreador's Song" (from "Carmen"), contralto solo, "My Partners" ("Country Girl"), two duet numbers, "Awake" (by Pelissier) and "My Task" (by Ashford). There will also be, quartet number "The Sea Hath its Pearls" (Pinsuiti). Mr. Edwin Dennis (tenor) will sing "Onaway, Awake, Beloved," from "Hiawatha," and "The Trumpeter," by Dix. Mr. C. Brown (elocution-



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ist) will entertain with a recital of "The Colonel" (by Bransby Williams), "The Foreign Legion" (by Harris), and the old favourite, "The Hindoo's Paradise."

An interesting item on Friday's programme will be a pianoforte solo by Mr. Norman Izett, L.A.B. Mr. Izett is a young pianist who is well known in musical circles in Wellington. He will play Chopin's "Ballade in A Flat," a number which will be appreciated by a large number of listeners.

ON Saturday evening the popular Melodie Four, together with Mrs. Culford Bell, of Auckland, and the Palmer Brothers' Hawaiian Duo, will provide a pleasing programme. The Melodie Four's concerted items will be "Ice Cream," "Katy Did," and the popular "Angela Mia." Mr. Frank Bryant (tenor) will sing "A Brown Bird Singing," and Mr. W. W. Marshall "Rocked in the Cradle of the Deep." "My Lady's Bower," by Temple, will be Mr. R. S. Allwright's solo, and Mr. S. Duncan will sing the popular tenor solo "Machushla."

Mrs. Culford Bell is an elocutionist well known throughout New Zealand. She will entertain listeners with a dramatic recital with musical effects, "O Koyo San" (by Wish Wyne), and with a French-Canadian number, "De Bell of San Michel" (by Drummond).

3YA Features

THERE will be a relay of the divine service conducted in the Anglican Cathedral on Sunday evening. His Grace Archbishop Julius will be the preacher. Dr. J. C. Bradshaw will be organist and choirmaster. Following the church broadcast, 3YA will re-broadcast 2YA.

THE captivating "Funiculi Funicula" will be the opening number to be played by Derry's Military Band on Monday evening. Other numbers by this popular organisation will include a waltz, a gavotte, a selection from "Faust," a descriptive fantasia and a march. Other instrumentalists for the evening will be the Studio Trio.

Contributing to the vocal programme will be Mrs. Stephen Parr, singing three well-known airs, Miss Avril Glanville, whose songs will include an operatic solo, an old-time favourite and a popular number. Mr. Cyril Rishworth (baritone) will sing "A Bandit's Life is the Life for Me" and "Oh! Oh! Hear the Wild Winds Blow." There will be two recitations by Mr. Harold Shaw.

ITEMS on Wednesday evening's programme will include selections from well-known operas: "The Anvil Chorus" and "The Miserere" (from "Il Trovatore"), "Il Bacio," two solos from "Una," and an excerpt from "Maid of the Mountains." Other solos will be "Beyond the Dawn," "The Secret," "My Sweetheart When a Boy," "You'll Get Heaps o' Läckin's," "Keep on Hopin'" and "Shipmates of Mine." There will also be a duet, "Come to the Fair." The vocalists for the evening will be Miss Lilian Hanham, Miss Dulcie Mitchell, Mr. H. Blakeley and Mr. J. Graham Young.

ON Thursday evening the "Commemorative Ode" written by Mr. Johannes Andersen at the time of the

New Zealand International Exhibition in Christchurch in 1906-7, and set to music by Mr. Alfred Hill, will be sung by Miss Frances Hamerton's Melodious Four. The ode comprises quartet numbers as well as solos. It is a very melodious composition and this will be the first time it has been broadcast. Besides the ode there will be other New Zealand numbers, notably two cello solos, which Mr. Beck will play, and three Maori songs by the Studio Trio.

Mrs. Culford Bell, wife of Mr. Culford Bell, announcer at 1YA, herself an elocutionist of note, will give three recitations: "The House by the Side of the Road," "The Little High Chair," and "The Last Lesson."



Miss Winifred Barrett, of 3YA, a talented mezzo-soprano soloist.
—Steffano Webb, photo.

IN view of the interest which aviation is now arousing in New Zealand, much attention will be paid to an address on Wednesday evening by Sir Francis Boyes, president of the Canterbury Amateur Aero Club.

FRIDAY, May 24, being Empire Day. 3YA will mark the occasion with an "All British" programme. Appropriately following the opening number, "God Save the King," sung by the Valencia Quartet, will be the old marching song of the English archers in the French wars, "The Song of the Bow," then the "Land of My Fathers," the Welsh National Anthem, after which Pipe-Major Patterson's bagpipes will speak for Scotland. The lilting strains of "The Kerry Dance" will follow. And so the programme will go on, an Empire programme. "The Hindoo Song" and "The Song of India" being introduced also. The evening's entertainment should be an extremely popular one.

Following on Friday's Empire Day programme, a full Scottish concert will be presented on Saturday evening—two hours of Highland music, not forgetting the bagpipes. The performers will be the Revellers Concert Party.

4YA Items

THE Hanover Street Baptist Church will be on the air on Sunday evening. The preacher will be the Rev. E.

S. Tuckwell. After the church broadcast 4YA will relay the concert to be given by the St. Kilda Band.

Numerous operatic selections will feature Monday's programme, the vocalists being Miss Mollie Andrews, Miss Stassia McCready, and Mr. E. G. Bond. There will also be the fourth, and final, instalment of "Rigoletto," with its dramatic and tragic climax. Recitations of more than usual interest will be the two items by Miss Joyce Hould: Scene from "Two Gentlemen of Verona" and a sketch from Dickens. Instrumental music will be supplied by the Studio Trio.

FOR Tuesday evening, the St. Kilda Band has arranged another excellent programme, in addition to which Miss Edith Harry will give her record song-pianoforte recital, and Mrs. Culford Bell, of Auckland, will recite. Baritone solos will be sung by Mr. L. M. Cachemaille.

The popular type of programme on Wednesday evening will be contributed to by such artists as Miss Anita Winkel and Major Lampen (who will enact sketches), Mr. Buster Brown (Scottish comedian), Mr. A. Allo (baritone), and the Scottish Banjo Duo.

A NEW vocal quartet combination known as "The Majors" will appear on Friday evening. The old favourite, "John Peel," and two songs by Mendelssohn, "Old Love Song" and "Parting," will be sung by them. There will be soprano solos by Miss Dorothy Skinner, tenor solos by Mr. J. Montague, and baritone solos by Mr. L. E. Cachemaille. Elocutionary items of a humorous nature will be given by Mr. Lester Moller.

A Breezy "Feature"

THE London "Popular Wireless" says: "Doings in back parlour of a village inn, where those who live in the country know a warm welcome awaits all and sundry, especially on these cold and wintry nights, is the basis of an attractive programme for Newcastle listeners on Tuesday, March 12. The conversation may not be brilliant, but it will always be interesting, while the singing will be of the kind that only the good old 'pub' can provide."

Broadcast Speech

Advice by an Expert

"THY voice is a celestial melody." Longfellow's poetic description of the human voice could not well apply to the majority of people, according to the celebrated woman traveller and radio speaker, Gladys M. Petch, who just completed a world tour of radio stations when she spoke over KGO, the General Electric station at Oakland, California.

Mrs. Petch, an Englishwoman, said to have the "best known voice on the air" in Europe, possessor of the "most perfect radio voice" of any woman, is interested in voices.

"The criticism is often made of Americans that they speak with a harsh nasal twang," Mrs. Petch told Bettina Angelo, feature newspaper writer, who has been speaking over KGO for some time. "I think this is true for the most part, but it is not only true of Americans, but of people the world over who are not careful of their speech tones."

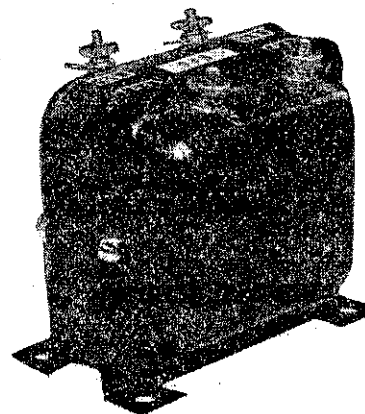
"Some of your radio announcers in the United States have terrible voices, though of course there are some fine exceptions. I believe that the radio is going to concentrate public interest on the speaking voice and do a great deal towards improving speech," she added.

"To what do you attribute your title to 'the perfect speaking voice?'" the European radio star was asked.

"I have been giving lessons in English over the Government station at Oslo, Norway, and I have learned to speak slowly and distinctly through the necessity of making my points clear in the teaching of a language to a foreign race."

The whole secret of a good speaking voice is to enunciate clearly and without the hasty slurring of vowels, or the harsh nasal twang of consonants, the expert radio speaker declares.

Mrs. Petch lectures under sponsorship of the Norwegian Government from the big broadcasting station at Oslo, the city where Prince Olaf and Princess Martha were recently married. She is said to be the first British woman to speak from any Italian, Austrian, or Czechoslovakian station and is frequently referred to as "the champion woman broadcaster."



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Full Programmes for Next

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Sunday, May 19

1YA, AUCKLAND (333 METRES)—SUNDAY, MAY 19.

- 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 West Street Church of Christ:
 Preacher: Pastor Campbell.
 8.30: (approx.): Studio concert.
 Orchestral—London Symphony Orchestra, "Symphony in D Allegro Molto" (Beethoven) (Columbia Record L1867).
 Baritone solo—Mr. Eric Mannell, "The Living God" (O'Hara).
 Instrumental trio—Cherniavsky Trio, "Spring Song" (Mendelssohn) (Columbia Record 0837).
 Soprano solo—Miss Cecilia Duncan, "O Divine Redeemer" (Gounod).
 Vocal duet—Messrs. Roy Dormer and Eric Mannell, "Crucifix" (Faure).
 Vocal quintette—Dora Labette, Harold Williams, Hubert Eisdell, Dennis Noble and Robert Easton, "By The Wayside" ("The Apostles") (Elgar) (Columbia Record 02593).
 Tenor solo—Mr. Roy Dormer, "How Many Hired Servants" ("The Prodigal Song") (Sullivan).
 Pianoforte solo—Ignaz Friedman, "Prelude in D Flat" (Chopin) (Columbia Record L1804).
 Baritone solo—Mr. Eric Mannell, "Thank God for a Garden" (Del Riego).
 Soprano solos—Miss Cecilia Duncan, (a) "The Lament of Isis" (Bantock); (b) "My Ain Folk" (Lemon).
 Cello solo—Gaspar Cassado, "Danzas Espanolas" (No. 5), (Granados), (Columbia Record 04075).
 Vocal duet—Messrs. Roy Dormer and Eric Mannell, "Farewell To Summer" (Johnson) (Gould).
 Orchestral—Plaza Theatre Orchestra, "Tarantella" ("Gipsy Suite") (German) (Columbia Record 02538).
 Baritone solo—Mr. Roy Dormer, "A Dream of Paradise" (Gray).
 Band—H.M. Grenadier Guards, "Dawn of Freedom" (Columbia Record 4029).
 Close down.

2YA, WELLINGTON (420 METRES)—SUNDAY, MAY 19.

- 3.0 p.m.: Afternoon session—selected studio items.
 4.30: Close down.
 6.0: Children's session conducted by Uncle George.
 7.0: Relay of service from Taranaki Street Methodist Church:—
 Preacher: Rev. T. R. Richards.
 Organist and choirmaster: Mr. H. Temple White.
 8.15 (approx.): Relay from His Majesty's Theatre of recital by the Wellington Municipal Tramways Band, under the conductorship of Mr. T. Goodall.
 Close down.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, MAY 19.

- 3 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 5.30: Children's song service, conducted by Miss H. Park.
 6.15: Hymn tunes.
 6.30: Gramophone recital.
 7.0: Relay of service from Christchurch Anglican Cathedral. Preacher, His Grace Archbishop Julius. Organist and choirmaster, Dr. J. C. Bradshaw.
 8.15 (approx.): Rebroadcast of 2YA, Wellington. (Relay from His Majesty's Theatre of concert by the Wellington Municipal Tramways Band, under the conductorship of Mr. T. Goodall.)
 Close down.

4YA, DUNEDIN (463 METRES)—SUNDAY, MAY 19.

- 3 p.m.: Town Hall chimes.
 3.1: Selected studio items.
 4.30: Close down.
 5.30: Children's song service, conducted by Big Brother Bill.
 6.30: Relay of service from Hanover Street Baptist Church. Preacher, Rev. E. S. Tuckwell. Organist, Mr. Upton Harvey. Choirmaster, Mr. H. P. Desmouilins.
 8.5: Relay of concert by the St. Kilda Band, under the conductorship of Mr. James Dixon.
 9.15: Close down.

Monday, May 20

1YA, AUCKLAND (333 METRES)—MONDAY, MAY 20.

SILENT DAY

2YA, WELLINGTON (420 METRES)—MONDAY, MAY 20.

- 3.0 p.m.: Chimes of the General Post Office clock.
 3.1: Selected gramophone items.
 3.40: Relay from Messrs. Kirkcaldie and Stains' Ltd. of tea-room music by the trio.
 4.0: Studio items.
 4.30 and 4.55: Sporting results to hand.
 5.0: Children's session conducted by Uncle Jeff.
 6.0: Dinner session.
 Orchestral—Philadelphia Symphony Orchestra, (a) "Danse Orientale" (Glazounov), (b) "March of the Caucasian Chief" (Iwanoff) (H.M.V. Record E521).
 Tenor—Jno. McCormack, "Softly Through the Night" (Schubert) (H.M.V. Record DA458).
 6.12: Tacet.
 6.15: Orchestral—New Light Symphony Orchestra, "Scene de Ballet Marionettes" (Glazounov) (H.M.V. Record B2754).
 Baritone and Male Quartet—Jno. Goss and Cathedral Quartet, (a) "Haul Away, Joe" (Arrgd. Terry); (b) "What Shall We Do With a Drunken Sailor?" (H.M.V. Record B2420).
 Cello solo—Pablo Casals, "Le Cygne" (Saint-Saens) (H.M.V. Record DA776).
 6.27: Tacet.
 6.30: Orchestral—Philadelphia Symphony Orchestra, "Toccata and Fugue in D Minor" (Bach) (H.M.V. Record D1428).
 Baritone—Lawrence Tibbett, "Drink To Me Only" (Calcott) (H.M.V. Record DA886).
 6.41: Tacet.
 6.45: Violin solo—Isolde Menges, "Ave Maria" (Schubert) (H.M.V. Record D1313).
 Bass-baritone solos—Peter Dawson, (a) "I Rage, I Melt, I Burn"; (b) "O, Ruddier Than the Cherry" (H.M.V. Record C1500).
 Waltz—Philadelphia Symphony Orchestra, "Tales from the Vienna Woods" (Strauss) (H.M.V. Record ED2).
 6.57: Tacet.
 7.0: News session.
 7.40: Lecture—Mr. H. C. South, "Books—Grave and Gay."
 8.0: Chimes of the General Post Office clock.
 8.1: Overture—Orchestra, "Overture in B Flat" (Schubert).
 8.11: Soprano solo—Miss Isabel Cooper, "Serenata" (Tosti).
 8.15: Duo for two pianos—Messrs. Gordon Short and Mat Dixon, "Waltz" (Arensky).
 8.19: Bass-baritone solo—Mr. Barry Coney, "O Thou, Palermo" (Verdi).
 8.23: Suite—Orchestra, "Scheherazade" (The Story of the Kalender Prince) (Rimsky-Korsakov).
 8.33: Recital—Mr. Cedric Gardiner, "Odysseus" (A. R. D. Fairburn).
 (Special Prize Dramatic Poem of the 2YA Poetry Competition).
 8.37: Contralto—Miss Evelyn Robinson, "Last Night" (Kjerulf).
 8.41: Violin solo—Fritz Kreisler, "Liebeslied" (Love's Sorrow) (Kreisler) (H.M.V. Record B985).
 8.44: Tenor solos—Mr. Eric Rishworth, (a) "Drink To Me Only With Thine Eyes" (Quilter); (b) "Ah! How Delightful the Morning" (Reynolds).
 8.51: Instrumental—Orchestra, repeat number.
 9.0: Weather report.
 9.2: Soprano solos—Miss Isabel Cooper, (a) "L'Envoi" (Drummond); (b) "If I Lost the Stars" (Drummond).
 9.9: Song suite—Orchestra, "In a Persian Garden" (Lehmann).
 9.19: Baritone solo—Mr. Barry Coney, "Waiata Maori" (Hill).
 9.26: Recital—Mr. Cedric Gardiner, "Mr. and Mrs. White Hold Hands" (Betty Kerr) (Third prize humorous poem of the 2YA Poetry Competition).
 9.34: Violin solo—Fritz Kreisler, "Liebesfreud" (Love's Joy) (Kreisler) (H.M.V. Record B985).
 9.37: Contralto solos—Miss Evelyn Robinson, (a) "Five Eyes" (Gibbs); (b) "There's a Big Lot of Sunshine" (Hay).
 9.44: Tenor solos—Mr. Eric Rishworth, (a) "Wandering"; (b) "Whither" (from Schubert's song cycle "The Maid of the Mill").
 9.51: Instrumental—Orchestra, "Slavonic Rhapsody" (Friedman).
 10.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—MONDAY, MAY 20.

- 3.0 p.m.: Afternoon session—selected studio items.
 4.25: Sports results to hand.
 4.30: Close down.

Week-all Stations-to May 26

[Copyright.—These programmes are copyright, but individual daily programmes may be published on day of performance.]

- 6.0: Children's session, conducted by "Scatterjoy."
 7.0: News session.
 7.30: Talk—Mr. Chas. Buckett, "Physical Culture for Women."
 8.0: Chimes.
 Studio programme by Derry's Military Band under the conductorship of Mr. J. M. Scott, and assisting artists.
 8.1: March—Band, "Funiculi, Funicula" (Roberts).
 Gavotte—Band, "Stephanie" (Zibulka).
 8.10: Mezzo-soprano solo—Mrs. Stephen Parr, "If I Built a World For You" (Lehmann).
 8.14: Male quartet—Goodrich Silvertown Quartet, "Old Pals Are The Best Pals After All" (Bates) (Columbia Record 01296).
 8.17: Instrumental—Christchurch Broadcasting Trio, (a) "The Muses" (Pargeron); (b) "Presto" (Hummell).
 8.25: Baritone solo—Mr. Cyril Rishworth, "A Bandit's Life Is the Life for Me" (Harper).
 8.29: Selection—Band, "Faust" (Gounod).
 8.38: Vocal solo—Miss Avril Glanville, "Only a Rose" (Friml).
 8.42: Recital—Mr. Harold Shaw, "Tisnt Worth It" (Herbert).
 8.47: Waltz—Band, "Sobre Las Olas" (Rosas).
 8.52: Mezzo-soprano solos—Mrs. Stephen Parr, (a) "I Passed By Your Window" (Brahme); (b) "Absent" (Metcalf).
 8.58: Weather report.
 9.3: Baritone solo—Mr. Cyril Rishworth, "Oh! Oh! Hear the Wild Winds Blow" (Mattei).
 9.8: Male choir—Sheffield Orpheus Male Choir, "The Long Day Closes" (Chorley) (Regal Record G30008).
 9.12: Instrumental trios—Christchurch Broadcasting Trio (a) "Isola" (Colerige-Taylor); (b) "Songs My Mother Taught Me" (Dvorak); (c) "Serenade of the Moon" (Eisipoff).
 9.20: Old-time popular songs—Miss Avril Glanville, (a) "The Song That Reached My Heart" (Jordan); (b) "Granny's Song at Twilight" (Allen-Stanley).
 9.27: Saxophone solo—Rudy Wiedoeft, "La Cinquantaine" (Arrgd. Wiedoeft) (Columbia Record 4037).
 Tenor solo—Chas. Hackett, "The World is Waiting For the Sunrise" (Lockhart) (Columbia Record 03596).
 9.33: Fantasia—Band, "A Cavalry Charge" (Luders).
 9.41: Recital—Mr. Harold Shaw, "The Waxworks Watchman" (Frank).
 9.47: Baritone solo—Dennis Noble, "Barber of Seville—I'm The Factotum of the Town" (Rossini) (Columbia Record 02748).
 9.51: Vocal duet—Lucyenne Harvel and John Coast, "Just We Two" ("The Student Prince" (Romberg) (Columbia Record 3904).
 9.54: Oriental scene—Band, "In a Chinese Temple Garden" (Ketelbey).
 10.0: March—Band, "Great American Favourite" (De Ville).
 10.4: Close down.

4YA, DUNEDIN (463 METRES)—MONDAY, MAY 20.

- 3.0 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sporting results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Big Brother Bill.
 7.0: News session.
 7.15: Lecture—Dr. Fisher, Dominion president, under the auspices of the League of Nations Union on "The International Labour Office Geneva."
 8.0: Town Hall chimes.
 8.1: Overture—La Scala Orchestra, "The Secret of Suzanna" (Wolf) (H.M.V. Record D1488).
 8.5: Bass solos—Mr. E. G. Bond, (a) "O Pure and Tender Star of Eve" (Wagner); (b) "Yeomen of England" (German).
 8.12: Instrumental Trio—4YA Broadcasting Trio, "West Finland Dance" (Palmgren).
 8.18: Mezzo-soprano solos—Miss Mollie Andrews, (a) "Slow Horses Slow" (Mallinson); (b) "Violet" (Mallinson).
 9.25: Presentation of the opera "Rigoletto" (Verdi), Fourth Instalment (H.M.V. Records C1493-7).
 (Synopsis: The scene of the plot is the Court of the Duke of Mantua, a Don Juan against whose attentions no woman is safe. He is indebted for help in his schemes to his jester, Rigoletto. The courtiers have much reason to hate both Duke and Jester, and plan revenge on Rigoletto. The courtiers, resorting to a ruse by which they secure the help of Rigoletto, he not realising that his own daughter is the victim, abduct Gilda and carry her off to the palace. Rigoletto swears vengeance on the Duke. The last act of the opera will be presented this evening. The scene is a house in a by street. Rigoletto engages his assassin, Sparafucile, to kill the

first person who comes, whoever this may be. He entices the Duke to the house, using Sparafucile's sister, Maddalena, as the attraction. Gilda hears, and, though wronged by the Duke, makes up her mind to give her life to save him. Putting herself in the Duke's place, she causes Sparafucile to stab her. Rigoletto enters to receive the Duke's body in a sack. To his astonishment and horror he hears the Duke singing in a room above. He opens the sack and finds—his daughter!

- 9.1: Weather report.
 9.3: Violin solo—Miss Eva Judd, "Doges March—Merchant of Venice" (Novello).
 9.8: Tenor solo—Franklyn Baur, "Beloved" (Khan) (H.M.V. Record EA392).
 9.11: Recital—Miss Joyce Hould, "Scene From Two Gentleman of Verona" (Shakespeare).
 9.17: Contralto solo—Miss Stasia McCready, "Tre Giorni Son Che Nina" (Pergolesi).
 9.21: Trio—4YA Broadcasting Trio, "Pierrette" (Chaminade).
 9.27: Bass solo—Mr. E. G. Bond, "Hear Me Ye Winds and Waves" (Handel).
 9.31: Grand Organ Solos—Arthur Meale, (a) "March on a Theme of Handel" (Guilmant); (b) "The Pilgrim's Song of Hope" (Batiste) (H.M.V. Record C1277).
 9.39: Mezzo-soprano solo—Miss Mollie Andrews, "A Summer Night" (Thomas).
 9.43: Cello solo—Mr. P. J. Palmer, "A Song of India" (Korsakoff).
 9.46: Recital—Miss Joyce Hould, "Sketch from Dickens."
 9.52: Orchestral—Victor Symphony Orchestra, "Dance of the Hours" (Ponchielli) (Zonophone Record EF12).
 10.0: Contralto solos—Miss Stacia McCready (a) "Saca Chi'O" (Handel); (b) "When All Was Young" ("Faust") (Gounod).
 10.5: Chorus—Light Opera Company "Gems From 'No, No, Nanette'" (Youmans) (H.M.V. Record C1205).
 10.9: Close down.

Tuesday, May 21

1YA, AUCKLAND (333 METRES)—TUESDAY, MAY 21.

- 3 p.m. Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.3: Further selected studio items.
 4.25: Sports results to hand.
 4.30: Close down.

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- 6.0: Children's session conducted by Uncle George.
 7.1: News session and market reports.
 7.40: Talk—Mr. George Campbell, "Motoring."
 8.0: Chimes.
 8.1: Relay of Orchestral Music from the Majestic Theatre, under conductorship of Mr. J. Whiteford Waugh.
 8.11: Duet—Madame Cora Melvin and Mr. Norman Day, "The Garden of Your Heart" (Dorel).
 8.15: Recital—Miss Maisie Carte-Lloyd, "Burglar Bill."
 8.20: Grand organ solo—Spencer Shaw, "Simple Aveu" (Thome) (Zonophone Record 5162).
 8.23: Tenor—Mr. George Barnes, (a) "La Donna e Mobile" ("Rigoletto") (Verdi), (b) "Take a Pair of Sparkling Eyes" (Sullivan).
 8.31: Instrumental trio—Studio Trio, "Three Cuban Dances" (Cervantes).
 8.41: Contralto solos—Miss Phillis Hazell, (a) "Habanera" (Bizet), (b) "Quando a le Lieta" (Gounod).
 8.49: Relay of Orchestral Music from the Majestic Theatre.
 8.59: Baritone solo—Mr. Norman Day, "Mandalay" (Willeby).
 9.3: Weather report.
 9.6: Grand organ solo—Spencer Shaw, "Salut d'Amour" (Elgar) (Zonophone Record 5162).
 9.9: Soprano solo—Madame Cora Melvin, (a) "The Lark Now Leaves Its Wat'ry Nest" (Parker), (b) "I Wonder if Love is a Dream" (Forster).
 9.17: Cello—Miss Molly Wright, (a) "La Bandoline" (Couperin), (b) "Gavotte" (Couperin).
 9.24: Tenor solo—Mr. George Barnes, "L'Elisir d'Amore" (Donizetti).
 9.28: Piano solos—Mischa Levitzki, (a) "La Campanella" (Paganini—Liszt), (b) "Staccato Etude" (Rubinstein) (H.M.V. Record D1489).
 9.36: Recital—Miss Maisie Carte-Lloyd, (a) "A Pleased Customer Returns," (b) "Her Lovers."
 9.44: Baritone solo—Mr. Norman Day, "The Rose Will Blow" (King).
 9.48: Instrumental trio—Studio Trio, "Gipsy Love" Light Opera Selection (Lehar).
 9.46: Contralto solo—Miss P. Hazell, "O Mio Fernando" (Donizetti).
 10.0: Marches—Black Diamond Band, (a) "Funeral March of a Marionette" (Gounod); (b) "Punjaub March" (Payne) (Zonophone Record 2793).
 10.6: Close down.

2YA, WELLINGTON (420 METRES).—TUESDAY, MAY 21.

- 3 p.m.: Chimes of the General Post Office clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sporting results to hand.
 5.0: Children's session, conducted by Uncle Jim.
 6.0: Dinner session.
 Orchestral—Weber's Orchestra, "Pot-pourri of Waltzes" (Rebrecht) (H.M.V. Record C1544).
 Soprano solo—Evelyn Scotney, "Blue Danube Waltz" (Strauss) (H.M.V. Record D1403).
 6.13: Tacet.
 6.15: Orchestral—San Francisco Symphony Orchestra, (a) "Serenade" (Moszkowski); (b) "Aubade" (Anber); (c) "Liebeslied" (Kreisler) (H.M.V. Record ED6).
 Violin solo—Isolde Menges, "Salut d'Amour" (Elgar) (H.M.V. Record D1813).
 6.27: Tacet.
 6.30: Orchestral—Philadelphia Symphony Orchestra, "Invitation to the Waltz" (Weber) (H.M.V. Record D1235).
 Bass-baritone solo—Peter Dawson, "Travellers All, of Every Station" (Balfe) (H.M.V. Record C1442).
 6.42: Tacet.
 6.45: Waltz—International Concert Orchestra, "Estudiantina" (Waldteufel) (Zonophone Record EF6).
 Novelty duet—Dalhart and Ribison, "The Little Green Valley" (H.M.V. Record EA382).
 Saxophone solo—Rudy Wiedoeft, "Rubenola" (Wiedoeft) (Zonophone Record EE119).
 6.56: Tacet.
 7.0: News session.
 7.40: Lecturette—Representative Agricultural Department, "For the Man on the Land."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Romantique" (Keler-Bela).
 8.9: Tenor solo—Mr. E. W. Robbins, "Ships of Arcady" (Head).
 8.13: Violin solo—Mr. W. McLean (a) "Good-bye" (Tosti) (by request); (b) "Schon Rosmarin" (Kreisler).
 8.20: Humour—The Co-Optimists in short turns and encores.
 8.28: Suite—Orchestra, "A Night in Madrid" (Glinka).
 8.33: Popular Songs—Messrs. Edward Silver and Billy Hart in the latest popular song hits.
 8.40: Hawaiian—Kane's Hawaiians, (a) "Drowsy Waters"; (b) "Hilo Hawaiian March" (Zonophone Record 2992).
 8.46: Tenor solos—Mr. E. W. Robbins, (a) "The Sea Gipsy" (Head); (b) "Rose Dreams" (Stasny).
 8.53: Instrumental—Orchestra, repeat item.
 9.1: Weather report.
 9.3: Instrumental—Orchestra, (a) cornet solo, "Drake Goes West" (Sanderson); (b) xylophone solo, "Splitting Kindling Wood" (Hacker).
 9.9: Humour—The Co-Optimists in short turns and encores.

- 9.16: Popular songs—Messrs. Edward Silver and Billy Hart in further popular songs.
 9.23: Instrumental—Orchestra, "Island King" (Garstin).
 9.30: H.M.V. dance programme:
 Overture—H.M. Coldstream Guards, "Der Freischutz" (Weber) (H.M.V. Record C1335).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "My Pet" (Yellen) (H.M.V. Record EA373).
 Foxtrot—Ted Weem's Orchestra, "Baby Doll" (Herscher) (H.M.V. Record EA433).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "I'm Afraid of You" (Davis) (H.M.V. Record EA373).
 9.43: Entertainer—Will Gardner, "That's Another One Gone" (Darewski) (Zonophone Record 5079).
 Vocal duet—"The Grass Grows Greener"—Jim Miller and Charlie Farrell (Yellen) (Zonophone Record EE100).
 Foxtrot—Ted Weem's Orchestra, "If You Want the Rainbow" (Rose) (H.M.V. Record EA433).
 Foxtrot with vocal chorus—Rhythmic Eight, "You Don't Like It, Not Much" (Miller) (Zonophone Record EE96).
 Waltz—Pennsylvania Orchestra, "Was It a Dream?" (Yellen) (H.M.V. Record EA335).
 10.0: Tenor with violin and piano—Browning Mummery, "Had You But Known" (Denza) (H.M.V. Record B2756).
 Hawaiian selection—Honolulu Serenaders, "Honolulu Stomp" (Pilipo) (Zonophone Record EE92).
 Foxtrot—Nat Shilkret's Orchestra, "Dainty Miss" (Barnes) (H.M.V. Record EA276).
 Hawaiian selection—Hilo Hawaiian Orchestra, "Hawaiian Dreams" (Marple) (Zonophone Record EE56).
 10.14: Male voices—The Revellers, "Was It a Dream?" (Coslow) (H.M.V. Record EA402).
 Bass-baritone solo—Peter Dawson, "The Admiral's Yarn" (Rubens) (H.M.V. Record B2661).
 Wurlitzer organ solo—Jesse Crawford, "Rosette" (Newman) (H.M.V. Record EA405).
 Foxtrot—Pennsylvania Orchestra, "The Grass Grows Greener" (Yellen) (H.M.V. Record EA335).
 Hawaiian orchestra—Hilo Hawaiian Orchestra, "Song of Hawaii" (Bories) (H.M.V. Record EA276).
 10.28: Male voices—Revellers, "Dream River" (Brown) (H.M.V. Record EA384).
 Foxtrot—Victor Orchestra, "What Do We Do on a Dew-dew-dewy Day?" (Johnson) (H.M.V. Record EA244).
 Foxtrot—Victor Orchestra, "The Doll Dance" (Brown) (H.M.V. Record EA181).
 Waltz—Bert Firman's Dance Orchestra, "Sunset Down in Somerset" (Evans) (Zonophone EE96).
 10.41: Tenor solo—Joseph Hislop, "Mary" (Richardson) (H.M.V. Record DA901).
 Hawaiian—Hilo Hawaiian Orchestra, "Honolulu Moon" (Lawrence) (Waltz) (Zonophone Record EE56).
 Foxtrot—Victor Orchestra, "Flapperette" (Greer) (H.M.V. Record EA181).
 Foxtrot—Hamp's Kentucky Serenaders, "Is it Possible?" (Dixon) (H.M.V. Record EA244).
 10.54: Comedian—Clarkson Rose, "I Want to be Alone with Mary Brown" (Gilbert) (Zonophone Record 5145).
 Wurlitzer organ solo—Jesse Crawford, "For Old Times' Sake" (de Sylva) (H.M.V. Record EA405).
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES).—TUESDAY, MAY 21. SILENT DAY.

4YA, DUNEDIN (463 METRES).—TUESDAY, MAY 21.

- 3 p.m.: Town Hall Chimes.
 3.1: Relay of instrumental music from the "Ritz."
 4.25: Sporting results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session conducted by Big Brother Bill.
 7.0: News session.
 7.15: Lecturette—Professor Fisher, Otago University, under the auspices of the Workers' Education Association, "Why Incomes are Unequal."
 8.0: Town Hall Chimes.
 Concert by the St. Kilda Band and assisting artists.
 8.1: March—Band, "Southern Cross" (Rowlings).
 Waltz—Band, "Silver Lining" (Norman).
 8.9: Chorus—The Revellers, "Gems from 'Tip Toes'" (Gershwin) (H.M.V. Record C1293).
 8.13: Recital—Mrs. Culford Bell, "Two Little Scottish Martyrs" (Anon.).
 8.18: Pianoforte and song recital—Miss Edith Harrhy:
 Pianoforte: (1) "Nocturne in F Sharp" (Chopin); (2) "Etude in A Minor" (McDowell).
 Songs: (1) "Bells Across the Moor" (Harrhy); (2) "You" (Harrhy); (3) "Six Weeks Old" (Harrhy); (4) "The Milkman" (Harrhy).
 8.30: Orchestral—San Francisco Symphony Orchestra, "Funeral March of a Marionette" (Gounod) (H.M.V. Record ED5).

- 8.34: Baritone solos—Mr. L. M. Cachemaille, (a) "Morning" (Speaks), (b) "The Lilac Tree" (Gartlan).
 8.41: Foxtrot—Band, "Forty-Seven Ginger-Headed Sailors" (Sarony).
 Song waltz—Band, "Was It a Dream?" (Spier).
 8.49: Humour—John Henry and Blossom, "The Stocking" (Henry and Reeve).
 8.55: Chorus and orchestra—Victor Arden, Phil Ohman, and Orchestra, "Funny Face" Selections (H.M.V. Record EB28).
 8.59: Weather report.
 9.0: Chorus—Light Opera Company, "Gems from 'Rose Marie'" (Friml) (H.M.V. Record C1205).
 9.4: Selection—Band, "Gems of Harroway."
 9.16: Recital—Mrs. Culford Bell, (a) "Leetle Bateese" (Drummond), (b) "The Wreck of the Julie Plante" (Drummond).
 9.24: Pianoforte and song recital—Miss Edith Harry:
 Pianoforte: (1) "Melodie in E" (Rachmaninoff); (2) "Waltz in G Flat" (Chopin).
 Songs: (1) "There is a Fair Isle" (Harry); (2) "Mother's Song" (Harry); (3) "Boat Reverie" (Harry).
 9.39: Cornet solo, band accompaniment, "Heart of a Rose" (Nicholls).
 9.44: Tenor solo—Sydney Coltham, "Green Hills o' Somerset" (Coates) (H.M.V. Record B2783).
 9.47: Selection—Band, "Pirates of Penzance" (Sullivan).
 9.57: Baritone solo—Mr. L. M. Cachemaille, "They Say" (Evans).
 10.0: March—Band, "Queen of the South" (Rimmer).
 10.4: Close down.

Wednesday, May 22

1YA, AUCKLAND (333 METRES).—WEDNESDAY, MAY 22.

- 3 p.m.: Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Further studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle Tom.
 7.0: News and information session.
 7.40: Talk—Mr. Norman Kerr, "Physical Culture."
 8.0: Chimes.
 8.1: Overture—National Symphony Orchestra, "Martha" (Flotow) (Zonophone BB19).
 8.5: Auckland Comedy Players (under direction of Mr. J. F. Montague), will present a three-act play, "The Dover Road" (A. A. Milne):
 Act 1. (Synopsis: Evening. The arrival of the eloping Leonard and Anne at the House of Mystery on the Dover Road, kept by the inscrutable Mr. Latimer especially for runaway couples.)
 Entr'acte, Royal Albert Hall Orchestra, "Carmen—Prelude to Act I." (Bizet) (H.M.V. E461).
 Act 2. (Synopsis: The next morning. The discovery that Nicholas and Latimer's wife, Eustasia, who have also eloped, have been in the same house for a week under the protection of Mr. Latimer and his retinue.)
 Entr'acte, Royal Albert Hall Orchestra, "Carmen—Prelude to Act 2." (Bizet) (H.M.V. E461).
 Act 3. (Synopsis: Three days later, Latimer, who has contracted a severe cold, is nursed and "cosseted" by his eloping but sympathetic wife. After a heart-to-heart talk, the two men, Leonard and Nicholas, depart without writing to say good-bye to the ladies. They've had enough!)
 10.11: March—Royal Opera Orchestra, "Marche Hongroise" (Berlioz) (H.M.V. C1279).
 10.15: God Save the King.

2YA, WELLINGTON (420 METRES).—WEDNESDAY, MAY 22.

SILENT DAY.

3YA, CHRISTCHURCH (306 METRES).—WEDNESDAY, MAY 22.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session.
 7.30: Addington stock market reports.
 8.0: Chimes.
 8.1: Overture—New Queen's Hall Orchestra, "William Tell" (Rossini) 1. Dawn. 2. The Storm. 3. The Calm. 4. Finale. (Columbia Records 01875-6).
 8.13: Chorus—Salon Quartet—"Anvil Chorus" ("Il Trovatore") (Verdi).
 8.17: Pianoforte solo—Miss Lucy Fullwood, "Sonata—1st. Movement" (Schumann).
 8.25: Contralto solo—Miss Dulcie Mitchell, "Beyond The Dawn" (Sanderson).
 8.29: Male quartet—Goodrich Silvertown Quartet, "Who's Blue Now?" (Meyer) (Columbia Record 01192).
 8.32: Orchestral—Studio Orchestra under the conductorship of Mr. Harold Beck, (a) "Minuet" (Boccherini); (b) "Ave Verum" (Mozart); (c) "La Danza" (Rossini).
 8.42: Tenor solo—Mr. H. Blakeley, "The Secret" (Pringle Scott).
 8.46: Soprano solo—Miss Lillian Hanham, "Dream of Home—Il Bacio" (Arditi).

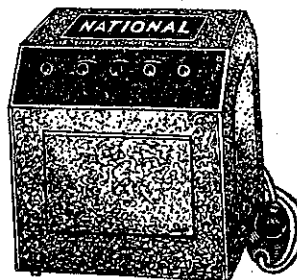
- 8.51: Xylophone duet—Byrne and Bennett, "The Two Imps" (Alford) (Columbia Record 02745).
 8.55: Baritone recitative and aria, Mr. J. Graham Young, (a) "Rabblement Draws Near"; (b) "A Palmer Met Me on the Way" ("Una" (Gaul).
 9.0: Soprano and tenor duet—Salome Duo, "Miserere Scene" ("Il Trovatore") (Verdi).
 9.4: Weather report.
 9.9: Instrumental—Studio Orchestra, (a) "Pavane" (Saint-Saens); (b) "Orientale" (Cui).
 9.17: Vocal quartet—Salon Quartet, "Golden Slumbers Kiss Your Eyes" (Senior).
 9.22: Pianoforte solo—Miss Lucy Fullwood, "Folk Song" (Mendelssohn).
 9.26: Soprano solo—Miss Lillian Hanham, "My Life is Love" ("The Maid of the Mountains") (Tate).
 9.30: Contralto and baritone duet—Salon Duo, "Come to the Fair" (Martin).
 9.34: Orchestral—Studio Orchestra, "Sullivan Selection" (Sullivan).
 9.44: Tenor solo—Mr. H. Blakeley, "My Sweetheart When a Boy" (Morgan).
 9.48: Contralto solos—Miss Dulcie Mitchell, (a) "You'll Get Heaps o' Lickings" (Clarke); (b) "Keep on Hopin'" (Heron-Maxwell).
 9.54: Violin solo—Efreem Zibballist, "Impromptu" (Aulin) (Columbia Record 04220).
 9.58: Baritone solo (with orchestral accompaniment)—Mr. J. Graham Young, "Shipmates of Mine" (Sanderson).
 10.2: Close down.

4YA, DUNEDIN (463 METRES).—WEDNESDAY, MAY 22.

- 3.0: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sporting results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Overture—Royal Opera Orchestra, "Marche Hongroise" (Berlioz) (H.M.V. Record C1279).
 8.5: Scotch comedian—Mr. Buster Brown, (a) "When I Get Back To Bonnie Scotland" (Lauder); (b) "Roamin' in the Gloamin'" (Lauder).
 8.12: Sketch—Miss Anita Winkel and Major F. H. Lampen.
 8.18: Baritone solo—Mr. Arthur Allop, "Harlequin" (Sanderson).
 8.32: Foxtrot with vocal refrain—Aaronson's Commanders, "I'll Get By As Long As I Have You" (Turk) (H.M.V. Record EA466).
 Dance Orchestra—McEnelly's Orchestra, "Sleep, Baby, Sleep" (Tucker) (H.M.V. Record EA466).
 8.38: The Scott Banjo Duo, (a) "Sunflower Dance" (Ossman); (b) "Purple Pansies" (Sutherland); (c) "Vera" (Weidt).
 8.46: Vocal duet—Dalhart and Robison, "My Blue Mountain Home" (Robison) (H.M.V. Record EA925).
 8.49: Scotch comedian—Mr. Buster Brown, "When I Was Twenty One" (Lauder).
 8.53: Tenor with kinema organ—Gerald Griffin, "At The End of an Irish Moonbeam" (Golden) (Zonophone Record 2989).
 8.56: Weather report.
 8.58: Sketch—Miss Anita Winkel and Major F. H. Lampen.
 9.8: Orchestral—Piccadilly Orchestra, "The Waltz Dream" (Strauss) (H.M.V. Record B2684).

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- 9.14: Baritone solos—Mr. Arthur Alloo, (a) "Border Ballad" (Cowen); (b) "King Charles" (White).
- 9.21: Banjo duo—The Scott Banjo Duo, (a) "Dream of Toyland" (Weidt); (b) "Kingdom Coming" (Robison); (c) "Plantation" (trdtl.).
- "His Master's Voice" dance programme:
- 9.30: Waltz—International Concert Orchestra, "Blue Danube" (Strauss) (Zonophone EF21).
- Comedian with chorus—Clarkson Rose, "Hippopotamus" (Carlton) (Zonophone Record 5145).
- Foxtrot with vocal chorus—Shilkret's Orchestra, "Flower of Love" (Dreyer) (H.M.V. Record EA431).
- Foxtrot with vocal refrain—Shilkret's Orchestra, "Dancing Shadows" (Golden) (H.M.V. Record EA367).
- Waltz—Paul Whiteman's Orchestra, "Cheerful Beanie Bee" (Wayne) (H.M.V. Record EA398).
- 9.48: Tenor solo—Franklyn Baur, "Just Across The Street From Heaven" (Newman) (Zonophone Record EE107).
- Saxophone solo—Rudy Wiedoeft, "Rubenola" (Wiedoeft) (Zonophone Record EE119).
- Tango Argentino—International Novelty Orchestra, "Y Como Le Va?" (Valverde) (H.M.V. Record EA364).
- Wurlitzer organ solo—Jesse Crawford, "The Dance of the Blue Danube" (Fisher) (H.M.V. Record EA404).
- 9.58: Duet—Maurice and Sidney, "Toy-Town Artillery" (Lynton) (Zonophone Record 5161).
- Dance Orchestra—Shilkret's Rhythm Melodists, "Dolly Dimples" (Alter) (H.M.V. Record EA336).
- 10.4: Baritone solo—John Brownlee, "Sirs! Your Toast" (Bizet) (H.M.V. Record D1396).
- Wurlitzer Organ Solo—Jesse Crawford, "I Can't Do Without You" (Berlin) (H.M.V. Record EA404).
- Waltz—Wurlitzer Organ Solo—Chas. W. Saxby, "Janette" (Nichols) (Zonophone 5094).
- Yale Blues—Rio Grand Tango Band, "A Blue Serenade" (Lytell) (H.M.V. Record B5355).
- 10.18: Tenor with kinema organ—Gerald Griffin, "My Irish Song of Songs" (Sullivan) (Zonophone Record 2989).
- Wurlitzer Organ Solo—Jesse Crawford, "King For A Day" (Lewis) (H.M.V. Record EA425).
- Foxtrot with vocal refrain—Nat Shilkret and Victor Orchestra, "Hallelujah" (Robin) (H.M.V. Record EA253).
- Foxtrot with vocal refrain—Waring's Pennsylvanians, "What Do You Say?" (Yellen) (H.M.V. Record EA340).
- 10.31: Male Quartet—De Reszke Singers, "My Lady Chlo" (Leighton) (H.M.V. Record EA432).
- Foxtrot—Nat Shilkret's Orchestra, "Rio Rita" (McCarthy) (H.M.V. Record EA315).
- Foxtrot—Zez Confrey, "Polly" (Zamecnik) (H.M.V. Record EA267).
- Foxtrot—Nat Shilkret's Orchestra, "The Kinkajou" (McCarthy) (H.M.V. Record EA315).
- 10.44: Male Quartet—De Reszke Singers, "Absent" (Metcalf) (H.M.V. Record EA432).
- Duet with violin and guitar—Dalhart and Robison, "Oh, Suzanna" (Foster) (H.M.V. Record EA309).
- Hawaiian—Ferreira and Paaluh, "Hawaiian Waltz Medley" (Trdtl.) (H.M.V. Record B2369).
- Barn Dance—Bert Firman's Dance Orchestra, "My Lady Dainty" (Hesse) (Zonophone Record 5118).
- Waltz—The Troubadours, "La Golundrina" (The Swallow) (H.M.V. Record EA349).
- Schottische—International Novelty Quartet, "Lens" (Mewes) (Zonophone Record EE67).
- 11.0: Close down.

Thursday, May 23

1YA, AUCKLAND (333 METRES)—THURSDAY, MAY 23.

- 2 p.m.: Afternoon session—Selected studio items.
- 4.0: Literary selection by the Announcer.
- 4.8: Further studio items.
- 4.25: Sports results to hand.
- 4.30: Close down.
- 6.0: Children's session conducted by Peter Pan.
- 7.1: News and market reports.
- 7.40: Talk—"New Zealand Manufactures—(1) Confectionery."
- 8.0: Chimes.
- 8.1: Overture—Orchestra, "Plymouth Ho!"
- 8.11: Baritone solo—Mr. Walter Brough, "The Great Awakening" (Kramer).
- 8.15: Orchestral—Orchestra, (a) Violin solo with orchestral accompaniment (soloist, Miss Ina Bosworth), "Reverie" (Vieuxtemps); (b) "Artist's Life" Waltz (Strauss).
- 8.23: Mezzo-soprano solo—Miss Norma Calder, (a) "Willow Song" (Sullivan), (b) "I Am Longing for the Spring" (Morris).
- 8.30: Debate—Messrs. Vernon Drew and F. W. Barker, "That Sport is Playing too great a part in Modern Life."
- 9.0: Weather report.
- 9.3: Song suite—Orchestra and Chorus, "J. L. Molloy's Songs" (arr. Baynes).
- 9.11: Baritone solos—Mr. W. Brough, (a) "A Son of the Desert" (Phillips); (b) "Sacrament" (McDermid).

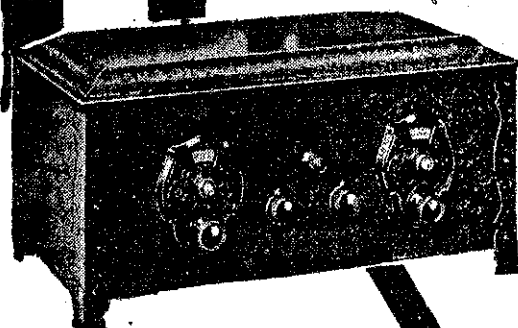
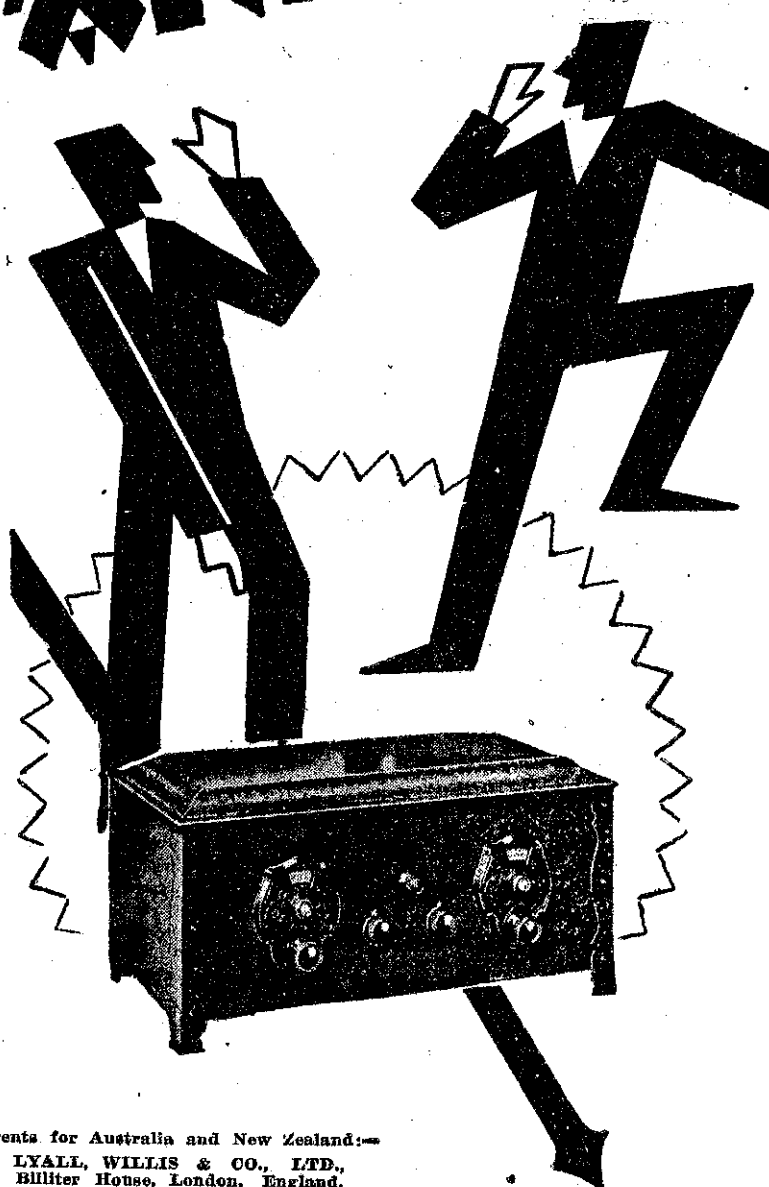
- 9.19: Ballet suite—Orchestra, "Ascanio Ballet Music," Part 2 (Saint-Saens): (1) Love appears to Psyche; (2) Ensemble of Phobus, Diane, Erigone, Nioce, and Bacchus, with Muses, Nymphs, and Bacchantes; (3) Variation—Love Theme; (4) Entrance of Dragon of Hesperides carrying the Golden Apple; (5) Goddesses, Bacchantes, Nyads and Dryads. (Saint-Saens makes great use of the woodwind in this ballet of the gods, and the third number is particularly notable for the brilliant flute solo played by Mr. Victor Bedford).
- 9.29: Mezzo-soprano solo—Miss Norma Calder, "Slave Song" (Del Reigo).
- 9.33: "Columbia" Dance Programme:
- March—H.M. Grenadier Guards Band, "Twist and Twirl" (Kottann) (Columbia Record 0987).
- Foxtrot—Denza Dance Band, "Dance of the Blue Danube" (Fischer) (Columbia Record 01151).
- Foxtrot—Biltmore Hotel Orchestra, "Sweet Sue—Just You" (Columbia Record 01249).
- Foxtrot with vocal refrain—Paul Whiteman's Orchestra, "Just a Sweetheart" (Dreyer) (Columbia Record 07015).
- 9.43: Tenor solo—Alfred O'Shea, "Love's Garden of Roses" (Wood) (Columbia Record 04117).
- Vocal duet—Layton and Johnstone, "Because My Baby Don't Mean 'Maybe' Now" (Donaldson) (Columbia Record 01339).
- Piano duet—Constance Mering and Muriel Pollack, "High Hat" Foxtrot (Alter) (Columbia Record 01224).
- Foxtrot—Piccadilly Revels Band, "Dolores" (Kassel) (Columbia Record 01157).
- Waltz with vocal refrain—Paul Whiteman's Orchestra, "Where is the Song of Songs for Me?" (Berlin) (Columbia Record 07015).
- 10.0: Soprano and male quartet—Norah Blaney and Ramblers, "Just Like Darby and Joan" (Leslie) (Columbia Record 01170).
- Pianoforte solo—Gil Dech, "Sometimes I'm Happy" (Youmans) (Columbia Record 01205).
- Foxtrot with vocal refrain—Paul Whiteman's Orchestra, "Roses of Yesterday" (Berlin) (Columbia Record 07014).
- Novelty Foxtrot—Debroy Somers' Band, "Laughing Marionette" (Collins) (Columbia Record 01341).
- Waltz with vocal refrain—Paul Whiteman's Orchestra, "The Sidewalks of New York" (Lawlor) (Columbia Record 07014).
- 10.17: Tenor solo—Alfred O'Shea, "Love, Here is My Heart" (Ross) (Columbia Record 03589).
- Xylo-rimba Orchestra, "Along Miami Shore" (Warren) (Regal Record G20328).
- Marimba Orchestra—Rio Marimba Orchestra, "My Isle of Golden Dreams" (Blaufuss) (Columbia Record 02685).
- 10.27: Humour—Flotsam and Jetsam, "Optimist and Pessimist" (Hilliam) (Columbia Record 0995).
- Hawaiian—South Sea Islanders, "Dreamy Hilo Bay" (Clark) (Columbia Record 01162).
- Hawaiian—King's Hawaiian Players, "Hilo March" (Berger) (Columbia Record 01226).
- Pipe organ solo with vocal chorus—Milton Charles, "Are You Happy?" (Ager) (Columbia Record 01184).
- 10.41: Tenor solo—Charles Hackett, "The World is Waiting for the Sunrise" (Lockhart) (Columbia Record 03596).
- Vocal solo—Vaughan de Leath, "I Just Roll Along" (De Rose) (Columbia Record 01136).
- Waltz—Xylo-rimba Orchestra, "My Sweetheart" (Nelson) (Regal Record G20328).
- Vocal solo—Vaughan de Leath, "Watching for the Boogie Man" (Johnson) (Columbia Record 01136).
- 10.54: Piano-accordion solo—Guido Deiro, "Toselli's Serenade" (arr. Deiro) (Columbia Record 01168).
- Vocal duet—Layton and Johnstone, "Good News—Varsity Drag" (de Sylva) (Columbia Record 01308).
- Vocal duet—Jack Lumsdaine and Len Maurice, "Good-Night" (Wood) (Columbia Record 01191).
- 11.0: Close down.

2YA, WELLINGTON (420 METRES)—THURSDAY, MAY 23.

- 3 p.m.: Chimes of the General Post Office clock.
- 3.1: Selected gramophone items.
- 4.30 and 4.55: Sporting results to hand.
- 5.0: Children's session conducted by Aunt Gwen.
- 6.0: Dinner session:
- Overture—H.M. Coldstream Guards, "1812" (Tschaiakowsky) (H.M.V. Record C1369).
- Chorus—Light Opera Company, "Vagabond King" Vocal Gems (Trinkl) (H.M.V. Record C1346).
- 6.12: Tacet.
- 6.15: Waltz—Marek Weber's Orchestra, "Wine, Women and Song" (Strauss) (H.M.V. Record C1407).
- Tenor solo—Browning Mummery, "Had You but Known" (Denza) (H.M.V. Record B2756).
- March—Royal Opera Orchestra, "Marche Militaire" (Schubert) (H.M.V. Record C1279).
- 6.26: Tacet.
- 6.30: Cello solo—Pablo Casals, "O Star of Eve" (Wagner) (H.M.V. Record DB1012).
- Male voices—Revellers, "Mammy is Gone" (De Sylva) (H.M.V. Record EA384).

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- Wurlitzer Organ—Leslie James, "O Sole Mio" (Di Capua) (H.M.V. Record B2792).
- 6.44: Tacet.
- 6.45: Wurlitzer Organ solo—Leslie James, "Simple Aveu" (Thome) (H.M.V. Record B2792).
- Bass-Baritone solo—Peter Dawson, "The Old Superb" (Stanford) (H.M.V. Record C1479).
- Waltz—International Concert Orchestra, "The Skaters" (Waldteufel) (Zonophone Record EF6).
- 6.55: Tacet.
- 7.0: News session.
- 7.34: Lecturette—Mr. W. J. Fergie, Publicity Branch, New Zealand Railways, "Excursions by Rail."
- 7.40: Lecturette—Miss M. S. Christmas, Voluntary Organiser, Wellington Federation Women's Institutes, "What Women's Institutes Bring to Country Folk."
- 8.0: Chimes of the General Post Office clock.
- Studio Concert by the Wellington City Salvation Army Band, under the conductorship of Mr. H. Scotney, and assisting artists.
- 8.1: March—Band, "Red Shield" (Goffin).
- 8.6: Tenor solo—Mr. Charles Williams, "The Desert Queen" (Hartwell-Jones).
- 8.10: Quartet—The Lyric Quartet, "Spin, Spin" (traditional).
- 8.14: Cornet solo—Bandsman B. J. Dutton, "The Song that Reached My Heart" (arr. Hawkes).
- 8.19: Selection—Band, "Love's Manifestation" (Kitching).
- 8.27: Baritone solos—Mr. Barry Coney, (a) "Alleluia" (Morris), (b) "The Carpet" (Sanderson).
- 8.34: Mezzo-soprano solo—Miss Monica Malfroy, "If there were Dreams to Sell" (Ireland).
- 8.38: Accordion and xylophone solo—International Novelty Orchestra, "El Choclo" (Villoldo) (H.M.V. Record EA364).
- 8.41: Humour—Mr. E. A. Sargent, "Land of Dreams" (Ellis).
- 8.48: Quartet—The Lyric Quartet, "Mammy's Little Sunny Boy" (Caddigan).
- 8.52: Meditation—Band, "Wareham" (Coles).
- 9.0: Weather report.
- 9.3: Bass solo—Mr. W. Binet Brown, "When the King went forth to War" (Koenen).
- 9.7: Duet—Messrs. Will Goudie and W. B. Brown, "Tell Her I Love Her So" (Defaye).
- 9.11: National selection—Band, "Scotland" (Scotney).
- 9.20: Mezzo-soprano solo—Miss Monica Malfroy, (a) "Just in the Hush Before the Dawn" (Lohr), (b) "Trees" (Rasbach).
- 9.26: Baritone solos—Mr. Will Goudie, (a) "Had a Horse" (Korby), (b) "King Solomon" (Cook).
- 9.33: Grand organ solo—Spencer Shaw, "Salut d'Amour" (Elgar) (Zonophone Record 5162).
- Contralto and male quartet—Sophie Braslau, "Carry Me Back to Old Virginny" (Bland) (Columbia Record 04215).
- 9.39: Humour—Mr. E. A. Sargent, "A Political Meeting" (Wilcock).
- 9.46: Quartet—The Lyric Quartet, "Aloha-oe" (arr. Parks).
- 9.50: Selection—Band, "The Tempest" (arr. Jackson).
- March—Band, "Our Flag" (Roberts).
- 10.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—THURSDAY, MAY 23.

- 3 p.m.: Afternoon session—Selected Gramophone items.
- 4.25: Sports results to hand.
- 4.30: Close down.
- 6.0: Children's session conducted by Uncle John.
- 7.0: News session.
- 8.0: Chimes.
- Special "New Zealand" programme, featuring the "Commemorative Ode" (Johannes Andersen) (music by Alfred Hill).
- 8.1: Overture—Berlin State Opera Orchestra, "Symphony No. 39 in E Flat," First Movement—Adagio, Allegro (Mozart) (H.M.V. Record D1448).
- 8.9: Chorus—Melodious Four, "Chorus of Welcome" ("Commemorative Ode, New Zealand International Exhibition, 1906-7" (Hill).
- 8.15: Cello solo—Mr. Harold Beck, "Maori Lullaby" (Wm. Jones, arr. Beck).
- 8.19: Soprano solo—Miss Frances Hamerton, "Long, Long Ago She Lay" ("Commemorative Ode" (Hill).
- 8.23: Baritone solo—Mr. T. D. Williams, "Not Unsought the Isles were Found" ("Commemorative Ode" (Hill).
- 8.27: Instrumental—Christchurch Broadcasting Trio, "Andante, Scherzo—First Trio" (Mendelssohn).
- 8.37: Tenor solo and quartet—Mr. Russell Sumner and Melodious Four, "Tillage and Shepherding" ("Commemorative Ode" (Hill).
- 8.41: Recital—Mrs. Culford Bell, (a) "The House by the Side of the Road" (Samuel Foss), (b) "The Little High Chair" (Joel Benton).
- 8.45: Piano and orchestra—Arthur de Greef and Royal Albert Orchestra, "Hungarian Fantasia" (Liszt) (H.M.V. Records D1806-7).
- 9.1: Weather report.
- 9.6: Chorus—Melodious Four, "The Lakes and Trees" ("Commemorative Ode" (Hill).
- 9.12: Talk—Sir Francis Boys (President of the Canterbury Amateur Aero Club).
- 9.27: Chorus—Melodious Four, "Open Stands New Zealand's Gates" ("Commemorative Ode" (Hill).
- 9.32: Cello solo—Mr. Harold Beck, "Rawhiti" (Song of the Sun) (Hugo Anson).

- 9.36: Tenor solo and chorus—Mr. Russell Sumner and Melodious Four, "Joyously, Joyously" ("Commemorative Ode" (Hill).
- 9.40: Instrumental—Christchurch Broadcasting Trio, "Three Maori Songs," (1) "Haere Tonu" (Horne), (2) "Pokarekare" (Hill), (3) "Kamata" (Te Rangī Hīkiora).
- 9.46: Tenor solos—Ernest McKinley, (a) "Waiata Maori" (Hill), (b) "Song of the Locust" (Hill) (Columbia Record 01061).
- 9.54: Chorus—Soprano solo and quartet, Melodious Four, "Praise to God" (Hill).
- 9.58: Recital—Mrs. Culford Bell, "The Last Lesson" (Alphonse Daudet).
- 10.4: Chorus—Melodious Four, "My Land" (Wedde).
- 10.8: Close down.

4YA, DUNEDIN (436 METRES)—THURSDAY, MAY 23.

SILENT DAY.

Friday, May 24

1YA, AUCKLAND (333 METRES)—FRIDAY, MAY 24.

- 3.0 p.m.: Afternoon session—Selected Studio items.
- 4.0: Literary selection by the Announcer.
- 4.3: Further studio items.
- 4.25: Sports results to hand.
- 4.30: Close down.
- 6.0: Children's session conducted by Nod and Aunt Jean.
- 7.1: News and market reports.
- 8.0: Chimes.
- 8.1: Overture—Budapest Philharmonic Orchestra, "Hungarian Rhapsody No. 1 in F" (Liszt) (Columbia Record 02728-9).
- 8.13: Baritone solos—Mr. Geoffrey Colledge, (a) "Aileen" (Loughborough); (b) "Smuggler's Song" (Kernochan).
- 8.21: Instrumental Trio—Studio Trio, (a) "Bouree in G Minor" (Bach); (b) "3rd Movement From 4th Symphony" (Mendelssohn).
- 8.31: Lecture Recital—Mrs. Daisy Basham and Mr. William Gemmell: Offenbach Songs: (a) "The Song of Fortunio"; (b) "To Catherine"; (c) "Vocal Gems from 'Tales of Hoffman'" (H.M.V. Record D329); (d) "In the Dusk of the Twilight" (duet).
- 8.49: Pianoforte solo—Mr. Eric Waters—"Rustling Woods" (Liszt).
- 8.54: Soprano solos—Miss Dorothy Yound, (a) "Gloriana" (Mallinson); (b) "Prince Charming" (Lehman).
- 9.2: Quartet—The Olympians "Swansea Town" (Holst).
- 9.6: Weather report.
- 9.9: Tenor solo—Mr. Lambert Harvey (a) "Edward Gray" (Sullivan); (b) Selected.
- 9.17: March—Budapest Philharmonic Orchestra, "Rakoczy March" (Berlioz) (Columbia Record 02729).
- 9.21: Lecture Recital—Mrs. Daisy Basham and Mr. William Gemmell, "Offenbach Songs: (a) "Lady—Look Down" (b) Prologue—"Legend of Kleinsack" (H.M.V. Record D654); (c) Duet—"The Gendarmes."
- 9.36: Instrumental Trio—Studio Trio, "Rondo From Trio Op. 35" (Hum-mell).
- 9.44: Contralto solos—Miss Martha Williamson, (a) "My Ships" (Del Reigo), (b) "Castles in the Air" (Moffatt).
- 9.52: Orchestral—Kettelbey's Concert Orchestra, "In a Fairy Realm" (Kettelbey): 1. The Moonlit Glade; 2. The Queen Fairy Dances; 3. Gnomes March (Columbia Record 02694-5).
- 10.4: Quartet—The Olympians, "Roundelay" (Gideon).
- 10.8: Close down.

2YA, WELLINGTON (420 METRES)—FRIDAY, MAY 24.

- 3 p.m.: Chimes of the General Post Office clock.
- 3.1: Selected gramophone items.
- 3.40: Relay from Messrs. Kirkcaldie and Stains, Ltd., of Tearoom Music by the Trio.
- 4.0: Studio items.
- 4.30 and 4.55: Sporting results to hand.
- 5.0: Children's session conducted by Big Brother Jack.
- 6.0: Dinner session:
- Orchestral—Royal Opera Orchestra, "Carmen" Ballet Nos. 1 and 2 (Bizet) (H.M.V. Record D1424).
- Chorus—Light Opera Company, Gems from "Princess Flaria" (Smith) (H.M.V. Record EB22).
- 6.13: Tacet.
- 6.15: Violin solo—Fritz Kreisler, "From the Land of Sky-Blue Water" (Cadman) (H.M.V. Record DA745).
- Chorus—Light Opera Company, Gems from "The Blue Mazurka" (Lehar) (H.M.V. Record EB11).
- Waltz—International Concert Orchestra, "Gipsy Love" (Lehar) (Zonophone Record EF17).
- 6.25: Tacet.
- 6.30: Orchestral—Victor Salon Orchestra, "Indian Love Call" (Friml) (H.M.V. Record EA186).
- Vocal duet—Winnie Melville and Derek Oldham, "Sympathy" (Strauss) (H.M.V. Record C1502).

Waltz—International Concert Orchestra, "Sweetheart" (Strauss)
(Zonophone Record EF17).

6.40: Tacet.

6.45: Orchestral—New Light Symphony Orchestra, "The Dancing Doll" (Poldini) (H.M.V. Record B2629).

Bass-baritone solo—Peter Dawson, "The Kerry Dance" (Molloy)
(H.M.V. Record C1442).

Waltz—International Concert Orchestra, "Sari Waltz" (Kalman)
(Zonophone Record EF18).

6.55: Tacet.

7.0: News session.

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

8.0: Chimes of the General Post Office clock.

8.1: Overture—Orchestra, "Alceste" (Gluck).

8.7: Soprano solo—Miss Ena Rapley, "Under the Deodar" (from "The Country Girl" (Monckton)).

8.11: Baritone solo—Mr. Arthur Brady, "The Toreador's Song" (from "Carmen") (Bizet).

8.15: Suite—Orchestra, "Ascanio Ballet Music" Part 1 (Saint-Saens).

8.25: Recital—Mr. C. Browne, (a) "The Foreign Legion" (Harris), (b) "The Hindoo's Paradise."

8.32: Tenor solo—Mr. Edwin Dennis, "Onaway, Awake" (from "Hiawatha" (Coleridge-Taylor)).

8.36: Cello solo—W. H. Squire, "Berceuse de Jocelyn" (Godard) (Columbia Record 04179).

8.40: Contralto solo—Miss Madge Freeman, "My Partners" (from "The Country Girl" (Monckton)).

8.44: Saxophone solo—Rudy Wiedoeft, "La Cinquantaine" (arr. Fiedoeft) (Columbia Record 4037).

8.47: Vocal duet—Miss Ena Rapley and Mr. Edwin Dennis, "My Task" (Ashford).

8.51: Instrumental—Orchestra, repeat number.

9.0: Weather report.

9.3: Pianoforte solo—Mr. Norman Izett, L.A.B., "Ballade in A Flat" (Chopin).

9.11: Soprano solo—Miss Ena Rapley, "The Bird with a Broken Wing" (Golson).

9.15: Quartet—The Philharmonic Quartet, "The Sea hath its Pearls" (Pinsuti).

9.19: Grand opera selection—Orchestra, "Girl of the Golden West" (Puccini—Gershwin).

(Synopsis: The action takes place in that period of Californian history which follows immediately upon the discovery made by the miner Marshall of the first nugget of gold at Coloma in January, 1848. An unbridled greed, an upheaval of all social order, a restless anarchy followed upon the news of this discovery. The United States, which in the same year (1848) had annexed California, were engaged in internal wars, and, as yet undisturbed by the abnormal state of things, they were practically outside everything that occurred in the period of our work. The presence of their sheriff indicates a mere show of supremacy and political control. An early history of California, quoted by Belasco, says of this period: "In those strange days, people coming from God knows where joined forces in that far Western land, and, according to the rude custom of the camp, their very names were soon lost and unrecorded; and here they struggled, laughed, gambled, cursed, killed, loved, and worked out their strange destinies in a manner incredible to us of to-day. Of one thing only we are sure—they lived!" And here we have the atmosphere in which is evolved the drama of the three leading characters. The camp of the gold-seekers in the valley, and the Sierra mountains; the inhabitants of the spot coming down from the mountains, joining the gold-seekers who come from every part of America, making common cause with them, sharing the same passions—round this mixed and lawless folk a conglomeration of thieving and murderous gangs has sprung up as a natural outcome of this same lust of gold, and infests the highways, robbing the foreign goldseekers as well as those from the mountains. From the strenuous conflict between these two parties arises the application of a primitive justice of cruelty and rapacity. "The Girl of the Golden West"—a drama of love and of moral redemption against a dark and vast background of primitive characters and untrammelled nature—is an episode in this original period of American history.)

9.28: Humour—Mr. C. Browne, "The Colonel" (Williams).

9.35: Baritone solo—Mr. Arthur Brady, "Lighterman Tom" (Sanderson).

9.38: Violin solos—Sascha Jacobsen, (a) "Always You're Near" (Goodrun), (b) "One Alone" (Romberg) (Columbia Record 01123).

9.43: Contralto solo—Miss Madge Freeman, "The Fishermen of England" (from "The Rebel Maid") (Phillips).

9.47: Tenor solo—Mr. Edwin Dennis, "The Trumpeter" (Dix).

9.51: Duet—Miss Madge Freeman and Mr. Edwin Dennis, "Awake" (Pelissier).

9.54: Instrumental—Orchestra, (a) Waltz, "Wine Women and Song" (Strauss), (b) March, "Imperial Life Guards" (Hall).

10.2: Close down.

3YA, CHRISTCHURCH (306 METRES)—FRIDAY, MAY 24.

"EMPIRE DAY."

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 "Storyman."

7.0: News session.

7.30: Lecturette—Mr. L. Wiltshire (under the auspices of Christchurch Poultry, Pigeon, Canary and Cat Club)—"Racing Pigeons."

8.0: Chimes.

8.1: National Anthem—Valencia Quartet, "God Save the King" (Elgar).

8.6: Old English song—Mr. E. J. Johnson, "Song of the Bow" (Aylward).

8.11: Violin solo—Miss Irene Morris, "Annie Laurie" (MS).

8.15: Solo and chorus—(Soloist, Mr. W. Bradshaw) (Welsh National Anthem—"Land Of My Fathers" (Anon)).

8.19: Bagpipe solos—Pipe-Major J. A. Patterson: (a) "A Man's a Man For A' That" (Trdtl.); (b) "All The Blue Bonnets Are Over the Border" (Trdtl.); (c) "The Bonawe Highlanders" (Bowman).

8.26: Irish song—Miss Renetta Rings, "The Kerry Dance" (Molloy).

8.31: Instrumental trios—Christchurch Broadcasting Trio: (a) "Hornpipe" (Bridge); (b) "Old Irish Air" (Trdtl.); (c) "Military March" (Bridge).

8.41: English sea song—Miss Mary Taylor (instrumental accompaniment by Christchurch Broadcasting Trio)—"The Glory of the Sea" (Sanderson).

8.45: Solo and chorus—Mr. W. Bradshaw, "Come, If You Dare" (Purcell).

8.49: March—H.M. Coldstream Guards, "Youth and Vigour" (Lautenschlager) (H.M.V. Record B2408).

8.53: Solo—Mr. E. J. Johnson (with instrumental accompaniment by Christchurch Broadcasting Trio, "There's A Land" (Allitsen).

8.58: Violin solo—Miss Irene Morris, "Oft In The Stilly Night" (MS).

9.2: Weather report.

9.7: Address on Empire Day.

9.17: Irish part-song—Valencia Quartet, "The Dear Little Shamrock" (Jackson).

9.22: Hindoo song—Miss Mary Taylor, "Hindoo Song" (Bemberg).

9.27: Instrumental—Christchurch Broadcasting Trio: (a) "Afton Water" (Scottish); (b) "The Last Rose of Summer" (Moore); (c) "Irish Jig" (Holbrooke).

9.34: Indian song—Miss Renetta Rings, "Songs of India" (Rimsky-Korsakov).

9.38: Bagpipe solos—Pipe-Major J. A. Patterson, (a) "Leaving Loch Asch" (Findalson); (b) "Miss Drummond of Perth" (Trdtl.); (c) "Sleeping Maggie" (Trdtl.).

9.44: Solo and quartet—Miss Mary Taylor and Valencia Quartet: "Land of Hope and Glory" (Elgar) (with instrumental accompaniment by Christchurch Broadcasting Trio).

9.48: Chorus—Valencia Quartet, "Auld Lang Syne" (Trdtl.).

9.57: "Columbia" dance programme:

Foxtrot with vocal chorus—Debroy Somers' Band, "The Toy Town Artillery" (Frederick) (Columbia 01305).

Waltz—Eddie Thomas' Collegians, "Till We Meet Again" (Whiting) (Columbia 02553).

Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Constantinople" (Carlton) (Columbia 07002).

10.3: Soprano and male quartet—Norah Blaney and Ramblers, "Sweet Suzanne" (Leslie) (Columbia 01170).

Selection—Debroy Somers' Band, "Good News" (de Sylva) (Columbia 02720).

Foxtrot—Paul Whiteman's Orchestra, "Last Night I Dreamed You Kissed Me" (Kahn) (Columbia 07002).

10.17: Tenor solo—Alfred O'Shea, "Just a Little Love, a Little Kiss" (Ross) (Columbia 03589).

Instrumental—Paul Whiteman's Orchestra, "Jeannine, I Dream of Liliac Time" (Gilbert) (Columbia 07505).

Waltz—Rio Marimba Orchestra, "Dolores Waltz" (Waldteufel) (Regal G20344).

Novelty foxtrot—Debroy Somers' Band, "Rag Doll" (Brown) (Columbia 01341).

10.31: Monologue—Milton Hayes, "Meanderings of Monty—Is Lipstick Nourishing?" (Hayes) (Columbia 01293).

Foxtrot—Stellar Dance Band, "Just Imagine!" (de Sylva) (Regal G20338).

Foxtrot with vocal chorus—Densa Dance Band, "Varsity Drag" (de Sylva) (Columbia 01151).

Foxtrot—Paul Whiteman's Orchestra, "Get Out And Get Under The Moon" (Shay) (Columbia 07001).

10.45: Tenor solo—Alfred O'Shea, "Then You'll Remember Me" ("The Bohemian Girl" (Balfe) (Columbia 03613).

Wurlitzer organ solo—Milton Charles, "Cheerie-Beerle-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).

10.59: Novelty—Flotsam and Jetsam, "The Business Man's Love Song" (Hilliam) (Columbia 0995).

Vocal duet—Gus Van and Joe Schneck, "Skatadin-Dee" (Tobals) (Regal G20336).

Foxtrot—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" (Akst) (Columbia 01137).

11.10: Close down.

4YA, DUNEDIN (463 METRES)—FRIDAY, MAY 24.

3.0 p.m.: Town Hall chimes.

8.1: Selected gramophone items.

- 4.25: Sporting results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Big Brother Bill and Aunt Sheila.
 7.0: News session.
 7.15: Lecturette—Mr. N. F. Braithwaite, "New Zealand Thermal Regions."
 8.0: Town Hall chimes.
 8.1: Overture—Royal Albert Hall Orchestra, "Carmen" prelude Act 1 (Bizet) (H.M.V. Record E461).
 8.5: Quartet—The Majors, "John Peel" (Williams).
 8.9: Trio—4YA Broadcasting Trio, "Rigandon" (Raff).
 8.15: Soprano solos—Miss Freda Elmes, (a) "Feast of Lanterns" (Bantock); (b) "Amber and Amethyst" (Carse).
 8.23: Recital—Mr. Lester Moller, "Matrimonial Meanderings" (Stanford).
 8.30: Piano and Orchestra—Arthur de Greef and Royal Albert Hall Orchestra, "Hungarian Fantasia" (Liszt) (H.M.V. Record D1306-7).
 8.40: Baritone—Mr. L. E. Cachemaille, "The Sun God" (James).
 8.50: Cello solo—Mr. P. J. Palmer, "Allegro Appassionato" (St. Saens).
 8.55: Contralto solo—Miss Dorothy Skinner, "Break, Break, Break" (Carey).
 8.59: Orchestral—Philadelphia Symphony Orchestra, "Dance of Death" (Saint-Saens) (H.M.V. Record D1121).
 9.7: Weather report.
 9.9: Quartet—The Majors, "Old Love Song" (Mendelssohn).
 9.13: Trio—4YA Broadcasting Trio, "Extase D'Amour" (Roze).
 9.18: Tenor solo—Mr. J. Montague, "Passing By" (Purcell).
 9.22: Grand Organ—Spencer Shaw, "Simple Aveu" (Thome) (Zonophone Record 5162).
 9.25: Soprano solo—Miss Freda Elmes, "We'd Better Bide a Wee" (Claribel).
 9.28: Violin solo—Miss Eva Judd, "Rondino" (Beethoven).
 9.32: Baritone solo—Mr. L. M. Cachemaille, "When the King Went Forth To War" (Koeneman).
 9.36: Recital—Mr. Lester Moller, "If I Were In Parliament" (Roberts).
 9.43: Piano solo—Mrs. E. Drake, "Finale Etude Symphony" (Schumann).
 9.48: Male Voices—Revellers, "Was It a Dream?" (Coslow) (H.M.V. Record EA402).
 9.51: Orchestral—Royal Opera Orchestra, "Peer Gynt Suite" (Grieg): 1. Anitra's Dance; 2. In the Hall of the Mountain King (H.M.V. Record C1299).
 9.59: Contralto solo—Miss Dorothy Skinner, "Vorrei" (Boosey).
 10.3: Orchestral—Paul Whiteman's Orchestra, "Rhapsody in Blue" (Gershwin) (H.M.V. Record C1395).
 10.11: Quartet—The Majors, "Parting" (Mendelssohn).
 10.14: Close down.

Saturday, May 25

1YA, AUCKLAND (333 METRES)—SATURDAY, MAY 25.

- 8 p.m.: Relay from Eden Park of description of Rugby Football Match.
 4.45: Close down.
 6.0 Children's session conducted by Cinderella.
 7.1: News and market reports.
 8.0: Chimes.
 8.1: Overture—Orchestra, "The Bartered Bride" (Smetana).
 8.10: Vocal trio—The Snappy Three, (a) "In a Bamboo Garden" (Donaldson), (b) "Marie" (Berlin), (c) selected.
 8.19: Humour—Mr. D. McKeivitt, "House-Hunting" (arr. Cecil).
 8.26: Musical saw—Mr. F. T. Nash, (a) "Passing By" (Purcell), (b) "Home, Little Maori, Home" (Indian Love Song) (Hill).
 8.33: Vocal foxtrot and novelty items—Miss Edna Langmuir, (a) "Promise Me" (Van Cooth), (b) "Kitten on the Keys" (Confrey).
 8.40: Recital—Mr. Clarence Paine, "The Coward."
 8.46: Orchestral—Orchestra, (a) "Serenata" (Moszkowski), (b) "Hungarian Dance No. 7" (Brahms).
 8.54: Ukulele and vocal—Mr. Raymond Harding, (a) "Aloha Oe" (Liliuokalani), (b) "Gay Caballero" (Crumit).
 9.1: Weather report.
 9.4: Vocal trio—The Snappy Three, (a) "That's Her now," (b) "Me and the Man in the Moon" (Monaco).
 9.10: Humour—Mr. D. McKeivitt, "Beware of the Maidens" (Cramer).
 9.17: Musical saw—Mr. F. T. Nash, (a) "By the Waters of Minnetonka" (Lieurance), (b) "Marcheta" (Schertzing).
 9.24: Novelty instrumental—Orchestra, (a) "Voice of the Bells" (Thurban), (b) "Berceuse de Jocelyn" (Godard).
 9.34: Monologue—Miss Langmuir, "Little Brook" (Kendal).
 9.38: Ukulele and vocal—Mr. R. Harding, "Frankie and Albert were Lovers."
 9.42: Humour—Mr. C. Paine, (a) "Monty on Bolshevism," (b) "The Sailor."
 9.48: Instrumental—Orchestra, "Glory of Russia" (Kreen).
 9.58: "His Master's Voice" Dance Programme:
 Band—American Legion Band, "March Salutation" (Seitz) (Zonophone Record EE74).
 Foxtrot with vocal chorus—Nat Shilkret's Orchestra, "Lonesome in the Moonlight" (Russell) (H.M.V. Record EA431).
 Foxtrot—Nat Shilkret's Orchestra, "Fascinating Vamp" (Nussbaum) (H.M.V. Record EA367).
 Foxtrot—Nat Shilkret's Orchestra, "What's the Reason?" (Atteridge) (H.M.V. Record EA378).
 10.13: Tenor solo—Maurice Gunsky, "Lay My Head Beneath a Rose" (Falkenstein) (Zonophone Record EE17).

- Foxtrot—Coon Sander's Orchestra, "Ready for the River" (Kahn) (H.M.V. Record EA378).
 Foxtrot—Paul Whiteman's Orchestra, "It was the Dawn of Love" (Davis) (H.M.V. Record EA381).
 Waltz—Rhythmic Eight, "Neapolitan Nights" (Zamecnik) (Zonophone Record EE108).
 Waltz with vocal refrain—Goodrich Silvertown Cord Orchestra, "The Church Bells are Ringing for Mary" (Colby) (H.M.V. Record EA381).
 10.27: Comedian with orchestra—Frank Crumit, "The Song of the Prune" (Crumit) (H.M.V. Record EA366).
 Kinema organ solo—Charles W. Saxby, "For My Baby" (Kahal) (Zonophone Record 5143).
 Foxtrot—Arcadians' Dance Orchestra, "Singapore Sorrows" (Le Soir) (Zonophone Record EE108).
 Waltz—Victor Arden and Phil Ohman's Orchestra, "Chiquita" (Wayne) (H.M.V. Record EA396).
 10.40: Tenor with orchestra—Franklyn Baur, "Beloved" (Kahn) (H.M.V. Record EA392).
 Foxtrot—Paul Whiteman's Orchestra, "Louisiana" (Razaf) (H.M.V. Record EA386).
 Male trio—California Humming Birds, "I Just Roll Along" (Trent) (H.M.V. Record EA356).
 Foxtrot—Paul Whiteman's Orchestra, "Dixie Dawn" (Trent) (H.M.V. Record EA386).
 Male trio—California Humming Birds, "She's a Great, Great Girl" (Woods) (H.M.V. Record EA356).
 Waltz—Rhythmic Eight, "Momsy" (Yellen) (Zonophone Record EE104).
 11.0: Close down.

2YA, WELLINGTON (420 METRES)—SATURDAY, MAY 25.

- 3 p.m.: Chimes of the General Post Office clock.
 3.1: Relay description of Football Match from Athletic Park (Announcer, Mr. Charles Lamberg).
 5.0: Children's session conducted by Uncle Toby and Aunt Gwen.
 6.0: Dinner session.
 Overture—New Light Symphony Orchestra, "Merry Wives of Windsor" (Nicolai) (H.M.V. Record C1280).
 Male quartet—The Revellers, "Oh, Lucindy" (Hollingsworth) (H.M.V. Record EA430).
 6.12: Tacet.
 6.15: Orchestral—Salon Orchestra, (a) "Glow-Worm Idyll" (Lincke) (b) "Nola" (Arndt) (H.M.V. Record B2189).
 Chorus—Mixed Chorus, "Sea Songs" (H.M.V. Record EB25).
 6.25: Tacet.
 6.30: Violin solo—Fritz Kreisler, "Aloha-oe" (Liliuokalani) (H.M.V. Record DA745).
 Hawaiian—Ferera and Paaluh, "Hawaiian Waltz Medley" (traditional) (H.M.V. Record B2369).
 Dance Orchestra, (a) Waring's Orchestra, "Ah! Sweet Mystery of Life" (Herbert), (b) Mayfair Orchestra, "This Year of Grace" (Coward) (H.M.V. Record EB37).
 6.41: Tacet.
 6.45: Foxtrots—All Star Orchestra, (a) "There's a Rainbow Round My Shoulder" (Olson), (b) "She Didn't Say Yes, She Didn't Say No" (Strong) (H.M.V. Record EA436).
 Male quartet—Rounders, "Chlo-e" (Kahn) (H.M.V. Record EA402).
 6.55: Tacet.
 7.0: News session.
 7.40: Lecturette—Professor W. H. Gould, under auspices of the W.E.A., "What Constitutes the Real Education of the Child?"
 8.0: Chimes of the General Post Office clock.
 8.1: Overture—Orchestra, (a) March, "Cordoba" (Liber), (b) Waltz, "Thousand and One Nights" (Strauss).
 8.9: Quartet—Melodie Four, "Ice Cream" (King).
 8.13: Hawaiian instrumental—Palmer Bros., (a) "Kawaihau" (Awai), (b) "Sonora" (traditional).
 8.20: Tenor solo—Mr. Frank Bryant, "A Brown Bird Singing" (Coates).
 8.24: Instrumental—Orchestra, (a) Novelty, "In a Bird Store" (Lake), (b) "Barcarolle" (Offenbach).
 8.34: Dramatic recital with musical effects—Mrs. Culford Bell, "O Koyo San" (Wish Wynne).
 8.41: Kinema organ—Charles W. Saxby, "Classica" (pot-pourri selection, arr. Ewing) (Zonophone Record A334).
 8.49: Bass solo—Mr. W. W. Marshall, "Rocked in the Cradle of the Deep" (Knight).
 8.53: Song suite—Melodie Four and Orchestra, "Four American Indian Songs" (Cadman): (1) From the Land of the Sky-Blue Water; (2) The White Dawn is Stealing; (3) Far Off I Hear a Lover's Flute; (4) The Moon Drops Low.
 9.0: Weather report.
 9.2: Instrumental—Orchestra, repeat number.
 9.10: Quartet—Melodie Four, "Katy Did" (Parkes).
 9.14: Tenor solo—Mr. Sam Duncan, "Macushla" (MacMurrough).
 9.18: Hawaiian instrumental—Palmer Bros., (a) "Aloha Sunset Land" (Goane, arr. Shannon), (b) "Jeannine, I Dream of Lilac-Time" (Gilbert and Shilkret).
 9.25: Chorus—Light Opera Company, "Gems from 'Rose Marie'" (Friml) (H.M.V. Record C1205).

- 9.29: Recital with musical effects—Mrs. Culford Bell, "De Bell of San Michel" (a French Canadian poem) (Drummond).
 9.36: Baritone solo—Mr. R. S. Allwright, "My Lady's Bower" (Temple).
 9.40: Quartet—Melodie Four, "Angela Mia" (Rapee, arr. Crowther).
 9.44: Chorus—Light Opera Company, "Gems from 'No, No, Nanette'" (Youmans) (H.M.V. Record C1205).
 9.48: Instrumental—Orchestra, Dance Novelties.
 10.0: "His Master's Voice" Dance Programme:
 Orchestral—Symphony Orchestra, (a) "Love, the Magician" (De Falla), (b) "Spanish Dance" (De Falla) (H.M.V. Record D1453).
 Male trio—Californian Humming Birds, "It Goes Like This" Caesar (H.M.V. Record EA468).
 Foxtrot with vocal refrain—International Orchestra, "Shine on, Harvest Moon" (Norworth) (H.M.V. Record EA407).
 Waltz with vocal refrain—Troubadours, "Some Day, Somewhere" (Pollack) (H.M.V. Record EA421).
 10.17: Male quartet—National Cavaliers, "Beautiful" (Gillespie) (H.M.V. Record EA430).
 Foxtrot with vocal refrain—Hamp's Kentucky Serenaders, "Blue Grass" (De Sylva) (H.M.V. Record EA407).
 Foxtrot—Geo. Olsen and His Music, "Who?" (Harbach) (H.M.V. Record EA79).
 Waltz with vocal refrain—Troubadours, "Neapolitan Nights" (Kerr) (H.M.V. Record EA421).
 10.30: Tenor solo—John McCormack, "The Far Away Bells" (Gordon) (H.M.V. Record DA914).
 Waltz—Hilo Orchestra, "Louisiana Lullaby" (Zoeller) (H.M.V. Record EA374).
 Hawaiian—Hilo Hawaiian Orchestra, "Hawaiian Nights" (Roberts) (H.M.V. Record EA810).
 Foxtrot—Hilo Orchestra, "My Bird of Paradise" (Berlin) (H.M.V. Record EA374).
 Violin and Kinema Organ—Elsie Southgate, "I Hear You Calling Me" (Marshall) (Zonophone 5109).
 Foxtrot—Statler's Pennsylvanians, "Happy-Go-Lucky Lane" (Lewis) (H.M.V. Record EA353).
 Foxtrot—Geo. Olsen and His Music, "Sunny" (Harbach) (H.M.V. Record EA79).
 10.53: Vocal guitar—Harry McClintock, "The Big Rock Candy Mountains" (McClintock) (Zonophone Record EE125).
 Foxtrot—Harry Reser's Banjo Boys, "Down South" (Myddleton) (H.M.V. Record EA353).
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—SATURDAY, MAY 25.

- 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 Aunt Pat and Peterkin.
 7.0: News session.
 7.30: Sports results to hand.
 8.0: Chimes.
 "The Revellers" Concert Party in:
 "A Braw wee Scotch Nicht midst the skir-r-r-l o' the Pipes and the scent o' the Heather-r-r-r Dew."
 10.0: Programme of Dance Music:
 March—Philadelphia Symphony Orchestra, "Damnation of Faust"—"Rakoczy March" (Berlioz) (H.M.V. Record ED7).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "In My Bouquet of Memories" (Lewis) (H.M.V. EA362).
 Foxtrot—Waring's Pennsylvanians, "In the Evening" (Hanley) (H.M.V. EA368).
 Waltz with vocal refrain—The Troubadours, "When Love Comes Stealing" (Rapee) (H.M.V. EA410).
 10.14: Baritone solo—Lawrence Tibbett, "Drink To Me Only With Thine Eyes" (Calcott) (H.M.V. DA886).
 Waltz with vocal refrain—The Troubadours, "A Kiss Before Dawn" (Perkins) (H.M.V. EA410).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "My Angel" (Pollack) (H.M.V. EA362).
 Foxtrot—Nat Shilkret's Orchestra, "Get Out And Get Under The Moon" (Tobais) (H.M.V. EA368).
 10.27: Orchestral—Philadelphia Symphony Orchestra, "Samson and Delilah" (Saint-Saens) (H.M.V. ED7).
 Male voices—Revellers, "Mammy is Gone" (de Sylva) (H.M.V. EA384).
 Pianoforte solo—Pauline Alpert, "The Doll Dance" (Brown) (Zonophone EE98).
 Waltz—Firman's Dance Orchestra, "I'm Away From The World" (Clare) (Zonophone 5099).
 Dance orchestra with vocal chorus—Salon Orchestra, "My Blue Heaven" (Donaldson) (H.M.V. EB18).
 10.40: Organ solo—Edwin Lemare, "Aloha-Oe" (Liliuokalani) (Zonophone Record EE93).
 Male voices—Revellers, "Dream River" (Brown) (H.M.V. Record EA384).
 Foxtrot—Bert Firman's Orchestra, "When I Ring Your Front Door Bell" (Lyn) (Zonophone 5099).
 Dance orchestra—New Light Symphony Orchestra, "Just a Memory" (de Sylva) (H.M.V. Record EB18).
 10.53: Comedian—Sir Harry Lauder, "Just Got Off The Chain" (Lauder), (H.M.V. Record DK434).

- Waltz with vocal refrain—Geo. Olsen's music, "King For a Day" (Lewis) (H.M.V. Record EA429).
 Foxtrot—Paul Whiteman's Orchestra, "Mississippi Mud" (Barria) (H.M.V. Record EA429).
 11.0: Close down.

4YA, DUNEDIN (463 METRES)—SATURDAY, MAY 25.

- 2.45 p.m.: Relayed description of Senior Rugby Football Match from Carisbrook Grounds.
 6.0: Town Hall chimes.
 6.1: Children's session.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Re-broadcast of 3YA, Christchurch ("The Revellers" Concert Party in a Scottish programme).
 10.0: Dance programme.
 11.0: Close down.

Sunday, May 26

1YA, AUCKLAND (333 METRES)—SUNDAY, MAY 26.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Further studio items.
 4.30: Close down.
 6.0: Children's service, conducted by Uncle Len.
 6.55: Relay of Evening Service from Baptist Tabernacle.
 Preacher: Rev. Joseph Kemp.
 Organist: Mr. Arthur Wilson.
 Studio items.
 8.30: Rebroadcast of 2YA Wellington (relay from Grand Opera House of concert by Port Nicholson Silver Band, under conductorship of Mr. J. J. Drew).
 Close down.

2YA WELLINGTON (420 METRES)—SUNDAY, MAY 26.

- 3 p.m.: Afternoon session.
 4.30: Close down.
 7.0: Relay of Evening Service of St. Gerard's Redemptorist Church (Choirmaster, Mr. F. J. Oakes; organist, Mr. H. Mount).
 8.15 (approx.) Relay from Grand Opera House of recital of Port Nicholson Silver Band under the conductorship of Mr. J. J. Drew.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, MAY 26.

- 3.0 p.m.: Afternoon session (gramophone recital).
 4.30: Close down.
 5.30: Children's Song Service.
 6.15: Hymn tunes.
 6.30: Relay of evening service from St. Andrew's Presbyterian Church.
 Preacher: Rev. G. H. Gibb.
 Choirmaster: Mr. J. McLean.
 Organist: Mr. Robt. Lake.
 7.45 (approx.): Overture—H.M. Coldstream Guards, "1812" (Tschalkowsky) (H.M.V. Record C1369).
 7.53: Soprano solo—Madame Gower-Burns, "Hear Ye Israel" (from "Elijah") (Mendelssohn).
 7.59: Grand Organ Solo—Spencer Shaw, "Simple Aveu" (Thome) (Zonophone Record 5162).
 8.3: Baritone solo—Mr. James Filer, "The Wanderer" (Schubert).
 8.8: Instrumental—Virtuoso String Quartet, (a) "Mignon" Gavotte (Thomas); (b) "Orientale" (Glazounov) (H.M.V. Record B2784).
 8.14: Contralto solo—Miss Dorothy Spiller, "Life" (Curran).
 8.18: Violin solos—Erica Morini, (a) "Rondo on a Theme by Beethoven" (Kreisler); (b) "Spanish Dance" (De Falla, arrgd. Kreisler), (H.M.V. Record EC5).
 8.24: Tenor solo—Mr. Ernest Rogers, "Where'er You Walk" ("Semele") (Handel).
 8.29: Tenor and baritone duet—Grand Opera Duo, "The Moon Hath Raised Her Lamp Above" (Benedict).
 8.35: Instrumental Trio—Christchurch Broadcasting Trio, "Allegro Energico Con Fuoco C Minor Trio" (Mendelssohn).
 8.47: Soprano solo—Madame Gower-Burns, "The Star" (Rogers).
 3.51: Cello solo—Pablo Casals, "O Star of Eve" (Wagner) (H.M.V. Record DB1012).
 8.55: Baritone solo—Mr. James Filer, "A Pleading" (Tschalkowsky).
 8.59: Choral—Choir of H.M. Chapels Royal, "Jesu, Joy of Man's Desiring" (Bach, arrgd. Hess) (H.M.V. Record B445).
 Orchestral—Philadelphia Symphony Orchestra, "Prelude in E Flat Minor" (Bach) (H.M.V. Record D1464).
 9.7: Contralto solo—Miss Dorothy Spiller, "O Western Wind" (Brahe).
 9.11: Band—H.M. Coldstream Guards, "Poet and Peasant" (Suppe) (H.M.V. Record C1315).
 9.19: Tenor solo—Mr. Ernest Rogers, "An Evening Song" (Blumenthal).
 9.23: Mixed Quartet—Grand Opera Quartet, "They Say The Lion and the Lizard Keep" (from "A Persian Garden") (Lehmann).
 9.30: Close down.

4YA, DUNEDIN (463 METRES)—SUNDAY, MAY 26.

- 3.0: Town Hall chimes.
 3.1: Selected studio items.
 4.30: Close down.
 5.30: Children's Song Service, conducted by Big Brother Bill.
 6.30: Relay of evening service from St. Paul's Cathedral.
 Preacher: Canon Nevill.
 Organist: Mr. E. Heywood, F.R.C.O.
 8.5: Relay of St. Kilda Band Contest, under the conductorship of Mr. James Dixon.
 9.15: Close down.

First Prize Humorous
Poem

PARTED.

By J. P. Black, 56 Hector Street,
Seatoun.

My Baby! You were all I had,
 And all I wanted, too;
 You filled my life with sunshine glad,
 And I was all to you.

To be but near you—hear you call—
 To know you owed to me
 Your life—your home—your comforts
 all
 Touched me unspeakably.

I'd clasp you in my arms, and feel
 Your heart-throbs all confess
 Your love for me, and else reveal
 Your thrill to my caress.

In all your little ailments, I
 Physician was, and nurse;
 Your little joys I'd join supply
 And aid you in reverse.

I bought you shoes—a winter hood
 And ought else you should ask;
 To meet your need I gladly would
 Perform most menial task.

But man-made law and cruel fate
 Ordained that we should part;
 What reck they that I'm desolate—
 That slowly breaks my heart?

I miss your little loving ways—
 The noise you made—the mess
 Through sleepless nights and lonely
 days
 No surcease of distress!

My babe! You were my Heaven, dear
 I loved you but too well!
 And now you are no longer here
 I'm plunged in deepest Hell!

No more upon a holiday
 Will we repair—ah me!
 No more will wend our gladsome way
 In search of shell or tree.

Why must you, far beyond my ken,
 To stranger's garage go?
 I had to meet one more P.N.
 And couldn't raise the dough!

Useful All-wave Set

NOT having noticed reports of reception of 7LO, Nairobi, in the short-wave notes during the last few weeks, it might be of interest to know that 7LO is coming in here at good strength in the mornings, closing down 6.30 a.m., on 31 metres. I do not now bother with stations I cannot get on the speaker, as I am too busy to sit with the phones on, and my morning programmes up to 7 a.m. are provided by PQJ, 5SW, 3LO, and 7LD. My set is an all-wave type, built specially for low-wave, but giving good reception on long-wave. It is all aluminium, 1-16in. thick, no wood being used, and measures 24in. long, 12in. wide, and 8in. high, and as audio portion (2 stages) take up 6in. only of the length, it will be seen that detector and screen-grid stages are roomy. All coils are 3in. diameter, shortwave ones being 16g. tinned copper, space wound, and broadcast coils 28g. d.s.c., all ticklers being 2 7-8in. diameter, and fitting inside their coils on 2 pins, allowing of movement if required. All coils wound on air. Formica stages, 1in. above base, carry the coils (and valves), which plug into flush valve sockets, arranged in the stages. Variable coupling provided for aerial coils. Variable grid-leak .1 to 7 meg., with potentiometer, 400 ohms, right alongside detector valve, both of these being operated with long 4in. ebonite rods. All stages well-shielded, variable condensers, .001, special low-wave rheostats on detector and screen-grid filaments, first quality valves and transformers, H.T. battery is 144 volts, home-made, as is the set. Output fitter as per "Radio Record."

Regarding this latter I had an experience. I cut over 100 pieces of tin, varnished them, and hung them on a line to dry. Unfortunately the varnish did not dry quickly, and next day I found I had caught about 100 flies and moths. Their legs do not seem to affect the reception, though. 4MF condenser is used with this. 2MF condenser across first audio, HT tapping, 1MF condenser across each of detector, and screen-grid tapplings. The formica panel, carrying jacks, etc., is across end of set on outside of audio stage, and fixed condensers, output fitter, etc., are all confined in this stage. No earth is used on shortwave. The HT battery gives very good results, in spite of the fact that it is home-made, and lasts about four weeks on a charge. It is in two blocks of 72 volts each, about the size of a handbag (small), and fitted with a handle. There is a valve base fitted to each, and two bases of valves have all the H.T. flex leads fitted, so that the work of connecting up HT takes about two seconds.

I must now state my appreciation of your excellent paper, to which I owe practically all I have learnt about wireless, since I built my first crystal set about one year and eight months ago. I must not forget to mention that hand capacity is absolutely unknown, and once tuned set need not be touched. I must add, that when "Megohm" notified his intention of leaving, I thought your paper would hold no further interest, and must congratulate you on obtaining the services of his worthy successor, "Pentode."—W. T. WEBB (Devonport.)

Have you secured your copy of
 "N.Z. Radio Listener's Guide?"
 Dealers and Booksellers 2/6; Post
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 Now Available

Drummondville, Canada.

Mr. Allan Parcell (Invercargill) writes in "Record" of May 3:—Mr. Sellers mentions an American station on 32 metres. Calling London, I first heard this station on Duplex work with someone a degree higher, about 32.2 metres on 24/2/29 at 7.15 p.m. Both stations were about R.S., but modulation was not very good. He gave his call as Drummondville, Canada, and said it was the Drummondville Beam Station carrying out a test with . . . presumably the station heard at the same time on about 32.2 metres. I have since heard Drummondville calling, generally, on Sundays about 6 p.m.

7LO, Nairobi

Mr. J. Rait, Brooklyn, writes:—VK6AG informs me that 7LO, Nairobi, ought to be received "F.B." here at 3.30 a.m. N.Z. T. W/L 31-4 metres. He also states that he will be on 20.2 in a few weeks.

"The Tower of Death"

TIME, that writer of history, is slowly moving its finger over the few remaining strongholds of savagery and romance, and leaving behind it the mark of modernity. In old Bokhara there is a tall tower, in form something like a pepper-pot or typical lighthouse. It is "The Tower of Death," and it is so named because it was once used for executions. But no longer are the bowstring and the scimitar used there; they have given place to the violin string and the dulcimer, for the grim tower is now a part of a broadcasting station, and the things that are executed there are called "Ops."

The
Public Trust
Office

A RECORD YEAR.

New business accepted during the year ended 31st March, 1929, was £7,091,350, exceeding the previous year's record by over half a million pounds.

The value of estates under administration on the 31st March, 1929, was £48,334,790—a net increase for the year of over four million pounds.

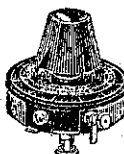
The number of wills held for safe custody on behalf of living persons who have appointed the Public Trustee their executor, exceeds 62,800, representing a present estimated value of £251,000,000.



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Price 6/9



Lissen Mansbridge Condenser. Prices:
.01 mfd, 2/6; .1 mfd, 2/6;
.25 mfd, 2/8;
.5 mfd, 3/-; 1 mfd, 3/6;
2 mfd, 4/6.



Lissen Rheostat, 7 and 35 ohms.
Price 3/6 each



Lissen Grid Leak, Fixed, 1, 2, 3 and 4 meg.
Price 1/6 each
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RADIO
PARTS

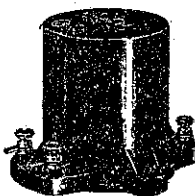
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Price 7/6 each



Lissen Neutralising Condenser.
Price 6/- each

Notes and Comments

By
"SWITCH"

AN inquirer has asked "Switch" to explain the differences between a "portable" and a "transportable" receiving sets, the terms being employed in the English radio journals. The "portable" set is of such weight and size (and is fitted with a single handle) as to be easily carried about the street. The "transportable" set is larger and heavier, and although it is too heavy to be carried about by a pedestrian it is easily transported in a motor-car. The "transportable" set is particularly suitable for transferring from a city residence to a seaside or up-country "bach."

ACCORDING to the official figures for the month of March, which have just been issued by the Commonwealth Postmaster-General's Department, the world's record quota of wireless licenses in Victoria per one hundred of population has been raised still further and now stands at 8.09. Analysing this remarkable quota, it means that one wireless set is installed to every three houses in Victoria, for according to the late Sir George Knibbs's statistics, an average of over four people reside in every house; but as a very large majority of the licenses are in the metropolitan area, it would appear that every other house in Melbourne and the suburbs has a wireless set installed.

INTERFERENCE from morse transmission by warships in port at Wellington has been rife of late during the broadcasting hours of the New Zealand stations. These ships have most powerful transmitters, and they seem to radiate on various wavelengths. 3YA, Christchurch, is a severe sufferer, and many a Wellington broadcast listener has reason to regret the stay of the warships at Wellington.

THOSE who endeavoured to listen-in to "outside" stations last week were subjected to an unpleasant bombardment from the ether. These atmospheric disturbances have a sinister effect upon the sales of sets to beginners, and it sometimes happens that a beginner will form quite an erroneous opinion of broadcast listening if they chance to encounter heavy static when listening-in for the first time.

THE grand organ in the Wellington Town Hall is seldom heard on the air, and this is rather to be regretted as it broadcasts perfectly, judging by its performances through 2YA, Wellington, on the few occasions when the citizens of Wellington are permitted to hear their own instrument per medium of radio. The Anzac Day afternoon service at the Town Hall enabled us to hear the organ under admirable conditions.

MR. E. M. CORNISH ("Brookdale," Masterton) writes to "Switch":—It was with considerable amusement that I read in the "Radio Record" that anyone should object to an occasional "honk" from a passing motor-car being heard during an item. We live 21 miles from Masterton, out in the country, and when we hear the "honk" of a car over the wireless we smile and

sometimes say "Hear the car!" It's so familiar and seems to bring us nearer civilisation. A neighbour was so used to the "honks" over the wireless that when a real one "tooted" at their gate no one took any notice! Good luck to 2YA."

THE above correspondent's counterblast to those hyper-critical listeners who object to a faint "honk" being heard during a studio concert at 2YA, Wellington, shows that the slight extraneous noise is by no means objectionable to everybody. The same folk who object to the "honk" from a loudspeaker probably in many cases chatter away while a concert is in progress. "Switch" can recall being present at a listener's house when someone protested against the intrusion of a feeble "honk," and the same person almost completely spoilt every item by incessant talk!

LISTENING to 4QG, Brisbane, at 11 o'clock the other night, "Switch" could distinctly hear music and talk from a Japanese station which continued to be audible through the music from 4QG for nearly half an hour. As a rule only a heterodyne whistle from the Jap. can be noticed on top of 4QG, but on the occasion referred to the Eastern music and speech was quite distinct. The Jap. is probably JOGK, Kumamoto, operating on about 380 metres. 4QG, Brisbane, is supposed to be on 385 metres. Both or one of the stations is off its listed wavelength.

IT may be a coincidence that the Jap station JOGK, Kumamoto, frequently closes down almost simultaneously with 4QG, Brisbane, and "Switch" has on many evenings endeavoured in vain to get the Jap. after 4QG, Brisbane, has signed off. Very rarely has JOGK been heard by the writer after the Brisbane station has closed down, although the loud bubbling heterodyne whistle of the Jap. was audible a few minutes before. The two best Japs, according to "Switch's" experience are JOHK, Sendai, which seems to be on about 375 metres, and JOAK, Tokio, on 345 metres. One published list gives JOAK on both 345 and 875 metres, but the Jap. pronunciation of the "H" sounds like "A."

SO an Invercargill man claims to have invented a static eliminator, and he "is absolutely satisfied with the results it produces." One can only hope that disinterested experts are similarly satisfied. What may be called a "family failing" of all so-called static eliminators hitherto placed on the market is that while they reduce static they also reduce the volume of reception in a similar proportion. A colossal fortune awaits the inventor of a static eliminator that is a proved success.

ABOUT a year ago a "static eliminator" invented by a Wellingtonian was being offered for sale by a local trader for a few shillings. The theory of the device was quite unsatisfying, but out of curiosity "Switch" gave the thing a trial. Of course it was a fail-

ure, and the dealer who had it in stock wisely declined to recommend it to his customers.

THE all-electric A.C. sets are steadily gaining ground in Wellington and the trade find beginners are more interested in the new development. The main difficulty with those who have battery-type sets and want to purchase A.C. sets is what are they are to do with their old sets. However, apparatus has been now produced which will readily convert them.

THE departure of H.M.S. Diomedea from Wellington was hailed with delight by many listeners residing close to the city. The warship's Morse was a frequent source of annoyance to listeners, breaking in as it did on top of broadcast reception. The cruiser's transmitter is exceptionally powerful and when she was lying at the wharf many a local loudspeaker jumped with the hammering of her Morse.

A VAUDEVILLE figure once well-known in New Zealand, the coloured comedian, Charlie Pope, died recently in Melbourne. He was heard in nigger minstrel songs from 3LO, Melbourne, not so long ago. Pope and his partner, Irving Sayles, were undoubtedly the greatest coloured comedians seen in New Zealand. Sayles dropped dead in the street in Christchurch a number of years ago while on a vaudeville tour of New Zealand, after having dissolved partnership with Pope.

THERE is an interesting little story connected with "Dem Golden Slippers," which was told by the late Charlie Pope, who for many years was a member of a minstrel troupe touring the United States. One night, during the interval, one of the niggers called for pencil and paper, and sat down at the table. "I'm going to write a song," he announced, "that'll sell for twenty dollars." The song, "Dem Golden Slippers," was written and immediately

sold for twenty dollars (£4), proving a wonderful success, and, arranged as a waltz, polka, quadrille, and lancers, was heard in every dance hall on both sides of the Atlantic, and proved a veritable gold mine to the enterprising person who had purchased it for £4.

A WELLINGTON listener complained to "Switch" that reception all round had gone "off" considerably of late. He was told that there had been certain vagaries in long-distance reception, but things were not so bad as he considered them. Eventually the listener disclosed the fact that his valves had been in regular use for two and a half years! The normal life of a good valve is about 1000 hours, which at, say, three hours' use nightly, works out at a little less than a year.

A LISTENER recently told "Switch" that he could not get the "outside" stations as well as formerly. On being questioned as to how old his valves were, he said they had been in operation only six months, and as a good valve of reputable make should last a year, the trouble could not be in his valves. A further questioning disclosed the fact that his set was in use about seven hours daily, which aggregates over 1200 hours in six months—200 hours more than the average 1000 hours' life of a valve.

A DOGMATIC intolerance of "talk" subjects still obtains among a small section of listeners, but prejudices would be overcome if they would take the trouble to listen to some of the very attractive talks put on the air by the New Zealand stations. A Sydney writer says: "Hitherto there has been a good deal of exception taken to the inclusion of both talks and readings, and in the early stages of broadcasting those protests were in many cases well founded. Greater care is now taken in the choice of both speaker and subject, and as a result the short talks, readings, and lectures have gradually established their popularity."

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The Screen-grid Valve as R.F. Amplifier

Varied Experiences of Constructors



HAT great interest has been shown in the screen-grid valve as an R.F. amplifier has been evidenced by the very large number of correspondents who, during the last few weeks have written in on this score. As stated previously, we have held these over until now, they are published collectively with some additional notes.

The fate of the screen-grid valve still hangs in the balance. It was at first greeted with great enthusiasm, but now there is a reactive tendency and it is being considered more critically than formerly. The great difficulty with this valve is its flat tuning, and when devices are introduced to sharpen this, losses occur which render it little better than the average valve. It appears that a screen grid set would be most suitable for use in the country distant from a local station. Even then, tuning would be flat, and there would be great difficulty in separating stations whose wavelengths approximate one another.

A short time ago "Pentode" discussed the application of the screen grid, recommending transformer coupling.

This has generally proved successful, as the correspondents indicate.

The screen-grid valve has been reviewed by one of New Zealand's radio authorities, Mr. E. R. McCarthy, who states: The science of radio frequency amplification has of late seen retrogression rather than progress. Nothing of any real value has been introduced since the Haseltine neutrodyne system several years back, and even that, in so far as the principle of neutralisation by external capacitative reactance is concerned, was only a variant of the earlier Rice system.

A surprising number of manufacturers have returned to the oldest method of stabilising known—potentiometer grid control.

That there is still a call for sets which will bring in distant stations was distinctly evidenced by the sudden rush when the screen-grid valve was announced, and it is decidedly unfortunate that this was heralded by so much misleading publicity, which led builders to expect much that has proven impossible.

Many of the leading publications carried editorial matter describing the great amplification obtainable from a valve which would not oscillate, and even the largest valve manufacturers and best engineers in the country allowed statements to appear such as "A voltage amplification of 200 per stage is obtainable, but at broadcast programmes the resonant impedance is lower, reducing the amplification by 25 per cent. of this value."

Prior to commencing any actual work, certain limits were laid down as essential if the results were to be of any value in designing a receiver which could be constructed by the home builder. First, standard apparatus, obtainable by anyone, must be employed. Second, if possible, the need for any complicated balancing by means of expensive accurate apparatus after construction, must be avoided. Thirdly, the use of shielding undesirable as introducing superfluous expenses and trouble. Last, no involved or critical adjustments of any kind were allowable, as such a receiver must be infallibly sure to give good results, if the connections are properly made, in the hands of the most inexperienced operator.

Types of Coils.

A TEST was given of coils of sixteen types, as many of each type being tried as were deemed necessary to determine their worth. Inasmuch as the reproduction of all these curves here would lead to confusion, due to their numbers, and would serve no particularly useful purpose, we will show the results obtained in these most useful types, which had a bearing on the final result, but as a matter of information, it may perhaps be advisable to outline roughly the types involved and the major reasons for their abandonment.

All coils were of the general type, having 77 turns of wire in the secondary circuit, and spaced to conform to an approach to the ideal shape factor, and supported by skeleton bakelite frame, so that the insulation losses are kept at a minimum figure.

The actually tested coils as the introduction of a primary coil or the use of a portion of a secondary coil for coupling, have a decided effect on both the inductance of the secondary.

1. A tuned impedance, directly from plate to grid to ground.
2. An auto transformer, in which a portion of the secondary is used as primary, and low potential end being common.
3. A transformer in which the primary and secondary are coupled by a by-pass condenser at the low potential ends, the direction of the winding be-

ing continuous from plate to grid, and the coils being tuned from plate to grid as in the original "R. B. Lab." circuit and other Betts circuit adaptations.

4. A primary wound to take up a length of one and a-half inches inside the secondary.

5. A primary wound to take up one-half inch placed inside, and in the centre of the secondary.

6. A primary wound to take up one-half inch, placed inside, and opposite the loss potential end of the secondary.

7. A primary wound with a length of one-eighth inch, placed in both positions above described.

8. A primary wound in a 1.32 inch slot, coupled adjustable to the secondary.

9. A primary wound on the same diameter as, and at an adjustable distance from, the secondary.

10. A tuned primary with adjustable coupling of the secondary.

Types four and six are very commonly used, and hence we have selected them for detailed presentation in connection with two types.

Type four is generally advocated for use with the shield grid valve when the tuned impedance arrangement is not employed. After the number of turns increase to a certain point, no further increase in amplification is obtained.

Type six is the type most commonly used at the present time, and the results indicate that if conventional circuits are to be employed, it is considerably superior to any of the others tried.

The results indicate at least as good result as with the widespread primary in amplification, with a considerably improved selectivity factor.

Type two is extremely interesting. In this type of coil a varying portion of the secondary acts as primary, with the primary and secondary currents in this portion of the coil in quadrature. The inductive coupling is much greater in this type of coil for the same number of turns, hence a comparatively high primary impedance is built up with a relatively small number of turns with consequent greater overall amplification.

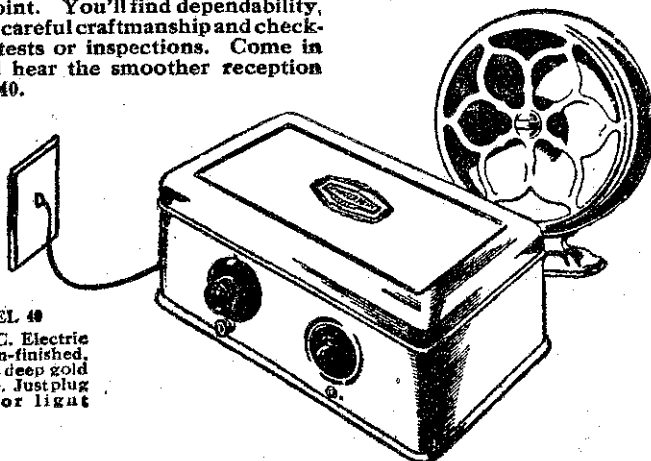
Shifting the Phase Angle.

A REVIEW of various past methods of stabilisation indicated that the best results were probably obtained by shifting the phase angle of the current in various stages by the method somewhat similar to that used in the circuit described in the "Listeners' Guide."

In a circuit containing two stages of radio-frequency amplification it will rarely be found necessary to employ more than one such resistance, as sufficient adjustment of the tune relation can be obtained to avoid oscillation, while still maintaining the satisfactory value of overall amplification. Maximum results, regardless of the type

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Why?

of valve used, can be obtained by varying the proportion of the secondary coil, which is used in the plate circuit of the preceding valve.

Shielding always introduces certain losses in the coil, due to linking a portion of the coil's field, and also complicates the mechanical construction of the receiver.

The necessity for shielding is mitigated as far as interstage coupling effects go, while the diameter of the coils is so small that direct pickup from local station is reduced to a minimum as has been demonstrated in practice.

Correspondents Write.

IN response to a general invitation in the "Radio Record" re screen grid (writes F.W.L., Alexandra), I can advise that I have been using one for three months. The set was originally a five-valve Browning Drake, home assembled, with commercial coils, 1—V—3, the three audio stages being impedance coupled.

The set has gradually transformed into a 2—V—1; 1 screened grid, tuned anode, 1 Browning Drake stage, space wound coils on celluloid strips, phasatrol neutralised, detector, and one audio stage, with a pentode.

The two radio valves have by-pass condensers and decoupling resistance in the B leads; the detector and pentode screen are by-passed, and two 100 Henry chokes out of impedance formers are used as decouplers. The two radio stages and the detector are fully screened in upper. The set is used without reaction. I took the tickler right out and when I was using a good choke it was a pleasure to listen to. It isn't bad now, but won't carry the same volume without distortion. I found the screen grid a big improvement, but the tuned anode has broadened the tuning, and I can no longer separate 2BL and JOAK. I sometimes use anode bend detection on 2YA, when it is coming in well (very variable here), and notice the sharpness of tuning of the detector stage as compared to leaky grid. The set is extremely quiet, and cannot be made to oscillate, and I am considering replacing the Browning Drake stage with another screened grid, but the selectivity question deters. I'm afraid I wouldn't be able to separate 2YA and 2FC.

I HAVE wired my set to your diagram No. 1, "Application of the Screen Grid" in the "Radio Record," Vol. II, No. 36, writes H. Jacob, Mangaweka. I use the best components procurable. I rewired the set at Baster (1—V—3), and since then I have had the following stations: New Zealand's 1YA, 2YA, 3YA, 4YA, 2ZM, 2ZF, and 3ZC; Australia: 2BL, 2FC, 2UE, 2GB, 3AR, 3LO, 4QG, and 7ZL; and three other stations I cannot get the calls—eighteen in all. The first 14 were all too loud when tuned right up to the mark. These stations could be heard about half-mile away. You can see I'm getting all the volume I require.

I have shielded the S.G. stage and the Det. stage, and I am now getting a very good tone. It is very seldom I use the four valves, as I find that I lose tone if I come down to that.

I think Mangaweka is rather a poor reception place, as a friend of mine has a five-valve set, about nine miles from here, and he can pick up America and Japan fairly often. There are eight sets here, and not one of us has picked up America or Japan.

I HAVE taken advantage lately of your Queries and Answers Column in connection with the application of the screen grid to the Browning Drake. I know that the term "Browning Drake" is somewhat of a misfit, but I call it such for the want of a better name. I made "Pentodes" 1 to 1 transformer, as described in an earlier issue of the "Radio Record," and used a 442. I found that with 140 volts on the pla. and 67½ on the screen that the results were entirely satisfactory. I tried 80 volts on the screen, but it seemed to choke the valve, and after a little experimenting 67½ seemed to be the best. The second dial also tuned broad. I might state that I joined the grid leak return to A minus, but have altered it to A plus. Would that make any difference to the broad tuning?

(It may improve matters depending on conditions particular to the set.)

I tried a .0001 fixed condenser in the aerial, but it made the tuning the reverse—too sharp, in fact. (Try bigger valve 00025.) I may also state that the B battery, which I made to "Megohm's" specifications, is still going strong. The only thing that is worrying me is the broad tuning. I have shielded the R.F. stage only, using 615 as detector with 5 megohm leak and usual audio stages.—"Dials" (Napier).

I HAVE been very interested in the discussions for and against transformer coupling and I am sure discussions of this nature are of interest.

By closely coupling the primary and secondary of the transformer and tuning the secondary with a parallel condenser, it is stated that indirectly the primary is tuned.

Now, as an example, if both consist of 60 turns and the secondary has a parallel condenser to increase its wavelength, how can the primary be tuned any way near the desired frequency without a similar capacity across it or increased turns?

I notice this week that an American, a Mr. Marvin H. Thoreau, in a letter on page 8 states that the "best sellers" are kit sets which tune both grid and plate circuits of S.G. Perhaps it would be worth the extra to tune both, as it is very desirable using S.G. valves to gain as much selectivity as possible.

About six years ago I used an aperiodic transformer (both primary and secondary) and found it fairly good. I believe it was wound with resistance wire to make it aperiodic and I have an idea that perhaps, if in the coupling you suggest the primary was wound with fine resistance wire, it would be aperiodic to the tuned secondary.

When Browning designed the B.D. Regenerator, he was careful to place the primary as near as possible to the grid end of the secondary coil, and apply reaction to the filament end, presumably to avoid damping.

Now I suggest winding 60 turns fine resistance wire solenoid fashion on a celluloid former to fit closely (say, 1-16th inch) inside a low-loss secondary of 60 turns No. 24 S.W.G. As the secondary would be the longer, the primary could fit under the grid end and reaction could be coupled to the filament end.

I am contemplating using a potentiometer in the grid return of the S.G. valve, so as to get any degree of grid bias. Do you think this worth while? Finally, can I expect a S.G. set of the type discussed to be as selective as the

good old Browning-Drake?—"Mech." (Dannevirke).

Comments.

The circuit referred to, tuning both plate and grid, is an altogether different circuit. The primary is tuned, in the close-wound primary and secondary, in centre of its light magnetic coupling with the secondary.

The correspondent is under a misapprehension regarding the placing of the primary in the B.D. It is placed under the filament end of the secondary. This would not act with the screen-grid valve. The potentiometer to control grid bias should be OK.

For selectivity, the four-valve B.D. is hard to excel.

RADIO DIRECTORY

What to Buy and Where

CITIES

- "AERIAL MASTS"** Domestic Radio Co., Ltd.,
Strand Arcade, Auckland.
- 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,
- CROSLY RADIO** Abel, Smeeton, Ltd.,
27-29 Customs St. E., Auckland.
- FERRANTI RADIO COMPONENTS** A. D. Riley & Co., Ltd.,
Anzac Avenue, Auckland, and all leading Dealers.
- CROSLY SETS** Lewis Eady, Ltd.,
Queen Street, Auckland.
- GREBE RADIO** Howie's,
Dilworth Building, Custom st., Auckland
- LOUDSPEAKER REPAIRS** .. A. E. Strange,
404 Worcester Street, Christchurch.
- MULLARD VALVES** All Radio Dealers.
- PREST-O-LITE. Car and Radio Battery Service** L. J. Purdie & Co., Ltd.
97 Dixon Street, Wellington.
- RADIOLA RECEIVERS** Chas. Bennett, Ltd.,
619 Colombo Street, Christchurch.
- RADIOLA RECEIVERS and Expert Radiola Service.** Farmers' Trading Co., Ltd.,
Hobson Street, Auckland.
- RADIO REPAIRS AND SERVICE** E. G. Shipley,
185 Manchester Street, Christchurch.
- T.C.C. CONDENSERS** A. D. Riley and Co., Ltd. Anzac
Ave., Auckland, and all leading dealers.
- TEMPLE SPEAKERS** Royds-Howard and Co.,
Christchurch Distributors.

COUNTRY TOWNS

- CROSLY RADIO** J. C. Davidson,
Main Street, Pahiatua.
- CROSLY SETS** F. H. Jellyman, Ltd.,
Devon Street, New Plymouth.
- CROSLY RADIO** D. A. Morrison & Co.,
Victoria Avenue, Wanganui.
- MAJESTIC, ATWATER-KENT AND APEX ELECTRICAL SETS.** Also Bremer-Tully, Radiola and Browning-Drake
Radio House, Hamilton.
G. S. Anchor, Manager.
- PHILIPS VALVES AND APPARATUS** All Good Radio Dealers.

ANOTHER correspondent, "R.T.C." (Dunedin), asks the following questions:

1. What gauge of tinned or enameled wire should I use in both the antenna coil in the transformer?

A.: Within a size or two, gauge does not matter. Usually 22 is considered as satisfactory as any. For the transformer try about 85 turns on a 2½-inch former. Space the wire so that the primary and the secondary, although close-wound, do not touch one another. If wound too tightly, oscillation will be difficult to control.

2. What diameter of former should be used for the tickler coil?

A.: If a 2½-inch secondary former is used, a 2-inch will be necessary. Wind on about 25 to 30 turns D.S.C. 30-gauge wire.

3. Should a .0001 m.f.d. condenser be connected in series between the antenna and the aerial coil?—Yes. It will sharpen tuning.

4. What should be the value of fixed condenser between "B" plus 135 and "A"—.5 m.f.d.?

5. What voltage should be applied to the plate of the .201A as detector?

A.: From 22½ to 45 volts.

For Sale or Exchange.

See page 32 for column of casual advertisements.

Finer Details of Radio

Three Electrode Valves as Detectors

By "PENTODE"

FOLLOWING our discussion on the theory of the modern valve when used as an amplifier, let us consider for a while just how and why a valve will detect signals when called upon to do so. The valve is the same as all the others in the receiver, but why does the first, if that be a R.F. valve, not detect? How is it that the mere fact of the inclusion of a grid leak and condenser specifies which valve is destined to convert the inconceivably high frequency impulses into audible low frequency electrical vibrations. To thoroughly understand the various principles involved needs a certain amount of imagination, not because there is any doubt as to the accepted explanation, but rather from the numerous factors working together upon which the final result of rectification takes place. A little concentrated thought will be needed, and the writer will endeavour, in this short article, to make it as clear as possible.

The word "detection" means the rectification of the high frequency alternating currents as they are received from the aerial or amplified by the

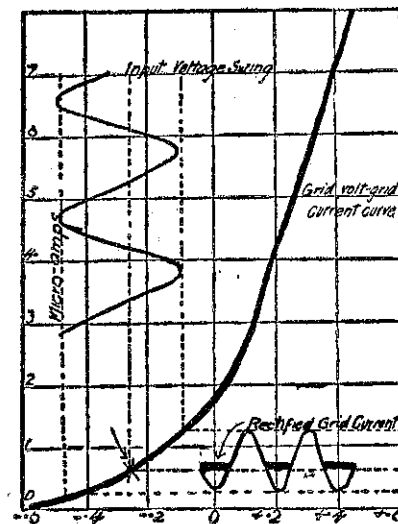


Diagram 10—Grid voltages along base, anode current vertically. Leaky grid detector.

radio frequency valves in a receiver. Several methods have been used, but the three of most importance are those using a crystal detector, a grid leak and condenser in conjunction with a valve, and the one known as the "anode bend" detector. As it is only with the valve that we are concerned, the last two methods only will be discussed.

The Leaky Grid.

THE most common and universally used system is the leaky grid condenser, and as this is the more difficult to fully understand it is dealt with first.

Last week a simple graph was explained, showing the relation between the grid voltage and anode current. Reference to the accompanying diagram shows the relation between grid current and grid voltage, irrespective of anode voltage, which is constant at 22 volts. Whereas the anode current amounted to several milliamps, the grid current as shown here amounts to one or two microamps. A milliamp is a one-thousandth of an ampere, a microamp is a one-thousandth of a milliamp. The vertical lines indicating grid voltages show the grid potential relative to the filament. These are expressed as fractions of a volt, the reason being explained later.

It will be noted that even when the grid is made slightly negative a small amount of grid current flows, and it is not until over ½ volt negative bias has been applied to the grid, that grid current is completely prevented from flowing.

This is accounted for by the fact that the velocity of the electrons, as

they rush toward the grid, is so great that it needs a small retarding potential to completely prevent them from settling in the grid and liberating their small charge of electricity. It is upon this small bend in the bottom of the grid-current, grid voltage curve that the action of detection depends. The curve is based upon measurements taken using a 201A type valve with 22 volts B supply and a 6 megohm grid leak. The valve of the condenser is not critical.

In the average receiver the grid return, in the case of a detector (the grid leak) is connected to the filament positive terminal and it would be assumed that the grid would be at a positive potential, the valve being half the filament supply voltage. This is incorrect.

The operating point of the valve is that which is finally evolved after one or two governing factors have been satisfied. Let us at first assume the grid to be 3 volts positive with respect to the filament. The graph does not accommodate this supposition, but it would be seen that a large grid current would flow. This, however, has to flow through the grid-leak. Whenever a current flows through a resistance, a voltage drop occurs across the said resistance. The grid-leak is merely a simple high resistance and the voltage drop across this would be comparatively great. In actual practice, the drop is such that the average detector valve operates with the grid at a fraction of a volt from the zero, usually, as shown, slightly on the negative side. So that although the grid return is connected to the positive filament terminal, the grid does not follow suit, but settles down to an operating point which depends upon the value of the grid leak and the current flowing through this resistance, causing a voltage drop across the same. This point has to be remembered.

Having arrived at the working point we are ready to apply a high-frequency wave to the grid to understand the various steps towards rectification. The series of waves on the left-hand top corner show the applied R.F. wave. The marked operating point shown, is

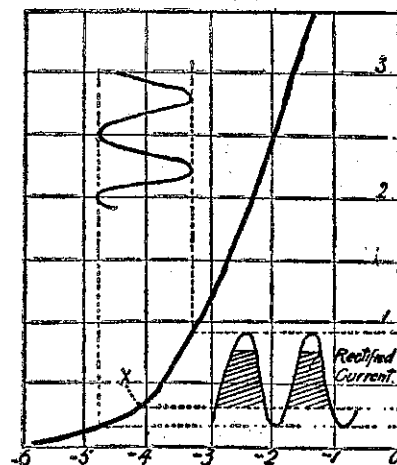


Diagram 2—Anode bend detector. Grid voltages and anode current as diagram.

correct only when no signals are being applied to the grid.

Directly a wave is impressed upon the grid, the operating point moves in sympathy. When at rest, this point is at 3 volts negative, but when the incoming wave is applied, this point moves from .1 to .5 volts up and down the curve.

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AE
SERIES 'F' FOR AMERICAN RECEIVERS

THIS series is intended for use in American—or American type—A.C. Receivers, and consists of the 6F6, 6F7, and 6G5.

These valves have no really exceptional features—they are just robust long-life tubes.

Characteristics			
	6F6	6F7	6G5
Purpose	H.F.	in Audio-Def.	Power
FL Volt	14	25	6
FL Amp	1.5	0.75	0
Heating	Di	Di	Di
Price	25A	27A	25A

The combination of these tubes in a typical American set is two:

HF	HF	HF DET.	AUDIO	POWER
6F6	6F7	6F6	6F7	6G5

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AE

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Branch Room: 611 Dillworth Building, Auckland.

Now turn the attention to the effect this has upon the grid current. According to the graph, this will also vary, corresponding to the movement of the operating point. Owing to the shape of this curve more grid current will flow when the point goes over to the positive side of the half cycle, than will be the case when the working point moves to the negative side of the completing half-cycle or wave.

Let us run over it once more. The incoming high-frequency wave shown on the left of the graph is directly impressed on the grid. Each half of this wave is equal and the voltage mounts up to a maximum on one side and repeats itself on the other side of the zero-line.

These variations of potential, however, produce variations of grid current, shown as the wave form on the bottom right side of the graph. But, owing to the peculiar shape of the characteristic grid curve, these current waves are not equal on each side of the zero-point shown by the dotted line. More current flows during one-half cycle than does in the other, and this current is said to be partly rectified.

Having obtained these minute impulses of direct current it would be thought that the process of detection was complete. One or two more steps are necessary before the audio-frequency signals find their way into the plate circuit.

The small amount of direct current produced on the grid has only one escape, and that is through the grid leak. It was mentioned before that when a current passes through a resistance a voltage drop occurs across the resistance. One of the factors governing this drop is the amount of current flowing. The more current the greater the voltage drop. The direct current flowing through the grid leak varies according to the amount of rectified current produced so it can now be seen that these direct current impulses, flowing through the resistance of the grid leak, produce variations in the voltage drop across the grid leak.

As one end of the leak is connected directly to the grid these voltage

variations produce an effect upon the anode current, and the action of the valve as a detector is complete.

Summarised, the process is as follows: High-frequency voltages are first rectified by making use of the grid volt-grid current characteristic. The rectified current's vibrations flow through the grid leak causing varying potentials in voltage to be again applied to the grid. The valve now works as an ordinary amplifier, and current variations appear in the plate circuit.

Anode Bend Detection.

THE explanation that has been given of grid-leak detection differs considerably from the familiar one in which the function of the grid leak is to let the grid condenser charge leak off and return to the filament.

The explanation of the type known as the "anode bend" detector will be almost self-evident. The curve given (Fig. 2) represents a characteristic curve of a typical high impedance valve. This class of valve is the most efficient when used as detector. No grid leak and condenser are used, and rectification is obtained by making use of the sudden curve at the lower end of the straight portion. The operating point in this case is obtained by using a negative grid bias of four volts, shown by point marked X. The high-frequency wave is impressed upon the grid, but owing to the shape of the curve the anode current wave form appears as represented by the wave on the bottom right-hand side of the graph. More current flows during one-half of the cycle than during the opposite half, and this extra current is the rectified current used to operate the phones or speaker in the anode circuit of the valve.

Have you secured your copy of

"N.Z. Radio Listener's Guide?"

Dealers and Booksellers 2/6; Post Free 2/9—P.O. Box 1032, Wellington.

Now Available.

Unique Radio Feat

Dual Rebroadcast

SOMETHING unique in the history of radio broadcasting was accomplished Sunday afternoon and evening by the General Electric and Engineering Company of America and Amalgamated Wireless (Australasia) Ltd., Sydney. Station KDKA (Pittsburg) broadcasts specially for Commander Byrd and his party at "Little America" at the Antarctica, on alternate Sundays a musical programme, and immediately this is finished special and personal messages from friends and relatives are broadcast to Commander Byrd and his men at the frozen south, a reply message in morse being eagerly awaited by the operators at KDKA.

Yesterday Commander Byrd's reply was rebroadcast by KDKA and also rebroadcast again by 2ME (Sydney). In other words, the American rebroadcast was again rebroadcast by Sydney. The actual distance between Sydney and the Antarctic was stated as being over 22,000 miles, via Pittsburg. Similarly, Pittsburg rebroadcast the transmission from 2ME (Sydney, so that actually a dual rebroadcast was going on all the time; the event, stated the 2ME officials at Sydney, was an innovation. A detailed note of the exchanges between the two stations was kept by Mr. R. Leslie Jones, of Lyall Bay.

The duplex telephony broadcasts were a great success, states Mr. Jones. Quite a surprise was sprung on everyone by the General Electric Company, who asked Commander Byrd and men to stand by for a pleasant surprise; and indeed listeners throughout the world who were fortunate to be listening-in on short-wave receivers got a great surprise. One message from "Little America" addressed to Horace Watson at KDKA said: "Thanks, old chap, enjoyed your programme fine; best thanks and kindest regards to all."

Station 2ME shortly after 6 p.m. stated that the speed of telephony between Sydney and Pittsburg and back to Sydney was between one-ninth and one-eighth of a second.

By special request of KDKA (Pittsburg), 2ME (Sydney) broadcast some music reproduced from records, and Mrs.

McDonald, speaking from Sydney (styled "Mrs. Sydney"), had a few words to say to Commander Byrd and party. Considerable amusement was caused, owing to the fact that those at the American end thought Mrs. McDonald and Mrs. Sydney were two distinct ladies; and the roars of laughter could be heard quite distinctly in Wellington.

KDKA linked up with the "New York Times" over a long line, and Mrs. McDonald's remarks and a full report of the extensive tests is to be the subject of special articles in the American Press, copies of which were requested should be forwarded to Sydney after publication.

Such selections as "In a Monastery Garden" and "Liebestraum" were greatly enjoyed. In fact, reports were hastily received by KDKA from various American States saying that reception was very good indeed. Away as far as the Grand Rapids in Michigan, the Sydney programme was beautifully clear. An announcement from Pittsburg stated the time was "Ten minutes to three, daylight-saving time, which is ten to two eastern standard time," and the speaker reminded listeners that it was "Mother's Day." A contrast in the programme of events was the announcing of weather reports both in America and Australia.

At 6.40 p.m., Wellington time, the two countries were still carrying on the tests, and a request was made to Sydney that members of KDKA staff wanted to speak to Mr. Farmer. At 6.55 p.m. 2ME told the American officials that they ought to be in bed. "I suppose you are going to bed; are you going home to bed now? Too interested, aye?" "It's getting near teatime here," said Sydney. It was remarked that 2ME being right in the path of the Sydney beam station, a certain amount of trouble was to be expected.

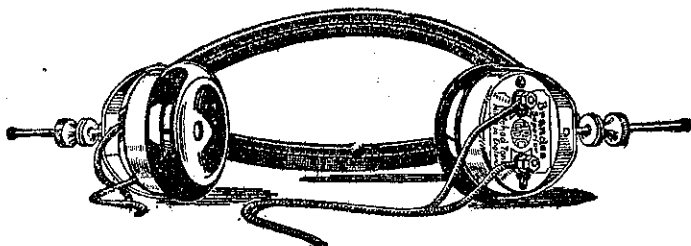
The wavelength of WSXX, the experimental call sign of KDKA, was given as 25.4 metres. The last statement was: "It is nearly 4 o'clock and we bid you all good-morning."

Reception, both through KDKA and 2ME, was obtained by Mr. Jones on a loudspeaker.

2ME works on a power of 50 kilowatts and was using two power amplifier tubes of 20 kilowatts each. KDKA uses push pull crystal control, and was working on four 20 kilowatts tubes. The broadcast was a remarkable event, and would not have been believed possible a year ago.

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Short-wave Jottings

Mr. Sellens writes:—

A LETTER and card have just been received from Messrs. James Richardson and Sons, Ltd., Winnipeg, Canada, owners of radio stations CJRM, Moose Jaw, Sask., CJRW, Fleming, Sask., and CJRX, Winnipeg, Man., in reply to a report sent on reception of the latter station.

CJRX operates on 25.6 metres with the power of 2000 watts. They state that all programmes are "tied in" with CJRW.

The schedule of this station, reduced to New Zealand time, is as follows:—Daily except Monday, 10 a.m. till 12.30 p.m.; Monday, 4 a.m. till 7.30 a.m.; Tuesday, 2.30 p.m. till 3.30 p.m.; Wednesday, 1.30 p.m. till 4 p.m.; Friday, 1.30 p.m. till 3 p.m.

Central standard time is observed at Winnipeg. The owners of CJRX state that they would appreciate further reports as they would like to know if their station is reaching this district consistently.

The "Wireless World" report having had a message from TLO Nairobi, Kenya, to the effect that their daily transmissions are now made on 31 and 400 metres.

This station has not been heard recently by the writer, either on the above or their previous wave. They do not appear to appreciate reports from distant countries, as a Christchurch friend and myself have sent detailed reports with copies of the "Radio Record," which, after some months, remain unanswered.

The following hints should be of assistance to the inexperienced short-wave listener:—

Hints on Short-wave Tuning.

ON the short waves it is often essential to allow the set to oscillate mildly whilst searching in order to pick up the carrier wave, since a station may easily be passed over if this is not done. But do not, once you have found a speech carrier, go squeaking up and down all over the place and cause interference with others who are listening to the transmission. As soon as you have found the carrier loosen your reaction a little, and then slightly re-adjust the grid tuning condenser. In this way you will be able to tune in the transmission very quickly, and will cause a minimum amount of

interference to other people. A transmission which can be heard only by keeping the set in oscillation and tuning to the silent point is practically never worth hearing at all. The proper adjustment for hearing telephony, and the one which gives far the best quality and the greatest signal strength, is that which brings the set to a condition just below the point of oscillation. This desirable state of affairs can take place only where reaction is perfectly smooth. Should your short-waver show any tendency to flopping into oscillation you will never have any success worth talking about upon the wavelets. When these symptoms are present there are three points worth remembering.

Grid-leak Values.

FIRST of all try a higher value of grid-leak than you are using. If this does not make things right disconnect the grid leak from "A" X and wire it instead to the slider of a potentiometer wired across the "A" busbars. In many cases smooth reaction control will be secured when the slider is somewhere about the middle of its travel. Supposing that neither of these remedies is effective, the high-frequency choke is the next component to be attended to. One that suits most circuits of the Reinartz type can be made by winding from 60 to 80 turns of fine enamelled wire in a single layer on a piece of ebonite or paxolin tube 1 inch in diameter. There is one other point that is worth noticing. Sometimes even if the circuits and components of the rectifying valve are up to the mark reaction is unsatisfactory because the low-frequency transformer that follows the valve is of an unsuitable type. A tip that sometimes works wonders in such a case is to fix a variable grid leak across the secondary of this transformer.

Saturday, May 4.

5SW was R8 from the commencement at 5.30 a.m., readability was very poor. This was much better by 6.30 a.m.

PCJ was 100 per cent. readable all through from 5.30 a.m. till 7.30 a.m. at about R8-9. At 6.12 they called Mr. Gledhill, of Christchurch, and hoped that he was receiving their signals well.

They were again tuned in at 1 p.m. when strength was R2, increasing R8 by 3.30 p.m.

At 5 p.m. a special transmission for the Sydney Radio Exhibition commenced. Greetings were sent to the Mayor of Sydney, and others. The station went off the air just after the commencement of the special programme for about five minutes. Signals were very unsteady, after the temporary stoppage.

2XAD was R6 when first heard at 1 p.m. The usual "General Electric" programme, "Half-hours with the Senate," etc., were well received.

KDKA were heard at good volume, but not so clear as they should be.

The "Slumber Hour" was broadcast from 2.30 p.m.-3.30 p.m., followed by a clock striking 12. Weather forecast and baseball scores completed the programme, signing off at 3.35 p.m.

At 2 p.m. a station on PCL's wavelength, 18.4, was heard at R3, increasing quite a great deal by 2.30 p.m. Several musical items were given, but no call was heard.

W2XG on about 32 metres at 6.35 p.m. called, "Hullo, London, — calling you." Then the usual "write down—" followed.

Sunday, May 5.

AT noon 2XAD was R3, increasing rapidly in strength. From 2.30 p.m. the programme was dedicated to the Byrd Expedition in "Little America." It was stated that a specially constructed antenna—the Byrd antenna, was being used. This was a directional aerial pointing due south from the transmitting station.

The first item was appropriate to the occasion, being named "Sway Down South."

KDKA was good strength, but not so clear as 2XAD or 2XAF. The latter station was transmitting simultaneously with 2XAD.

Monday, May 6.

On about 31.2 metres at 6.20 a.m., a foreigner was talking at R4. The time signal was heard at 6.30 from the Melbourne Observatory, via 3LO, followed by the regular musical programme Strength R9, with uneven fading. VK2ME, Sydney and VPD, Suva, carried out a long duplex telephony test till 9.10 p.m. Both were received at R9.

Wednesday, May 8.

AT 5.50 p.m. W6XN (KGO), were giving news items till 6 p.m. From

then till 7.30 p.m. the programme was by the "Trocaderians," from the San Francisco studio of the National Broadcasting Co. Reception was excellent at R9.

Friday, May 10.

AT 5.30 a.m. the Big Ben from 5SW was R8. The title of the following talk was missed, but it was about "Operas." It was 100 per cent. readable. Two Columbia records were heard next, followed by a talk on "China." At 6.15 a.m. the musical programme opened at the studio with an orchestra item by Coleridge-Taylor, followed by solo solos. Volume was still better now, quite good in all respects. On about 15.4 metres, a foreigner was talking at about R3. A little lower—about 15 metres—a man and woman were talking, duplex telephony, I think. Strength R5.

FOR SALE OR EXCHANGE

The rate for small advertisements under this heading is 2/- cash for 20 words, and twopence for every other word thereafter.

SHORT-WAVE SET and number of Radio Parts, Condensers, Transformers, etc., for sale, very cheap. Apply P. J. Cannell, Rangataua, K.C.

WANTED SELL, 5-Valve Radio, complete, Accumulator, "A" Charger, "B" Eliminator, Loudspeaker. Cash £20. Apply "Calcutta," Box 1032, Wellington.

FOR PRIVATE SALE, Seven 20-Volt Units Fuller "B" Batteries; large capacity; in perfect condition; cost £9 9s. What offers? Write Radio, care 110 Southern Cross Building, Auckland.

FILING COVERS for "Radio Record," strong board, pierced, 1/6 post free. "Radio Record," P.O. Box 1032, Wellington.

TWO OMNIGRAPHIS, will send up to fifty words a minute. Ideal for learning Morse. Lynn, Lyndon Road, Hastings.

KEEP your "Records" neat. Filing covers, strong, printed and pierced, 1/6 post free.—"Radio Record," P.O. Box 1032, Wellington.

8-VALVE Radio Receiver, in new condition, with Valves. Also good Radiola Speaker, P.B. Eliminator. Apply "Valve," Box 1032, Wellington.

HAVE you obtained your "Listener's Guide"? 2/6 from booksellers and radio dealers, or 2/9 post free from the publishers. Box 1032, Wellington.

SHORT-WAVE SET by Mack's Radio. Owner bought another set. Box 3, Stratford.

YOU can save money by writing for our special radio mail-order price list. Electric Lamp House, 27 Manners Street, Wellington.

RALEIGH 5-valve radio set, £10 cash. Valves in good order, also 6-volt A battery, 50-volt B battery; A and B battery charger. Freight paid to any address by owner. Owner going in for all-electric model. Apply "Receiver," Box 64, Henley, Otago.

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, MAY 17, 1929.



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