

THE RADIO RECORD

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WELLINGTON, FRIDAY, JUNE 7, 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.

By
Bolton
Woods

An Opera With a Goat.

MEYERBEER originally wrote "Dinorah" as a one-act opera, but Perrin, who was at that time director of the Opera Comique, considered that a work by the great Meyerbeer was too important not to occupy the whole evening, so the composer took the score away with him on a holiday and expanded the very weak plot into a full-sized three-act opera. Dinorah's cottage has been destroyed by a storm, and her lover, Hoel, goes away to look for material to rebuild it. Dinorah thinks he has deserted her and becomes insane, wandering about the countryside accompanied by her pet goat. In a dreadful storm Hoel sees her crossing a ravine by a fragile bridge which breaks, and she is thrown into the water below. He plunges in and saves her. They return to the village, and find that the cold douche has restored Dinorah's reason, and everybody (including the goat) lives happily ever after. The famous "Shadow Song" is sung when Dinorah, seeing her own shadow, thinks it is someone with whom to dance.

Miss Frances Hammerton will sing the famous "Shadow Song" at 8YA on Thursday, June 13.

Nevin's Nigger Mammy.

ETHELBERT Nevin's songs are nearly always based on some memory, and may be regarded as a record of his own emotions and experiences in his life. "Mighty Lak' a Rose" was composed in sight of his boyhood home, and it seems as if he had in mind happy recollections of the old coloured mammy who cared for him in his childhood. The melody

brings more than a hint of the tenderness and humour of the words.

"Mighty Lak' A Rose" will be played as an accordion solo by Johnny Sylvester at 2YA on Tuesday, June 11.

Gilbert's Happiest Lyric.

GUISEPPE'S song "Rising Early in the Morning," from the "Gondoliers" is one of the most popular numbers in all the Gilbert and Sullivan operas. It really is a patter-song, and as such it deserves to take precedence over most of them. As a descriptive song, crowded with incident and humour in every line, and with a happy moral at the end of it all, it holds a very high rank in the operas. In the humorous vein, it is probably Gilbert's best and most typical lyric.

2YA are using a record of "Rising Early in the Morning," sung by Robert Howe, on Friday, June 14.

"A Second Trombone."

THE entry of the hero is always an important thing in an opera. In the Gilbert and Sullivan Opera, "Mikado," the hero, "Nanki Poo," the eldest son of the Mikado of all Japan disguised as "a second trombone," enters all in a hurry to inquire the whereabouts of "a gentle maiden named Yum-Yum." He is solemnly asked who he is, and replies in an extended solo, "A Wandering Minstrel I," with its varied moods and phrases, each change emphasised by the music. He describes his "ballads, songs and snatches," a sentimental love song, a very English patriotic ditty, a typical English "song of the sea," and just when the

music has thoroughly roused up the hearers, it lapses into the opening serenade mood, and ends as it began.

Mr. Arthur Brady will sing "A Wandering Minstrel I," at 2YA on Friday, June 14.

A Tragic End.

STRADELLA was that seventeenth-century composer about whom there grew up a story (which may or may not be true) to the effect that he eloped with a lady and was followed by assassins, who were so moved by hearing some of his music that they repented of their evil intention and spared his life. However, so the story goes, Stradella was murdered later. Using this story as a foundation, Flotow wrote an opera when he was twenty-five (in 1837). It was first brought out as a lyric drama, and then adapted as a Grand Opera, and as such was produced at Hamburg and Drury Lane.

The Auckland Artillery Band, under the conductorship of Mr. Wynne J. Smith, will play selections from "Stradella" at 1YA on Wednesday, June 12.

Herr and Frau Wagner, and Dog.

IN July 1839, Wagner, with his wife (his first wife), and his huge Newfoundland dog, embarked at Paillau on a sailing vessel bound for London en route for Paris. He writes himself: "I shall never forget the voyage; it lasted three weeks and a half... The legend of the Flying Dutchman was confirmed by the sailors, and circumstances gave it a definite and characteristic colour in my

—Continued on page 2.

Broadcast Music

(Continued from front page.)

mind." The story tells of a captain who, trying to round the Cape of Good Hope in a storm, swore that he would do it if he had to sail on for ever. The Devil overheard, and took him at his word, and sent him sailing for Eternity, or until he should find a woman who would love him to the death. Senta, the Norwegian fisher-maiden, finally redeems the Dutchman by her self-sacrifice. The music of the opera is very graphic, especially in the storm scenes.

The 1YA Studio Trio will play the "Sailors' Song" from "The Flying Dutchman" on Tuesday, June 11.

The Song of Yum Yum.

IN connection with the soprano solo, "The Sun Whose Rays Are all Ablaze" from the Gilbert and Sullivan opera, "Mikado," Dr. Percy Buck

(King Edward professor of Music at London University), has made some pertinent allusions to the unique skill which the composer has exhibited. "The writing of a learned eight part fugue," he tells us, "is within the power of any musician who cares to waste his time in trying to do it; but if he tries to reset the words 'the sun whose rays are all ablaze,' and then compares his music with Sullivan's, he will have no doubts as to which is the more serious task." An English University professor who is ready to acknowledge the artistry displayed in "The Mikado," as handsomely as this, is such a rarity that the circumstance seems worthy of special notice.

"The Sun Whose Rays" will be sung by a member of the Celeste Trio at 1YA on Friday, June 14.

An Ancient Advertisement.

HANDEL'S "Messiah" was first performed at mid-day on Tuesday, April 13, 1742, in the Musick Hall, Fishamble Street, Dublin. The proceeds were in aid of the Mercer's Hospital and the Infirmary, and the tickets were half a guinea each. There is an interesting note in the advertisement of the performance: "Many ladies and gentlemen who are well-wishers to this grand and noble charity request it, as a favour, that the ladies who honour this performance with their presence would be pleased to come without hoops, as it will greatly increase the charity by making room for more company." Mr. Laurie North will sing "The Trumpet Shall Sound" from the "Messiah," from 1YA on Friday, June 14.

Rhythm and Religion.

THE Plantation Songs known as "spirituals" are the spontaneous outbursts of intense religious fervour, and had their origin chiefly in camp meetings, revivals and other religious exercises. They were never "composed," but sprang into life ready-made from the white heat of religious fervour during some protracted meeting in camp or church, as the simple utterances of wholly untutored minds, and are practically the only music in America which meets the definition of folk song. Sometimes the words are from the Scriptures, but more often they are just the crude verses made up by the Negroes themselves. H. T. Burleigh is one of the best known arrangers of this class of music, and has collected large numbers of these songs, uniting them to impressive accompaniments.

Miss Irene Horniblow will sing Burleigh's arrangements of "Steal Away," "Swing Low" and "I Stood On De River," at 4YA on Friday, June 14.

Two Russian Preludes.

ONE of the most celebrated of modern piano works is Rachmaninoff's "Prelude in C Sharp Minor." He was only twenty years old when he wrote it, and it served to make him known to the wide public he now enjoys. The work is one of extraordinary power, deeply emotional and thrilling. Although Rachmaninoff gives no hint as to the

source of his inspiration, and even says that it presents no musical picture, it has been attached to the accounts of the burning of Moscow, during Napoleon's invasion of Russia. The "Prelude in G Minor" is less known, but quite as thrilling. It brings a picture of great armies passing in review with glittering habiliments, flying banners and all the splendour of the days of Russia's grandeur. The middle portion is composed of a beautiful melody like a folk song, and the martial music is again heard at the end.

Both these Preludes will be played at 3YA on Wednesday, June 12.

An Opening Song

SUNG to the tune of "Glory, Glory, Hallelujah," Big Brother Bill of 4YA opens his Children's Session with:

*Come all ye lads and lassies at the end of the day,
Come, listen in, and sing, and laugh with us at 4YA.*

*The night's begun, let's have some fun,
it's the kiddies' time for play,
While the hour is marching on.*

CHORUS.

*Come, listen in and have some fun together,
It may be cold, but never mind the weather;
Your heart should be as light as a feather
While the hour is marching on.*

*There are riddles fine, and birthdays, too,
and other things galore,
There are some things so really good,
you're sure to ask for more,
In fact you ought to have more fun than
ever you've had before,
While the hour is marching on.*

CHORUS.

*So listen in, let's have some fun together,
It may be cold, but never mind the weather;
Our hearts are now as light as a feather,
And the hour is marching on.*

2YA Children's Sessions

Monday, June 10—The pupils of Mrs. Isobel Haggan will present a jolly little programme of music and stories. Uncle Jeff will send birthday greetings and puzzles and sing his songs of welcome and farewell.

Tuesday—Uncle Jim will have stories to tell and greetings to send, and the pupils of Miss Edna Purdie will delight all Radioland with their happy songs and recitations.

Thursday—Uncle George will send the birthday messages to-night. Cousins Dorothy and Marjorie will sing duets and Joyce and Lurleigh will play.

Friday—Brother Jack with his Happy Song to-night, and Cousin Eva, who will sing, and Jean, Betty and Diana, who will play the piano and recite.

Saturday—Uncle Toby and Aunt Gwen and the pupils of Mrs. Martin Williams will entertain you in their usual happy way.

Sunday—The children's song service will be conducted by Uncle George, assisted by the Kent Terrace Presbyterian Sunday School Choir, under Mr. Jack.

4YA's Children's Sessions

MONDAY, JUNE 10.

The Archerfield girls, the girls in brown, Charm everybody's eyes as they march through town,
And they'll charm your ears, as well as your sight,
If you twist the little dial and listen in to-night.

TUESDAY, JUNE 11.

Forbury's a school that has not sung before
Through the "mike" at 4YA.
If you'll tune in to-night we are very sure
You'll want them again some day.

WEDNESDAY, JUNE 12.

Elsie Burns on the piano will play
Lenore Mackenzie will have something humorous to say,
Eric Johnson will sing (we could listen all day),
These are some items at 4YA.

FRIDAY, JUNE 14.

Musselburgh School is at Anderson's Bay
(And Anderson's Bay's in Dunedin).
We've asked them to entertain 4YA
(An' we're thinkin' it's more ye'll be needin').

SATURDAY, JUNE 15.

Oh, it's certainly true (between me and you),
Ruby Powell can sing like a lark;
And it isn't a sell (he recites very well)
To call Bruce Jones a clever young spark;
You will hear just how nice (I'll be through in a trice),
Valmai Sundstrum on the piano can play,
If you'll draw up your chair (and get on the air)
To Dunedin, 4YA.

Well Worth Reading

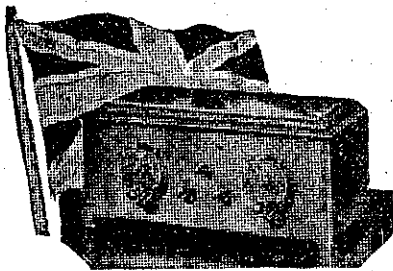
That is the opinion of those who have read the new booklet, "A Vital Business Matter," issued by the Public Trust Office. It contains much valuable information for the business man and deals with loans, financing, managing estates, and other interesting matters. All business men should read the booklet—

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ONLY a few weeks back the advent of the "movie-tone" in New Zealand was heralded, but it was impossible at the time to outline its technical features. Its success has been unique, and it is quite safe to predict that it is essentially the entertainment of the future. Already, several theatres in New Zealand have installed or are installing this new apparatus, and it seems that before very long all large picture theatres will be thus equipped. The technique of the system has been almost perfectly developed through radio. A few years ago, it would have been ridiculous to have suggested that one could see and hear what was enacted, say, six or twelve months ago at a scene thousands of miles away, but now this is an accomplished fact.

The greater number of movie-tone films released here, with the exception of news items, have the actions accompanied by music rather than speech. The result of this is that a special score can be written for the film, and at the critical points, the music can be suspended and the voices of the actors reproduced.

Audibility is perfect when the actors speak perfectly clear, and the language of these contrary to accepted ideas, is of a very high standard. The orchestral music is certainly perfect, and the fact that one of the largest theatres in New Zealand has covered the orches-

tral pit with a decorated lattice is significant of future development.

Systems of Talking Film.

So far, the movie-tone system has been most widely used, but there are two others that will be introduced ere long. The vitaphone and the photophone. The former is a disc-recording system while the latter resembles the movietone in that the sounds are produced through medium of light impressions on the side of the film.

On examining a piece of movie-tone film, series of bands varying in their density can be seen. These resemble film negatives, though not so intricate as far as impression. When the film passes through the projector it is taken to a point lower down, where a strong light is thrown on to the bands at the side. The variations in the intensity of these causes a variation in the intensity of the light passing through. This is recorded by a photo-electric cell. This latter, known usually as the "eye" of television, is a valve which may be likened to microphone. It transforms variations in light into variations of electric current, whereas the microphone transfers variations in the ether

into variations of electric current. From this point on, amplification is the same.

The weak currents from the photo-electric cells are taken to an adjacent amplifier, comprising two A.C. amplifying valves of the usual receiver type. The strengthened signals are passed on to a power amplifier, where they are handled by five more valves, the last two being transmitting valves in push-pull. From this point relay lines carry the signals to the points at which the speakers are located.

In the case of the Paramount Theatre, Wellington, the management of which enabled us to get the full technical particulars, eight dynamic cone speakers are situated in two columns at the sides of the screen. From these the signals are thrown perfectly to the rear of the theatre.

In making a movie-tone film, the process is just the opposite. Speech vibrations are carried to a neon lamp, which causes fluctuations in the intensity of light, resulting in bands of different densities corresponding to the differences in the strength of the impressed signal. As it is almost impossible, both from the recording and reproducing standpoint, to have the photo-electric

apparatus and the apparatus concerned with the photography exactly beside one another, the tone process is retarded eleven exposures behind the photograph.

The photophone, working on the same principle, varies only in that the bands vary in size and not in intensity. It is considered that from a point of view of durability, they are more suitable than the movie-tone. Both can be used in the same apparatus without adjustment.

One of the Best Investments

A Countryman's Wireless Set

VIEWING it entirely from the point of view of the concert programmes, without taking into account the many other features of the broadcast service, a dweller in the back country writes: "I installed a set last October. I consider it is one of the best investments I have ever made. We have had a great deal of amusement, and my three girls, who are all learning music, and are very keen on it, have the advantage of hearing the orchestral and other music which, as we live in the country, they would not otherwise have the chance of hearing. We have renewed our license, and there is no danger of us letting it lapse."



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Radio Round the World

PHILLIPS Glowlamp Works, Ltd., now employ 20,000 workers on the production side of their business, which, with the addition of staff and workers now engaged throughout the world, constitutes a total of 35,000 people.

A 9 KW broadcasting transmitter has been installed at Belgrade for the Yugo-Slavian broadcasting authority. The official inauguration took place on Sunday, March 24, in the presence of a representative of the King of Yugo-Slavia, members of the Cabinet, and other high Government officials. The station was reported to be an unqualified success.

AN interesting experiment in simultaneous broadcasting was carried out recently in Australia, when an interview from Melbourne with an artist at the broadcasting station 2FC, Sydney, was put on the air. There was no perceptible lag between question and answer, despite the distance of over 600 miles between the stations.

THE rate of licenses in Victoria is 8.17 to every 100 inhabitants; the net rate in the Commonwealth is 4.69, which is considerably greater than South Africa, New Zealand, and is almost as high as Germany, which is estimated to be 4.85. The United States in radio popularity leads the world with approximately 6.48; England is second with 5.82.

THE official figures have been issued showing the number of licenses in force in the Commonwealth at the close of the month of April. Good increases are shown in each State, with the exception of Queensland and Western Australia. The increases for April were as follow: New South Wales, 1390; Victoria, 1461; Queensland, 15; South Australia, 244; Western Australia, 23; Tasmania, 140. The total is 296,317.

IT has been said that the separate development of broadcasting and cinematography has been responsible for the great success of both, and that had earlier experiments with combined

sound and sight been more successful, the film as we at present know it might never have been evolved at all—that the many film "stars" might never have found an outlet for their particular types of genius, which lie in telling a story in pictures without the use of the spoken word, and sometimes without the use of the printed word.

THE new development in wireless picture transmission means that pictures can now be wireless all over the world within a few minutes of the photograph being taken. The photo-electric cell transmitter as the new apparatus is called, has been elaborated and improved by Captain Fulton, the inventor of the Fultograph system. A demonstration of this new system was recently given by Wireless Pictures (1928), Ltd., and proved eminently satisfactory.

THERE are now twelve B.B.C. school advisory engineers, who spend two or three months in a particular area paying daily visits of investigation to schools and other places where there are wireless sets installed. Of course, good reception is essential if the B.B.C.'s educational broadcasts are to be of any value. It looks as though the B.B.C. is going all out in catering for schools. And this has given rise to a good deal of criticism as to whether the B.B.C. should supplement the educational authorities by spending listeners' money on providing educational broadcasts.

IN face of severe competition the Marconi Company has secured the contract for the supply of a 60 kw. aerial energy, broadcasting transmitter for the Swedish Government to be erected at Stockholm. This installation will be operated on the low-power modulation system, with deep and distortionless modulation. It is modelled on the high-power transmitters which are now being manufactured by the Marconi Company for the British Broadcasting Corporation, and is worked direct off a three-phase public electric power supply.

THE Marconi Company has received authority to proceed with the manufacture of a short-wave broadcasting transmitter for the Italian Broadcasting Company. This company has had considerable experience in the technique of short-wave broadcasting through the operation of the short-wave broadcasting station at Chelmsford (5 S.W.). The Italian station will to a large extent follow the design of 5 S.W. and will enable the Italian Broadcasting Company to carry on a broadcasting service for the Italian colonies. Italy will thus be one of the first countries to make special provision for its colonies in its broadcasting organisation.

THE recent two-way communication between 3AR and 2FC recalls the premier successful attempt between these two stations some two years ago. Arrangements were made for pressmen in Victoria to interview Mr. George

Carney, the famous English comedian who was then on a visit to Sydney. Mr. Carney was equipped with headphones and sat in front of a microphone in the studio of 2FC, Sydney, while the Melbourne pressmen were each given the same facilities in the studios of 3LO, Melbourne. The pressmen, after being hailed by Mr. Carney, addressed a series of questions to the comedian in Sydney, and Mr. Carney not only answered these questions, but carried on a running fire of humorous remarks and also sang several songs during the transmission. Both stations 2FC and 3LO not only broadcast the actual speech which was taking place in their own studios, but in turn they rebroadcast the two-way conversation—each from the inter-State source, making it available simultaneously to listeners in both States.

A REMARKABLE prospect of what may happen by the bringing of the "talkies" to the fireside was afforded by the private showing of the "Home Talkie," a British invention which is really a simple electric attachment between an ordinary gramophone and any existing type of home kinema-projector. It can be made for less than £5, and the synchronised sound and picture can be set going by the simple means of switching on to a domestic electric light. The result, as shown by Mr. G. V. Dowding, the inventor, was not great art, but the synchronisation was perfect—one saw an orchestra playing what one heard and people dancing to it. By this device it will be possible for people to make their own gramophone and kinema records for a few shillings, and see themselves dancing, singing, or speaking.

ANOTHER demonstration was successfully carried out from 5CL, Adelaide, when a solo selection from Victor Harbor, South Adelaide, was sung to the accompaniment of a piano played at Tanunda, 100 miles Germany, and those projected for the near future, are to be fitted with wooden aerial masts instead of the usual steel ones hitherto used. This decision is the result of the success of Munich's station with this type of aerial support. It was found that the previous system resulted in the radiation of only about 20 per cent. of the energy fed into the aerial system.

BRITISH Talking Pictures announced recently that the State-supported cinematograph organisation of Italy have decided to adopt the British Talking Pictures system of producing and reproducing talking films. An agreement has just been signed to exploit this system throughout Italy. Luce, the national topical film company, and the leading firm of Italian music publishers, are also parties to the agreement. A company has been formed with a preliminary capital of £150,000 to install the British Talking Pictures apparatus throughout Italy, and production of talking films by the new company and the Ente has begun in Rome.

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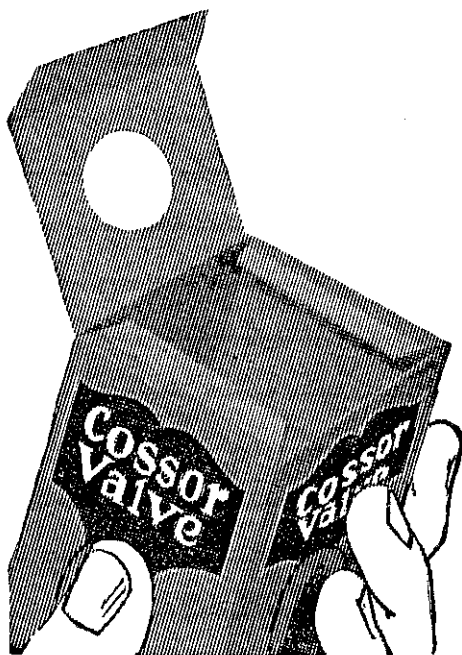
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P.O. Box 1032, WELLINGTON.

WELLINGTON, FRIDAY, JUNE 7, 1929.

BROADCASTING IN THE BRITISH ELECTIONS.

THE most interesting event in the radio world in the past week has been the part played in the British elections by broadcasting. Although for long the use of the microphone was banned to controversial and political subjects in Britain, such a pressure was exercised by public opinion that eventually the Government permitted the door to be opened for the inclusion of the treatment before the microphone of both controversial and political subjects. The British Broadcasting Corporation was charged, however, with the responsibility of seeing that controversial subjects were handled equitably and justly by acknowledged experts, and in the political field that equity was preserved as between the contending parties.

QUITE notable reactions on the part of the electors have been noted to the use of the microphone. Observers' comments have noted that the election has been one of the quietest on record from the point of view of popular demonstration. This is attributed directly to the fact that the microphone has carried into the homes of the people the considered statements of the leaders, that thereby there has not been the occasion for such intensive popular feeling at actual meetings as has existed in the past, and that as a consequence there has disappeared from the political arena many of those features of popular demonstration which have in the past been associated with political gatherings. There can be no question that the use of broadcasting will have a psychological reaction upon the community. It will call into being a new technique in the art of popular oratory. In the Parliaments of the world the tendency of the past century has been to advance reasoned explanations at the cost of flowery eloquence. Gone are the days when House of Commons thrilled to the impassioned oratory of an individual speaker. Now it is the considered statement of reason which commands attention and respect. The same tendency has been noted in our own Parliamentary circles. The microphone will now carry into the popular field this trend, and lead to a higher appreciation of plain straight-forward statements, backed by reason. This must be regarded as an advance. Decisions reached under the influence of mob psychology, inflamed by momentary eloquence, are not always sound. The mob in the past has proved very easily led. The actual contact between speaker and audience facilitates the transfer of mob psychology. Enlargement of the audience by the microphone and

the disassociation of physical contact between the speaker and his audience will thrust mere mob oratory into the background and increase the importance of reason and common sense. The election just fought, from this point of view, establishes a milestone in political history. It is the first in British history in which modern methods have been employed to educate and solicit the considered decision of the mass of electors. Necessarily the method has come to stay. It will be improved upon in future years, so that ultimately a steady advance will be made towards the ideal of a fully-informed electorate giving its balanced judgment. Only under those conditions will the voice of the people become the voice of God.

THE experience of the British election, following on the recent Presidential campaign in the United States, where also broadcasting played an important part, will not be lost upon New Zealand. As things stand, the microphone is barred to politicians and political messages at present. It is not likely that this ruling will stand permanently. The advantages offered by broadcasting for the diffusion of information concerning policies and plans are so great that it is inevitable that they shall be utilised, under guidance and judicious restraint, for the benefit of our widely-scattered electorates. It is likely, in our view, that the next election held in this country, whenever that may be, will see the employment of broadcasting as a means of securing the considered decisions of all electors.

Bishop Bennett

"Waterloo"

To Broadcast from 3YA 4YA Commemoration

The Right Rev. F. A. Bennett, the first Bishop of Aotearoa, will speak from 3YA on Wednesday evening, June 12. His lecture will be entitled: "Maori Subject, Embracing Language and Legends."

To mark the anniversary of the Battle of Waterloo, which falls on Tuesday, June 18, a special "Waterloo programme" is to be presented by 4YA on the following evening, Wednesday, June 19.

This commemoration will take the form of a play "Waterloo," by Sir Arthur Conan Doyle. It will be presented with full effects and musical background.

The vocal numbers will all be specially selected for the occasion, and will comprise a number of the older songs reminiscent of Napoleon's day.

"Waterloo" will be the first full length one-act dramatic play presented from 4YA. A new combination of singers, a male quartet to be known as the Four Aces, will also make their first appearance.

First Race Broadcast in U.S.A.

IN announcing that it would broadcast on May 18 a running description of the Kentucky Derby, famous for years as the climax of the Churchill Downs race meeting, the Los Angeles station KF1 said:

"This will mark the first time in history that a horse race has been deemed of sufficient interest to claim the attention of the radio public."

America is quite a big country, but things do happen elsewhere in the world, even if they are not heard of in the States. Once upon a time racing broadcasts were a regular thing in New Zealand.

Timaru on the Air

Orchestral Concert on Tuesday

THE Timaru Orchestral Society is arranging an excellent programme, to which the leading talent of the town will contribute, for the evening of Tuesday, June 11. The Timaru society found necessary to alter the date previously arranged, and Tuesday was found to be the most suitable, so, though 3YA is usually off the air on that day of the week, the station will carry out the relay, which should provide a musical treat to all listeners.

Radio in the Hospital

Contributions Needed

MEMBERS at a recent meeting of the Wellington Hospital Board discussed the question of obtaining additional funds to complete the installation of radio at the hospital.

The chairman said there were still six wards which were so far not connected with the wireless installation.

The opinion of the medical profession was that patients were effected beneficially by wireless, and it was hoped that the public would subscribe sufficiently to allow the installation to be completed.

The chairman added that the board had £1000 in hand for the purpose, but was unable to spend its own money on wireless installation. An application had been made to the Macarthy Trust, and he hoped that public subscriptions also would be forthcoming.

A DOCTOR'S OPINION OF SYDAL.

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S-O-S

TRAVEL IN COMFORT BY
CAR

WELLINGTON - PALMERSTON
NEW PLYMOUTH

Cable Merger

Epoch-making Event

AT the meeting of Marconi's Wireless Telegraph Company, Lord Inverforth, who presided, recalled that the Government took the exploitation of Imperial beam wireless out of the hands of the company, which had invented and developed the system, and made it a Post Office monopoly. The Government license to the Marconi Company excluded its participation in wireless telegraphy to the rest of the Empire. In the circumstances, the only revenue the company could hope to derive from the beam service was a royalty of 6½ per cent. on the gross traffic. It also became certain that as Marconi's foreign services developed the cable companies would not sit quietly under wireless competition, but would embark on a rate war, which would certainly have reduced their revenue and been even more damaging to the Marconi Company. He believed that the establishment of one comprehensive system of Imperial communications would form a landmark in the history of world communications.

Resolutions authorising the merger were carried unanimously.

At a meeting of the Eastern Telegraph Company, Sir Denison Pender said that the invention of beam wireless resulted in the establishment by the British Government of beam wireless communication "in competition with our most remunerative fields of telegraphic correspondence. If we reduced the cable rates to wireless rates and recovered the traffic previously lost to the beam, the Government would reduce the rates still further."

Resolutions for the merger were carried.

4YA Church Advisory Committee Meeting

A MEETING of the 4YA Church Service Advisory Committee was held at the Studios Moray Place on Monday, May 27, the Rev. E. S. Tuckwell presiding over the following attendance of delegates:—

Archdeacon Fitchett (Anglican), Rev. C. Miller (Presbyterian), Rev. H. E. Bellhouse (Methodist), Rev. W. D. More (Church of Christ), Rev. A. Mead (Congregational), Captain Chandler (Salvation Army), Mr. S. J. Hayden, station director of 4YA, and Mr. A. L. Curry, announcer at 4YA.

The church service rota as decided upon at the previous meeting was confirmed, and delegates expressed satisfaction with the draft as drawn up and submitted.

A request came before the committee that an Orange service should be broadcast during July, and after discussion it was decided that the committee should adhere to the rota originally drawn up.

The question of special broadcasts on Thanksgiving Day was discussed at some length, and it was finally decided that services be broadcast from the Anglican and Congregational Churches on the date in question, one service to be broadcast in the morning and the other in the evening.

Catering for Numerous Requests

A Correspondent Reviews the Broadcasting Service

IN a recent publication of the "Radio Record," I noticed that listeners were requested to state their views of the programmes of the broadcasting stations. Before stating my own views on the subject, I would like to mention that I have followed with interest the various letters which have been published from time to time, and taking them collectively it clearly shows how utterly impossible it is to satisfy all the time all the numerous and varied tastes included in the listening-in public.

A great many complaints that have appeared at various times appear to me to be very childish, and often decidedly selfish, which goes to show how very narrow is the view taken by some of the writers. I have many times been reminded of the old fable of the man and his son who were taking the ass to market, and, incidentally, they were also taking the advice of one and the other met by the way.

Some of the criticism, on the other hand, is very intelligent, and no doubt it has proved helpful to the Broadcasting Company. Surely to the large majority of the listeners, who take a broad view of the whole situation, it must appear quite obvious that the Broadcasting Company are doing all they possibly can with the means at their disposal, to cater for the numerous different requirements of the public whom they serve. It is impossible, of course, to suit everybody all the time, so the next best thing is to suit everybody in their turn, and I believe the company are making an honest attempt to do it.

Marked Improvement.

I HAVE been listening in now for over two years, and during that time the improvement in the broadcasting generally has been very marked. I have many times remarked on the way the various stations pounce down on notable people who may be passing and get them to deliver over the air whatever may be in their particular line. So much we are inclined to take as a matter of course, giving little thought to the amount of trouble and expense involved in giving us perhaps just a few minutes of pleasure. These cases are too numerous to mention, but just to hint at one of them; we all knew, of course, that the description of the taking off of the Southern Cross from Blenheim was broadcast, but did we worry about how much was done and what it cost to give us just those few minutes?

QUITE recently I noticed one writer complaining about the broadcasting of the weather conditions from the various stations in the country. Now, for my own part, I have appreciated that very much. The writer remarks that it is of little interest to anybody but the shipping people. Surely he must be one of those who still believes in the long ago exploded myth that the moon controls the weather.

I have noticed several who are wanting more news in the news session, and as a settler in a very out-of-the-way part of the country, I can quite agree with them, but at the same time, to those who have just read the evening paper, it must be rather boring. Personally I get very bored when all the racing news is put over, but then there are thousands who are very glad to hear it, so they are welcome to it.

Now a Growl.

HOWEVER, just to get on the other side for a wee while, there are one or two little things I would like to growl about, while I have the chance. One is that I notice that one of the announcers at 2YA, when reading out figures, after the decimal point, he reads them the same as those before the point. For instance, not long ago he was giving over the barometer readings, and for, say, 29.96 he read it as twenty-nine decimal ninety-six. It sounded bad to me, and I am sure it is never taught that way in any of the schools in New Zealand.

Another thing, the instances I will mention happened months ago, but still similar items may come along in the future. I allude to the cricket scores at the Australian test matches. They are many of us in the country who do not finish the day's work until after 8 p.m., summer time, so the only news we get is at 9 p.m. Now, it happened often from 2YA that at 9 p.m. all we heard was the latest progress reports. Say, for example, "England in their second innings had lost two wickets for 110 runs," and we were left to imagine what Australia had made in their first innings. That was probably put over during the news session or at 4.30, and was missed by all who were not tuned in at that time of day.

In conclusion, I will take this opportunity of thanking the Broadcasting Company for their very good class and variety of programmes that are put over the air, and also for their many little incidental items of interest that we hear from time to time.—"A Back-Blocker" (Coromandel Peninsula).

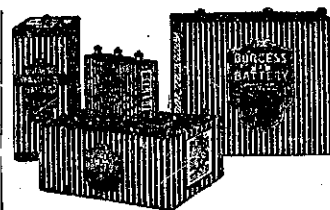
Relay from Hamilton

A Successful Event

THE broadcast on relay from Hamilton by station 1YA, Auckland, on Tuesday afternoon last of the opening ceremony of the Waikato Winter Show and the special musical programme arranged for the occasion was an achievement highly creditable. It had been arranged to put over a three hours' broadcast, from 2 to 3 p.m., but when the company's representative, Mr. John Ball, arrived in Hamilton he was concerned to discover that the official programme would in all probability occupy less than an hour. The entire programme comprised a bugle call (to call the assembled thousands to attention), the singing of an opening ode, four short speeches (estimated correctly to average not more than ten minutes), and the National Anthem.

It was only necessary to mention the apparent oversight to the keenly enthusiastic officials of the Winter Show Association. The secretary, Mr. Paul, whose outstanding ability as an organiser is so eloquently demonstrated by the magnitude of the splendid exhibition, was determined that there should be no "let down" so far as the broadcast was concerned, and promptly placed the company's representative in touch with Mr. T. S. Webster, the well-known organist and choirmaster, Mr. Webster, who, by the way, prior to his removal from Auckland to Wellington, treated listeners-in to many delightful organ recitals, was just the man to save the situation. Enlisting the aid of his Exhibition Choir and Orchestra, and some of the leading vocalists and instrumentalists of Hamilton, he very capably organised an acceptable programme which, with the official ceremony, enabled 4YA to keep on the air for the full three hours, save for a slight interval occasioned by the necessity of transferring the microphone from the official to the concert platform. The programme was so arranged as to enable Mr. Ball to put over several interesting and informative "talks" relative to the show, the town and district, and the great primary industry in which the Waikato holds such a foremost place. These "talks" included a specially-prepared description of the show and a statement of great value to dairy farmers throughout the Dominion concerning the wonderfully beneficent results accruing from herd-testing and New Zealand's unique system of calf-marking. Before leaving Hamilton the company's representative was afforded ample evidence of the pleasure occasioned by the broadcast, prominent officers of the Winter Show Association and leading citizens of Hamilton expressing to him their warm appreciation of the company's enterprise.

RADIO-CONTROLLED clocks are the latest indication of the uses to which the modern genii is to be put, according to reports originating at the Paramount-Express station KNX, Hollywood. One of the members of the technical staff is developing a device which he claims will enable listeners to regulate their watches and clocks by means of radio. Interesting, if true.



**BURGESS
RADIO
BATTERIES**

ON Monday evening, May 27, the annual meeting of the Amateur Radio Society of Wellington was held in the Dominion Farmers' Institute. The night was bitterly cold, and there were only thirty present. Mr. Byron Brown, president, occupied the chair.

A letter was received from Mr. D. G. Wyles, formerly of Wellington, now in Melbourne, thanking the society for its letter of appreciation of his lectures, and undertaking to render any assistance possible in Australia.

Annual Report.

THE hon. secretary, Mr. A. G. H. Laws, read his annual report, which was as follows:—

"During the past year the society has done much good work in the service of listeners. At the present moment there is a general feeling of satisfaction among members in the work of the Broadcasting Co., and the society has had very few complaints or even suggestions to pass on. During the year we have, however, on several occasions agitated for the broadcasting of dinner music, and, as you are aware, this request has now been granted. The society also took an active part in the effort to persuade the Racing Conference to remove its ban on the broadcasting of race meetings, and much correspondence passed in this connection.

"Ten monthly meetings have been held, and a very fine series of lectures and demonstrations given. The following subjects have been dealt with: Various characteristics of receiving valves; short-wave sets; the Browning Drake circuit; all-electric sets; crystal sets; electric power amplifiers; some electric units; and the pentode valve. The thanks of the society are due to Messrs. McCarthy, Fear, Billing, Hardcastle, and Dawson for the provision of these talks.

"The membership of the society stood at 225, but I regret to say that a considerable number of resignations have just been received, while sub-

Wellington Amateur Radio Society.

Annual General Meeting

scriptions for 1930 are coming in very slowly.

"The average attendance at meetings has of late fallen off somewhat, and the reason for this is thought to be a feeling of apathy brought about by the general satisfaction in the programmes provided by the Radio Broadcasting Co."

A tribute was also paid to the work of the president, Mr. B. Brown.

the broadcast programmes could be still further improved. He had no fault to find with the Broadcasting Company in particular, but he considered that any service essentially a monopoly should be controlled by the State, and if this were brought about, it would ensure a higher standard of progressiveness. If broadcast listening were as popular in New

Radio Licenses Number 37,000

WE have received from the Secretary of the Post Office a statement showing that the total number of radio licenses issued as at April 30 was 37,090. While this represents a gain on the position as at the same period last year, it is still considerably below the position obtaining at the end of March. Frequent announcements have been made over the air, on behalf of the Secretary of the Post Office, to the effect that listeners who are still in possession of radio apparatus capable of receiving, who have not renewed their licenses, are committing a breach of the regulations.

Details of the position are as follow:—

District.	Receiving.	Dealers.	Transmitting, etc.
Auckland	12,515	181	127
Canterbury	6,790	132	65
Otago	2,763	88	39
Wellington	14,008	304	78
	36,076	705	309

The treasurer's report showed a small credit amount in the bank, and the sum of £2 11s. owing to the society, which had no liabilities.

Presidential Address.

THE president, Mr. B. Brown, in his address, expressed the opinion that

Zealand as in Australia, the number of broadcast listening licenses in the Dominion should total 60,000 instead of 42,000 as at present. The wealth of the people of New Zealand was vastly in excess of that in Australia per capita, and yet there was a much higher proportion of listeners in the Commonwealth. He urged that when the existing contract between the Government and the Broadcasting Company expired broadcasting should be taken over by the Government, as was about to be done in Australia or by a semi-Government corporation.

Football Broadcasts.

SOME speakers condemned the practice of announcing "2YA, Wellington," while musical items were being broadcast during the dinner music session. It was contended that the station's call-sign could be announced between items, instead.

A motion was adopted that a request be forwarded to the Broadcasting Com-

pany that the Sunday afternoon musical session be extended till 5 p.m.

The meeting carried a resolution dissociating the society from certain criticisms of the announcing at 2YA, Wellington, which have appeared in the Press. The secretary was instructed to write to the director of 2YA, complimenting the announcer on his work.

Considerable discussion ensued on the subject of broadcasting descriptions of football matches from 2YA every Saturday. By thirteen votes to seven, several present abstaining from voting, the following resolution was adopted: "That this society recommends that the Broadcasting Company abstain from relaying descriptions of football matches from 2YA, Wellington, other than international, inter-colonial, inter-provincial and final of club championships, music to be substituted instead on Saturday afternoons." The secretary made a special appeal for subscriptions.

THE election of office-bearers for the ensuing year resulted:—President, Mr. Byron Brown; chairman, Mr. J. H. Owen; hon. vice-presidents, the Hon. Sir J. G. Ward, the Mayor (Mr. G. A. Troup), Messrs. P. Fraser, M.P., McKeen, M.P., R. A. Wright, M.P., Chapman, M.P., R. Semple, M.P., S. Kirkcaldie, Captain C. Foster, Messrs. S. Geo. Nathan, D. A. Aiken, Dr. H. E. Gibb, Messrs. C. G. Turner, G. Robertson, Irvine, Fitt, R. Wilberfoss, Hope-Gibbons, H. D. Bennett, Dr. Harty; active vice-presidents, Messrs. W. J. Roche, I. M. Levy, T. Donovan, and Dr. W. S. Robertson; committee, Mr. Ponman, Messrs. G. W. Morgan, W. A. Glover, W. H. Taylor; hon. secretary, Mr. A. G. H. Laws; hon. treasurer, Mr. W. J. Roche; hon. auditors, Messrs. Henry Kember and Son; technical adviser, Mr. W. M. Dawson.

Static Eliminator

Invitation not Accepted

Our Invercargill correspondent telegraphs us that he has been assured by a reliable authority that the reported invention of a static eliminator by an Invercargill radio enthusiast may be regarded as a pure fiction. The alleged inventor, who claimed to have discovered a means of eliminating static, did not accept the opportunity that was made available to him to thoroughly test out his principle when arrangements to that end were undertaken.

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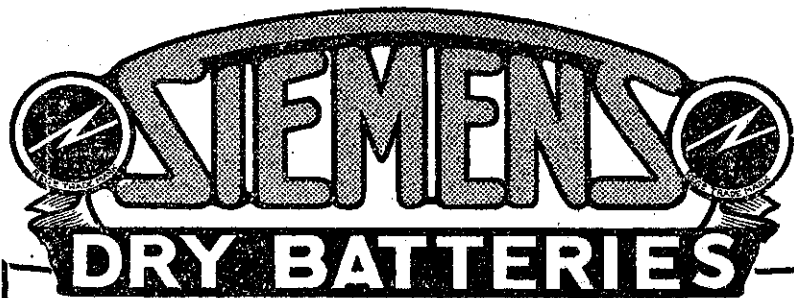
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WELLINGTON	Dominion Building, Wakefield Street
NELSON	Hardy Street
CHRISTCHURCH	83 Cathedral Square
GREYMOUTH	Mackay Street
DUNEDIN	Rattray Street
INVERCARGILL	Esik Street
NAPIER	Hastings Street
WESTPORT	Next Bank of N.Z.

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Laboratory Jottings

The "660" Products

A SHORT time ago our full report of the "660" products, comprising valves, and a speaker, was published in our columns. At the time, the New Zealand agency had not been allotted, and the products were then unobtainable.

Listeners will now be interested to learn that the agency has been secured by Abel, Smeeton, Ltd., Auckland, from whom stocks of these excellent valves and speakers, as well as paper for making cone speakers, will from now be obtainable.

The "Airzone" Portable

J. A. SMYTH & CO. have submitted to us the Airzone Portable. It has been given an extensive test, and the results are very pleasing. The receiver is made up in a neat carrying case approximately 2ft. by 18in. by 6in., and weighs 27lb. The circuit is the well-known Browning-Drake four-valve (RF, detector and two audio). The filaments are heated from dry "A" cells carried within the case, and the "B" battery 90 volts is similarly concealed. The speaker is a magnetic cone of the best type. It has a substantial magnet that is altogether greater than the usual for this type. It is thus capable of reproducing a very wide range of musical frequencies.

A loop antenna is concealed in the lid. To this there are three terminals, two of which connect to the set directly, and a centre tap to which to connect an aerial when it is desired to work with this. Under these circumstances, an earth is connected to the lower terminal. This antenna has marked directional properties, and is particularly sensitive. From 2YA working on the loop, it was found that volume unless controlled was excessive. It lacked nothing in quality, and compared very favourably with the straight-out Browning-Drake. With the loop, the set is highly selective. It was possible, while 2YA was operating, to tune in 1YA and 3YA without background, and at good strength. 2BL and 2FC were likewise brought in while the local station was operating, though the latter was somewhat weak and had a background.

The set was tested during one of the worst weeks as far as static interference is concerned that has been experienced for some considerable time, so that almost all testing had to be done on the loop alone. The tests were carried out during the search for the Southern Cross, and it was found that this receiver was to be preferred to one using an aerial and an earth under these conditions. Every evening 2BL was tuned in and could be heard right through his session at perfect speaker strength. It was a treat to be able to obviate the static, and hear the latest authentic news of the airman. 3LO was heard from the loop, but its strength depended very much on atmospheric conditions.

On one evening only was the set able to be tested from an aerial, and this fortunately was Wednesday. 1YA, 3YA and 4YA were tuned in at perfect

speaker strength during the latter afternoon and early evening. In addition, the following stations were brought in at excellent strength: 2UE, 2GB, 3LO, 3UZ, 4QG, 5CL, 2FC, 3AR, 7ZL, JOAK and JOGK. The portable thus equalled the ordinary four-valve Browning-Drake.

D.X. Notes

In Difficulties.

CAN any listener help me to find out which station I heard last night, Monday, on about 230 metres? The items came through excellently clear, but was fading badly; the announcements were very weak. Some of the items were:—"In a Persian Market," "Drink to me Only With Thine Eyes," The only letter I could catch was a Z; would this be 2ZQ?—A. E. Ireland (Taradale).

CAN any member of the fraternity give me any information about a station on 295 metres, whose call sounds like KGLA, Los Angeles? I logged him at 10.30 p.m., Tuesday, playing records and selling motor-cars for 1290 dollars. Last Friday I heard KNX operating until 11 p.m. our time. Listen for Australian amateurs mid-night, Sundays, I have logged VK3BY on 249 metres; VK3EE, on 240 metres; VK3TM, on 215 metres; and VK3ML, on 227 metres.—H. Jakeman (Huntly).

[Latest lists do not indicate a station KGLA. Would it be KGFH on 300 metres?]

A Good Log.

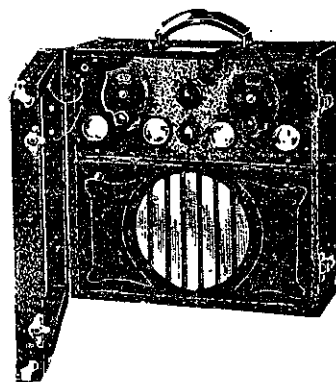
CAN any reader beat my list of stations, all received on a four-valve (s.w.) made by myself and own circuit? P.C.J (R6), RSR, DOR (R5), ZL2AW, ZL3AF, 3LO, 2LO, K8, RFM, POLL, 7LO, R4, JOAK, JOCK, ZMBY, JOBK, JOHK, JOAK (375), 4QG, 2BL, 2FC, 1YA, 2YA, 3YA, 4YA, 2ZM, 7ZL, 5CL, 3AR, 2UE, 2UW, IZC, KNRC, KLX, KMA, KOIN, WAPI, KEX, 2XAF, 2XAD, W2XG, 2BG, VK2ME, (R7-8), KOKA, PCK, 3AF, 2AX, PHI, KFKX, KFON, KGO, WBBM, KEL, KHJ, ECS, 2ZY, 5IT, 2BD, 6BM, 5SC, 5WA, 5ND, LP, SFR, PCGG, FL, 2ZQ, 4ZM, 2YB, JOGK, WART, WHER, WMAQ, KCJJ, PLE, RFM, RF (R2), JHBB, WFAT, WFBT, ANE (R7), GMT, 2ME, EST, 5SW, W2XAD, RK2ME, WGY, KTM, WFLA, NZMT, KFOA, KEJK, KVOO, KMOX, KHT, KOMO, 2OA, 2AX, 4ZO, 2ZF, 5NO. I have heard many other stations, but could not get their calls.—A Fifteen-Year-Old (Gisborne).

[If all are authentic this is a good list for a fifteen-year-old enthusiast. However, we cannot undertake to publish competitive lists.—Ed.]

REPORTS of reception from many unusual and romantic places have been received by radio stations all over the country, but KNX, Hollywood, claims the prize for the month for a letter that came from Loma Loma, a tiny island in the South Seas. The letter expressed appreciation of the "dedication programme" released over the powerful Hollywood station when it moved to its "cleared channel" last November. For over four months the letter was carried by a trading schooner before finally reaching a posting point.

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Auckland Notes

(By "Listener.")

AT the time of writing there is nothing new to report regarding efforts to secure resumption of broadcasting to the Municipal Band. Our City Council has been occupied so much by transport matters that it has not yet found time to consider the wishes of the thousands of listeners within and beyond its city boundaries.

THE third relay of a Wellington Sunday concert was given by 1YA last Sunday, and proved as popular as its two predecessors. These relays have demonstrated beyond doubt that perfect crystal or valve reception of Wellington is thus possible, and that the land line is going to solve many future problems in broadcasting. Incidentally it may be mentioned that Aucklanders, through listening to the recent relays, have the highest opinions of the Wellington programmes.

MR. KARL ATKINSON provided music-lovers with another treat on Tuesday in one of his excellent gramophone lecture-recitals. He illustrated how a judicious selection of records, suitably introduced and explained, can provide a splendid programme with a universal appeal.

HAS any other listener noticed the relation between the movements of the barometer and the strength of distant reception. The writer possesses a barograph, and has observed that invariably on a rising barometer overseas stations come in at much greater strength than they do on a falling one. There was a good example this week. During the earlier days, Australian stations were heard poorly, but on Wednesday, when the barometer showed a pronounced upward tendency, volume increased to a remarkable degree.

AUCKLAND experienced its first long-distance provincial relay this

week when the official opening of the big Waikato Winter Show was put on the air by 1YA. Speeches and musical items alike were heard perfectly, and the broadcast must have been a splendid indirect advertisement for the show as well as a great boon to the many farmers in the district who could not spare the time to attend the function. The success of the relay indicates that there will be no difficulty in putting out from 1YA a complete Hamilton programme in the near future. There is abundance of talent in the dairy centre, and we may be assured that the officials of the Auckland station will soon organise it.

A CONCERT is also promised from the far north, Whangarei artists being the contributors. The country centres so regularly hear the talent of the city that a reversal of the order will be decidedly a popular procedure with the likelihood that several artists will be discovered whose capabilities will warrant their inclusion in programmes at such times as they can visit the studio.

SHORT-WAVE enthusiasts in the suburbs report numerous receptions of the speeches of the political leaders, who are concluding their British election campaigns as these notes are being written. Mr. Cooper, of Devonport, states that he picked up with perfect clarity a speech of Mr. Ramsay MacDonald, but did not know who the speaker was until his name was announced at the conclusion of the address. On Friday night 1YA will come into the picture with the latest results of the polling, so that the whole province and the South Seas will know the political fate of Mr. Baldwin's party almost as soon as the people of Britain will. In work of this kind broadcasting has a big lead over the newspaper.

For Sale or Exchange.

See page 32 for column of casual advertisements.

Hawke's Bay Notes

(By "X.Y.Z.")

THERE is not much to report in radio matters from Hawke's Bay this week. With a fair degree of safety it may be said that improved reception conditions are now ruling, mainly through the subsidence of the static which has been so much in evidence for weeks past. Good volume is recorded from the main New Zealand stations, with the Australians rather weaker than usual. Of course this is not the nightly position, but it may be taken as an average.

THE relay from Auckland on Sunday night of the band concert in Wellington was again marred by static. The sooner that proposed line of relay stations is completed, the better pleased local listeners will be. The Hawke's Bay Society, by the way, has written to the Government urging the expedition of the sanctioning of the scheme. In this connection the Gisborne Listeners' League has offered its solid support to the local society in the hope of getting a station located at Hastings.

THE Radio Broadcasting Company and the Post and Telegraph Department has now finally selected August 22 as the date for the relay of the concert from the Hastings Municipal Theatre, and it is hoped to make this one of the best concerts ever presented in the Dominion. The local Maoris will combine with the pakehas to organise a first-class concert of which Hawke's Bay will be proud.

HIS Lordship the Bishop of Aotearoa, president of the local radio society, will broadcast a short Maori talk from 3YA at about 9 p.m. on June 12. The writer advises all who wish to hear an eloquent orator and a most interesting man, to tune in to 3YA that night. His Lordship will be well worth hearing.

Whangarei Band Concert

CONTINGENT on a relay line from Auckland to Whangarei being available, it has been arranged that 1YA shall broadcast a Whangarei band concert on the evening of Sunday, June 16. The musicians of the chief town of the "Winterless North" are arranging a splendid programme.

What "Guide" has for the Crystal Owner.

COMMENCING with the most simple of crystal circuits, and explaining the "why" and "how," the "Guide" takes the crystal owner through very many circuits and adaptations, explaining the merits and demerits of each. These include two most popular amplifiers, and a crystal circuit that is capable of outstanding performances. Hints on operating and repairing are abundant, and the crystal owner will find all he wants to know about his set in "1929-30 Radio Listeners' Guide."

Suggestions from Correspondents

Success of the Booster

W. E. DANCE (Blenheim) writes: I have built up the R.F. unit as described by J.H. in this week's "Radio Record." I have much pleasure in stating that it is very much better than J.H. claims. I had no trouble in making the coil and assembling the booster. On the first try-out last Wednesday night I logged the following stations with great volume:—7ZL, 3AR, 4YA, 2FC, 4QG, 3LO, 2BL, 1YA, 3YA. On Saturday afternoon the 11th I received 1YA and 3YA on the speaker at quite good volume. I haven't had very good results on stations below 3YA. The condenser vanes are right out. Am I correct in this respect? I wound on about forty turns of No. 24 for the secondary and sixteen turns for the primary.

[It appears that there are too many turns on the secondary. Try a reduction to about 35. The attention of constructors is drawn to a query in Questions and Answers last week where it was pointed out that under certain conditions the booster would cause trouble. The aerial coil must in no wise be connected with the grid coil.]

Regarding Selectivity

S. W. BOON (Oamaru) writes regarding selectivity:—I use a short wave set with turned s.g. R.F. stage. I wound coils for broadcast and have had good results though set was not selective. Uncontrollable volume troubled me. I have only one rec., and that on det. filament. Here in Oamaru, Wellington and Christchurch were too powerful altogether, so I looked out a midget condenser, .00005 mfd., and put this, externally, in series with aerial lead. On the broadcast band selectivity was fairly good but volume is slightly decreased, also, is interference. I can now separate 3YA and 2GB and can very nearly cut out 2BL right off the Jap. alongside (JOFK), a great improvement on what I had previously with 2YA smothering 2FC.

On S.W. it works well, with practically no noticeable decrease in volume and cuts out the greater part of interference on 80-metre band.

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In Brief.

"C.H." (Karori) states that he intends to purchase a "B" and "C" eliminator, and asks which we consider the best of a list of manufacturers' names submitted. If he will but refer to our conditions, he will notice that discrimination between factory products cannot be given. He should consult a reliable dealer who carries a wide stock.

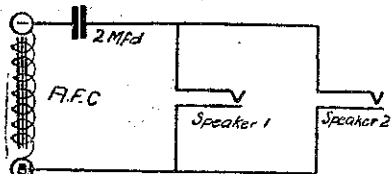
Speaker Units.

"R.P." (Petone) is unable to locate an agency for "Blue Spot" loud-speaker units. He should try the Rodger Importing Company, Worcester Street, Christchurch, who are New Zealand agents.

Hooking Up Speakers.

"S.P.S." (Richmond) asks for the necessary diagram to connect two speakers, so that when one plug is out, the other speaker will yet work. One is to be at a considerable distance from the other.

A.: A diagram is appended showing the necessary connections. It will be noted that an audio choke and by-pass condenser is incorporated. This is necessary only where an output transformer is not



employed. As few receivers employ this it should be fitted to any set where the lead to the speaker is to be taken any considerable distance. By this attachment, high potential battery current is not passed through the speaker leads, thus rendering a short circuit due to dampness or wearing of the insulation impossible. Furthermore, the speaker need not be connected in any particular way. (See "Megohm's" article on "Chokes.")

Improving the Set.

"CHRISTCHURCH" asks how he might improve his set. It is a five-valve factory-made model using five 201A valves with 90 volts on the plate. He asks if the 135 volts could be used, and asks for suggestions regarding a power valve.

A.: A set of this type can be improved by the addition of a power valve. If signals from the stations to be relied on are relatively strong, it would pay to introduce a valve of the 171A type. This valve with 135 volts on the plate, which is not the maximum, would require about 22½ volts grid bias, but would improve the tone very much. However, if signal strength is relatively weak, and the slight reduction caused through the introduction of a 171 detrimental, the best valve would be the 112A type, which, with 135 volts on the plate, would require about 9 volts grid bias. As the set is an American one, it would be wise to adhere to American valves or American type valves, as many of the English manufacturers, e.g., Mullard, are making American type valves which can replace the ordinary American valves without interfering with the balance of the set. Usually the warning that we have given not to change from American to English valves applies to R.F. and detector valves, and rarely to the audio stages, though it is possible that the change has some effect, but it is unlikely.

2. Could I use the 6-volt moving-coil loudspeaker with my set?

A.: It is difficult to say authoritatively, but in all probability yes. (See the Beginner Corner.)

Charging a "B" Accumulator.

"G.J.W.", of Greyouth, is intending to purchase or construct a "B" accumulator, and asks whether a 6-volt dynamo which is used for charging the "A" battery would be sufficient if the "B" battery were split up into 6-volt sections,

and then these connected together to form the 120 volts.

A.: The method is hardly suitable, as it would be difficult to get the charging rate constant. However, here are the details: Generally a "B" accumulator has about 2 amp. hours capacity, and if 120 volts were split up into 6 volt sections, it would give a battery having a capacity of 120/6 x 2/1 ampere hours, equal to 40 amp-hours. As the charging rate should be one-tenth of the capacity this works out at 4 amperes. Charge at 4 amperes for 12 hours or until the cells gas freely.

What is a Jack?

"F.J." (Ohoitu) asks: "What is an output jack?"

A.: A jack is a device employed for making various changes in the circuit of radio receivers. Among the more common uses of these are cutting in or out additional stages of audio or radio frequency amplification, operating different combinations of loudspeakers and headphones, changing from one antenna to another, control of power supply units or filaments, etc. An output jack is one that is used in the last stage or in the stage connected with the loudspeaker. It may have two or four connections, according to which it fulfils of the purposes mentioned above.

The Trickle Charger.

"A.R.W." (Island Bay) has constructed the "A" and "B" trickle charger described by "Pentode" and asks the following questions:

1: Should I keep "R plus" and "B—" shorted while charging the "A" battery, and the "A plus" and "A—" shorted while charging the "B" battery?—No.

2. When using the polarity indicator, the deep colour appears to show on the wrong wire with the "B" terminals. It appears on the one nearest the charger.

A.: Exactly what is meant as nearest the charger is not certain. If the correspondent means nearest the rectifier, this is quite in order, as the "A—" and the "B—" are one and the same.

3. My transformer has an output of 8 volts. Is this high enough?

A.: Not quite. If possible it should be brought up to within the region of 20 in order to allow for a drop in the rectifier. According to the functioning of Ohm's law the provision of ample voltage means the supplying of the requisite voltage at a higher amperage.

4. Could I have some turns taken off my transformer to obtain a greater output?

A.: No, at least double them; reducing the number lessens the voltage delivered.

5. Could a rectifying valve be used in place of the jar in the trickle charger?

A.: Yes, but it means converting the charger from electrolytic rectifier to a valve rectifier, which entails changing the circuit completely. A trickle charger using a valve has been described in the "Radio Listeners' Guide."

"Q" Coils.

"E.H.C." (Tokaanu) asks regarding "Q" coils: (a) their form, (b) their function as different from other coils.

A.: "Q" coils are inductances mentioned by one or two English journals some time ago. They have the advantage of being able to receive either high or low wavelengths, by the medium of a simple switching device. Actually, they were made up of two coils which when connected together in series would tune down to a higher wavelength, but if connected in parallel, one half partly cancels out the other half, leaving a small portion of inductance for the lower wavelength. Taken all round, they are not as efficient as when two separate coils are used.

The Exponential Horn.

"EXPONENTIAL" (Palmerston North) wishes to construct a "curly" exponential horn, and asks the following questions:—

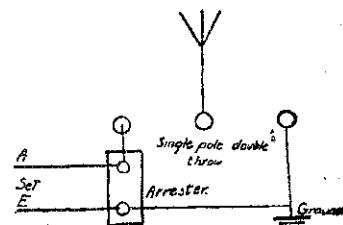
1. Could 3-ply be used, and would this bend satisfactorily for the top and the bottom?

A.: Yes, but beaver board would be better. It would bend easier, and the layers would not be separated by the use of hot water or steam as may be the case with 3-ply.

2. Could you supply the measurements? A.: The safest way is to work out the measurements for oneself. Make a rough sketch of the shape required and compare this with the specifications given for the straight exponential horn. Now draw one to scale (preferably a large scale) and then set these markings off on the beaver board.

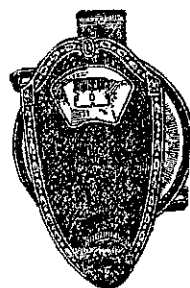
Lightning Arrester

A CORRESPONDENT from North Auckland requests a diagram showing the connections between a lightning arrester and the set using a single pole double throw switch to connect the aerial to earth when the set is not in use. This is given below.



An Extra Eliminator Tapping.

THE difficulty of running a moving-coil loudspeaker from an eliminator providing only two taps has been encountered by "W.C." (Waikato), who is using a five-valve set and operating it from an eliminator with two tappings. At the present time, high and low frequency current is being taken from the one tapping. He now wishes to use a moving-coil loudspeaker and requires all the power possible on the last valve. This means that the voltage on the R.F. valve must be reduced. A lead is taken



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from B+ amplifier through a resistance to the new tapping. This is connected through a condenser to B—. A condenser of 2 mids. with a high-voltage test is essential. The resistance should range between a 25,000 and 50,000 ohm wire wound or carborundum. If a variable resistance is inserted here the voltage may be adjusted. In addition, biasing the radio frequency valves with, say, 1½ volts, would further cut down the current, making still more available for the moving coil.

The correspondent states that he is using 605 and 608 valves in the first audio and power sockets respectively. This is a wrong combination—605 is a power-valve and being used in the first audio, is consuming far too much current and thus depriving the last valve. Replace it with a higher impedance valve, say 609.

He goes on to state that he constructed the moving coil described by "Pentode," but finished it before the article on the matching of impedances appeared. He now uses 605 with 105 turns, and asks if this is correct?

A.: With 605 the impedance of which is 2800, 50 turns are required with a step-down transformer, but 608 would be the better valve to use with such a speaker. It will slightly lessen volume but will make up in tone. Using this valve, 30 turns on the moving coil are sufficient. It would pay our correspondent to dismantle his speaker and take off some turns to give the number specified.

Oscillation Troubles.

"SHIELD" (Waitara) inquires regarding his super-hetrodyne, which uses

three UX222 valves. He has observed that he cannot increase the filament voltage beyond 2.8 without the set bursting into oscillation. As the normal current is 3.3 volts, he presumes he is not getting the maximum from his set.

A.: So long as the set is oscillating he is getting the maximum, though in this case, he should try reduction of the plate voltages. This should bring the oscillation point lower, and allow a higher voltage to be applied on the filament.

"Round the World Two."

REGARDING this popular receiver, "W.I." (Lower Hutt) asks the following questions:—

1. Would a glass tube of half an inch diameter be suitable on which to wind the choke.

A.: Yes, if by half-inch the inside diameter is understood.

2. Would a fixed condenser .0005 replace .0002. I cannot purchase the latter?—Yes.

3. Would a midget condenser be suitable for aerial coupling?—Yes.

4. What wavelengths could my five coils cover? Do I use the same coil for reaction all the time?

A.: Regarding the coils: Before the wavelengths these will cover can be calculated the following data is essential. The distance between the first and the last turn, the number of turns, the size of the wire, the size of the former, and capacity of the tuning condenser. The tickler has to be altered for each coil.

The correspondent states: A friend has constructed one, but when tuning with the reaction plates all in, all he can get is a very loud squeal all round his dials. What is the cause?

A.: Too much reaction. Don't use the plates all in if this is the case, and try reducing the "B" voltage.

"Megohm's" Speakers.

COULD you please tell me which speaker will give the best results on the high and low notes, writes "G.F." (Dunedin). The one described in the "Radio Record" of May 3 or the 2ft. cone described in the "Radio Listeners' Guide"?

A.: There is very little difference between them. The one described in the "Record" gives a slightly better overall amplification, but the difference is very small.

2. Will any four pole balanced armature type of speaker unit do for either speaker?—Yes.

Coils for the Browning-Drake.

"RHEOSTAT" (Alexandra) has done some experimenting with the 2R.F. Browning-Drake and has found that replacing his 3in. coils by those wound on a 2in. former has made a great improvement in the layout. The particulars of these coils are: Aerial coil used in series with a .0001 fixed condenser tuned with a .0005 variable condenser, 65 turns wound 32 turns to the inch, regenerator tuned with a .00025 condenser 122 turns wound 32 turns to the inch. To neutralise a tapping has been made on the twenty-second turn of the regenerator. He asks if this is correct.

A.: It is rarely necessary to shift the tapping past the eighteenth turn, although the twenty-second turn should give quite good results.

Could you give me the correct number of primary turns to suit the following valves, the regenerator being wound on a 2in. former:—

A609 impedance 6,000 ohms, turns 16
PM3 impedance 16,000 ohms, turns 20
PM5 impedance 18,000 ohms, turns 22
A630 impedance 20,000 ohms, turns 28
A425 impedance 21,000 ohms, turns 30

The correspondent has noticed a peculiar phenomenon. With the set switched on, but with the speaker not connected to the jack, reception may be heard, although it is sometimes of a "buzzy" nature. At times it reaches such volume and intensity that speech may be followed.

A Corner for Beginners

Power for Dynamic Speakers.

DYNAMIC cone speakers are now becoming very popular, and with their popularity problems concerning them arise. The power required by these speakers to excite the field magnet ranges usually from half an amp to an ampere or more. This places a fairly heavy drain upon the 6-volt accumulator, and so some provision has to be made in order to keep the "A" battery up to scratch. There are two methods: 1. The provision of a charger with a charging rate of about 3 amps, to recharge the "A" battery as soon as it is finished with, and (2) keeping a trickle charger either on the battery when this is connected with the speaker or by connecting the battery charger directly to the speaker winding. Where a battery charger having an output of half an amp. upward is obtainable it can be quite well connected between the electric light mains and the speaker. The only difficulty here is that if the charging rate is not high enough the field magnet will not be saturated and hum will result, although this is not very distracting providing the field can be relatively well provided with current.

Connecting a trickle charger to the battery and the battery to the moving coil loudspeaker as well as to the set has a slight disadvantage in that it is liable to cause the set to hum, but this again very much depends on the particular conditions in which the set and the speaker work.

It is sometimes stated that this type of speaker requires very high plate voltage on the last valve and is less sensitive than an ordinary cone speaker. This is not necessarily the case. It is sometimes, and the intending purchaser should ascertain the sensitivity of the speaker he intends purchasing. Recently, the writer tested a good moving coil speaker comparing it with a cone type speaker for both sensitivity, tone and quality. It was found on all these three points that the dynamic cone was far superior, it being quite as sensitive as an ordinary speaker even on distant stations and with only 150 volts on the plate of the last valve. When operating on the local station, it was found that the voltage on this valve could be reduced to 100 without a great deal of loss without quality.

The Care of Wet Batteries.

IF the set is to function well it is essential that the wet batteries, whether "A" or "B," are carefully attended to. The principal points in the care of the batteries are as follow: (1) Keep it fully charged, (2) keep the liquid at least ½ in. above the plates (3) handle it carefully.

When the battery is being charged the sulphuric acid which has passed from the electrolyte into the plates is driven out, thus raising the specific gravity of the electrolyte, and one recognises the condition of a full battery. This is the explanation of the hydrometer testing apparatus, whereby various specific gravities are tested. As a battery slowly discharges, sulphuric acid passes from the electrolyte (the solution) into the plates, and unless this is thoroughly driven out by regular recharging the plates become loaded with sulphuric acid, and sulphation takes place. Acid should never be added. If the battery becomes weak, and the full specific gravity cannot be real-

A.: One of the transformers is slightly defective, resulting in one of the laminations vibrating in sympathy with the varying density of the magnetic field resulting in a conversion of electro-magnetic impulses into sound waves acting on the same principle as does a speaker unit.

ised, it should be charged as fully as possible, and the electrolyte drained off and fresh solution of the specific gravity of 1.3 (1300) added.

It is important that the solution be kept covering the plates. This is a point very liable to be overlooked. A case was noted by the writer recently where a listener complained that his battery would not come up to the right charge, and dropped very rapidly. On examination it proved that the solution was not covering the plates. In fact, two inches were uncovered. This is liable to permanently ruin a battery, for in discharging sulphuric acid enters the plates, the electrolyte evaporates slightly, and on recharging the sulphuric acid cannot be driven out, because there is nothing to drive into, hence in time the plates become ruined. Distilled or rain water collected in a earthenware vessel can be used.

Correspondents quite frequently complain that in spite of regular charging and keeping the electrolyte to its proper level the battery rapidly runs down, indicating a short circuit. Presuming this is within the accumulator (which can be tested by isolating the accumulator from the set, and leaving it for some time, and testing), it is caused probably by parts of the plates becoming dislodged, falling to the bottom, and short circuiting. This is the outcome of either age or rough handling. In addition, rough handling causes leakage.

Concerning Audio Transformers.

THE general advice regarding these is to avoid small transformers, the reason being that unless special material is used in the core and in the wire of the windings, various faults will arise. Particularly is this the case when more than one transformer has to be used.

Probably the most common fault in the audio amplifier is audio frequency oscillation—a high-pitched squeal that altogether spoils reception. This is sometimes very difficult to eliminate, and the writer had a quite interesting experience recently. An amplifier using high voltages was employed, but it was found that whenever a high voltage was applied to the plate of the last valve a high-pitched howl, which developed into a roar, drowned reception. It was caused probably through interaction between the transformers, an over-saturation of the last valve or grid plate interaction.

There are several cures for this type of audio oscillation, and from time to time, we have recommended them to correspondents through "Questions and Answers." The usual practice is to reverse the primary leads to the transformer, or to place a resistance in shunt, that is across the terminals of the secondary of the last transformer (G to GB or C minus). This resistance may be a grid leak, and the most appropriate resistance is found to be usually half a megohm. If the whistle persists, resistance may be lowered. Such a resistance may be placed across the secondary of the first transformer. This will reduce volume, but considerably increase tone. By placing the grid leak in series with the grid, a preventative is assured. Short grid and plate wires well clear of one another should be employed. Transformers should be at right angles to one another, and it is sometimes necessary to earth the cores. When this howling is noticed with a crystal and amplifier, A minus should be connected to earth.

NO matter what kind of set or how much high-frequency amplification used, a good aerial and a good earth are always well worth while.

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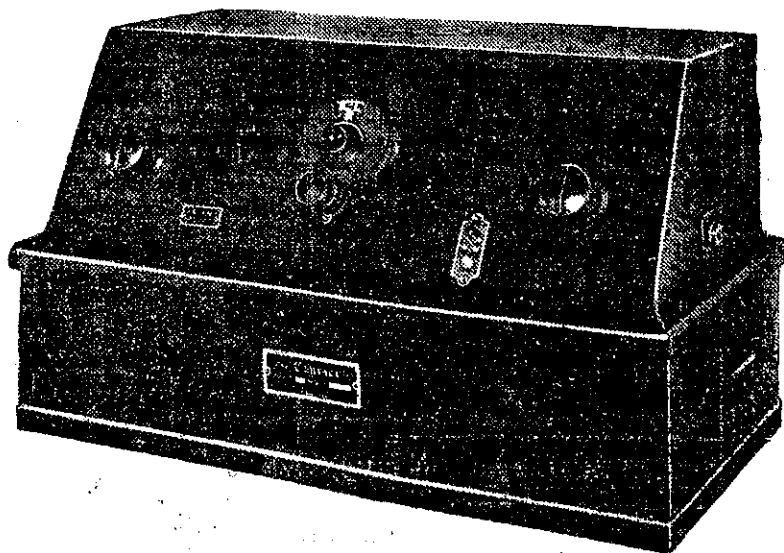
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Next Week's Features

1YA Features

THE religious service to be broadcast on Sunday evening will be from St. Andrew's Presbyterian Church, the preacher being the Rev. Ivo B. Bertram. Afterwards there will be a relay of the concert to be given by the Port Nicholson Band, Wellington.

ON Tuesday evening a splendid operatic programme will be presented by the Olympians. Their concerted numbers will include "Pretty Little China Girl" from the popular opera, "Belle of New York," and the "Miserere Scene" from "Il Trovatore." Miss Dorothy Youd's fine dramatic soprano voice will be heard in the great aria from "Madame Butterfly," "One Fine Day," while Miss Martha Williamson will include among her contralto solos "Willow Tree" and "Ingrid's Song." Mr. Geoffrey Colledge, well known for his work in the Auckland Choral Society's production of "Maritana," will sing two numbers from that opera, "In Happy Moments" and "My Heart with Woe O'ertaken." Mr. Lambert Harvey will also sing the well-known tenor solos from the same opera, "Let Me Like a Soldier Fall" and "There's a Flower That Bloometh." The Studio Trio's numbers will include "Sailor's

Song" from "The Flying Dutchman," and selections from Saint-Saens's great opera, "Samson and Delilah," while a cello solo will be rendered by Miss Mollie Wright. Concluding the programme will be a gramophone lecture-recital by Mr. Karl Atkinson, who will present, with explanatory dialogue, part one of Act 3 of Wagner's opera, "Tristan and Isolde."

THE main contributors to Wednesday evening's programme will be the Auckland Artillery Band, under the baton of Mr. Wynne Smith. This popular combination will render a fine programme of band items, including "Waldmere March," Rachmaninoff's "Prelude," a "Harry Lauder Song Selection," "In a Monastery Garden," "Wellington March" and a cornet solo. Assisting the band will be the Minster Quartet and Mr. T. T. Garland, humorist. The Minster Quartet, comprising Misses G. Hosking and M. Davison and Messrs. R. Stephenson and A. Macpherson, will present a vocal programme of quartets and solos, including "The Shades of Night Around us Steal," "A Spring Song," "The Little Road to Kerry," "If You Pass Through My Garden" and "Wayfarer's Night Song."

A SPLENDID variety programme will be presented on Thursday evening by the "Radio Scamps," who will be remembered for their bright and breezy entertainment on Saturday, May 11. Their latest offerings, entitled "A Trip from Tilbury," will be even more entertaining than on that occasion. This production will be looked forward to by all listeners. Following the studio concert a programme of dance music will be broadcast until 11 p.m.

OUTSTANDING on Friday evening's programme will be the initial appearance at 1YA of Mr. Laurence North, who is considered one of the most promising baritones in the Dominion. Mr. North's fine interpretation of the role in "Elijah," produced by the Auckland Choral Society last year, is still remembered in Auckland, and his first appearance "on the air" will be eagerly looked forward to. The Celeste Ladies' Trio will contribute vocal trios and solos, while Mr. Eric Waters, the well-known pianist, will play "Spinning Song" (Raff). Another feature on the programme will be two short organ recitals by Mr. Arthur E. Wilson, the first of which will be devoted to compositions by Handel. Mr. Wilson will also accompany Mr. North in two baritone numbers, "The Trumpet Shall Sound" and "Alleluia." Contralto solos to be sung by Mrs. B. Jelard include "In My Wild Mountain Valley" and "I'm Alone," from "The Lily of Killarney." Instrumental selections will also be played by the Studio Trio.

THE variety programme for Saturday evening will include soprano solos by Mrs. L. Parry and elocutionary items by Mr. C. Paine. The popular Snappy Three will be heard in the latest ballads and jazz hits, while a

new combination in the persons of "The Peripatetic Pair," will contribute "Novelties and Nonsense." The Studio Orchestra will provide popular orchestral items and the programme will conclude with dance music until 11 p.m.

2YA Features

THE vocalists for Monday evening's interesting and varied programme will be Mrs. Fraser Morrish (soprano), Miss Hilda Chudley (contralto), Mr. Wilbur Davies (baritone) and Mr. Eric Rishworth (tenor). Mr. Victor S. Lloyd will relate another of his experiences. Mrs. Fraser Morrish has chosen for her items Helmund's "Black



Mrs. Lucy O'Brien, a regular soloist (soprano) broadcasting from 3YA.
—Steffano Webb, photo.

"Bird" song, a traditional Scottish number, "The Auld Man," and Teresa del Riego's "Thank God for a Garden." Two ballads, "The King's Minstrel" and "Brian of Glennaar," will be Mr. Wilbur Davies's items. Miss Hilda Chudley is making a welcome reappearance before the microphone. Her items will be "The Time of Roses" and "A Young Girl's Song," together with a composition of Drummond's entitled "To Sing Awhile." Two numbers from Schubert's beautiful song cycle, "The Maid of the Mill"—viz., "The Inquirer" and "Impatience," will be sung by Mr. Eric Rishworth. Mr. Rishworth is an artist who has specialised in classical songs and his interpretation of songs of this nature is always enjoyed. A further item by Mr. Rishworth will be "Ah! Moon of My Delight," from Liza Lehmann's song cycle, "In a Persian Garden."

A MUSICAL event of unusual interest to radio listeners will take place in the Wellington Concert Chamber on Monday, June 10, when two

young musicians who have broadcast very successfully from 2YA on different occasions will give a joint piano-forte and violoncello recital. Thelma Willoughby, aged 16, a pianiste from the studios of Mr. Gordon Short, Wellington's well-known pianist and teacher, has been awarded the coveted L.A.B. scholarship for last year, which is tenable at the Royal Academy of Music, London. She will leave for London to take up the scholarship within a few weeks. Thelma Willoughby had previously been very successful at the Wellington Competitions, having won a number of first prizes, including the special gold medal presented last year in connection with the Schubert centenary, and previously the scholarship awarded by the Competitions Society. Shura Cherkassy, the great pianist who visited New Zealand last year, spoke most enthusiastically of the young artist's musical gifts. Grete Jespersen, who comes from Palmerston North, has studied the cello with Mr. George Ellwood. Although only 12 years of age she has already appeared with great success at different concerts of importance in Wellington and elsewhere. She has been engaged as soloist at the concert of the Wanganui Choral Union to be given next month, a great distinction for so young an artist. Numbers from this recital will be relayed for the benefit of listeners-in.

A LIGHT popular programme will be presented on Tuesday evening, the assisting artists being Mr. Charles Wilkie (baritone), Mrs. N. R. Lightbody (soubrette), and Mr. Billy Hart. Mr. Hart will be heard in popular songs at the piano and the humour of the evening will be provided by Mr. Len Ashton.

THURSDAY evening's programme will be devoted to "Uncle George's Evening." The programme will consist of choral and instrumental items, elocutionary numbers, both dramatic and humorous, and several solos, which will include songs by Uncle George.

THE Philharmonic Quartet, with the assistance of "Kohu" (who will relate Maori anecdotes) and the Studio Orchestra, will provide the programme for Friday evening. Amongst the items to be presented will be the famous tenor operatic solo, "Questa o Quella" from "Rigoletto," which will be sung by Mr. Edwin Dennis; a solo, "The Quaker Girl," from the musical comedy of that name, to be sung by Miss Madge Freeman; and "Love Will Find a Way," a solo from "The Maid of the Mountains," by Miss Ena Rapley. "Kohu's" anecdotes will include the story of the origin and meaning of the "Kamate" haka.

THE Saturday evening vaudeville programme will be contributed to by the Melodie Four, Mrs. Kenny's Steel Guitar Trio, and Mr. Henry Desmond (humour). Contralto solos will also be given by Miss Mona Carrick. The Melodie Four will sing as con-

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certed items "Ice Cream," "I Wish I Had My Old Girl Back Again," and the popular waltz number, "Someday, Somewhere, We'll Meet Again." Mr. Sam Duncan will sing "Then You'll Remember Me" from "The Bohemian Girl," and Mr. R. S. Allwright "The Yeoman's Wedding Song." Mr. Frank Bryant's solo will be "Little Lady of the Moon" and Mr. W. W. Marshall's resonant bass will be heard to advantage in Hermann Lohr's rousing song, "Chorus Gentlemen." Miss Mona Carrick's items will be "True Till Death" and "My Dear Soul." Mr. Henry Desmond has chosen for his items two Albert Chevalier songs, "What's the Good of Hannyfink?" and "Who'll Buy?" The orchestra will render items in keeping with the programme.

3YA Items

THE Rev. J. Robertson, M.A., will be the preacher at the Oxford Terrace Baptist Church on Sunday evening, when the service will be broadcast. The organist will be Mr. Melville Lawry, and the choir conductor Mr. O. Murray Jones. To the studio concert which is to follow, the contributing local artists will be Miss Hilda Reeve (mezzo-soprano), Miss Marjory Miller (soprano), and Mr. W. H. Inkster (baritone).

Mr. E. J. Bell will give one of his fortnightly book reviews on Monday evening at 7.30.

DERRY'S Military Band, under Mr. J. Scott, and assisted by 3YA artists, will provide Monday evening's programme. The band will play a number of old and new pieces and there will be instrumental music by the Studio Trio. The vocalists will be Miss Lucy Fullwood (mezzo-soprano), Mr. Arthur T. Couch (singing "From the

Land of Sky-blue Waters," and two Maori songs), Mr. Basil Johnson (comic singer), and Mr. J. J. Flewelling (elocutionist).

"The Cultivation of Roses" will be the subject for a talk on Wednesday evening by Mr. Frederick Morse, an English authority.

THE operatic programme which has been arranged for Wednesday evening will comprise principally excerpts from "The Dollar Princess." The vocalists will be The Radiolians. There are many catchy tunes in solo, duet, and chorus form in this musical play. Instrumental music will be supplied by the Bohemian Quintet.

At 7.30 on Thursday evening Major Stafford, M.R.C.V.S., will give a talk to farmers and other stock owners.

MR. SYDNEY FRANCES HOBEN will give his third pianoforte recital on Thursday evening. He will supplement his numbers with introductory explanatory remarks. His instrumental pieces will include two selections from Moskowski and Jensen's "Dance of the Elves." Other instrumental numbers will be played by the Studio Trio and by Mr. Harold Beck (cello).

THE classical vocal items on Thursday's programme will include many favourites. Miss Frances Hamerton will sing "Shadow Song" (from "Dinorah") and two compositions by Ireland. Miss Belle Renaut's solos will be "Caro Mio Ben," "Sapphic Ode," and "Woodland Thoughts." Mr. Russell Sumner will sing "All Hail Thou Dwelling Pure and Lowly" and "Down Her Soft Cheek." Mr. T. D. Williams has chosen "The Bri King," "The Birds of Passage," and "Slow, Horses, Slow." There will also be two duets and two quartets.

FRIDAY is the night for a popular programme, concluding with a dance session provided by the Bailey-Marston Dance Orchestra. Solos and choruses will be sung by the Valencia Quartet. Among the solos will be "The Hills of Donegal," "A Brown Bird Singing," and "Sally in our Alley," "The Norseman's Song," "The Perfect Day," and "The Deathless Army." There will also be a duet and three fine quartets. The Studio Trio will provide instrumental numbers.

On Saturday evening 3YA will re-broadcast 2YA.

4YA Notes

MISS FREDA ELMES (soprano), Miss Dorothy Skinner (contralto), Mr. J. Montague (tenor), and Mr. Cecil Hawes (baritone) will provide the vocal portion of the musical programme on Monday evening, when items of a miscellaneous nature will be sung. Recitations by Miss Beryl Cooper will include Milne's "Medes and Persians," Byron's "The Ocean," and two selections from Kipling. Items by the Studio Trio will be "Nina" and "Reve Angelique."

AN excellent programme will be presented by the St. Kilda Band on Tuesday evening. The items will include two marches, "Guard of Honour" and "The Evertonian," an inter-

mezzo, "Rendezvous," the fantasia "Harmonious Blacksmith," a humorous selection, "Lads and Lassies," and a waltz. "The Trumpeter will be played as a trombone solo with band accompaniment. The vocalists will be Mr. A. J. Parker (tenor) and Miss Agnes Guy (mezzo-soprano), while Miss Sheila Neilson and Mr. J. B. McConnell will contribute sketches.

ON Wednesday the programme will consist of the dramatic cantata "Esther," relayed from St. Andrew Street Church of Christ. There will be a choir of forty voices. The soloists will be: Mr. J. Sivan (tenor), "Mordecai, the Jew"; Miss R. Stubbs (soprano), "Esther, the Jewess"; Mr. W. H. McKenzie (baritone), "Haman"; Mr. J. Ferguson (bass), "Ahasuerus,



Mr. Leslie Harvey, Organist, at the Christie Organ at the Empire Theatre, Dunedin. He will be heard on the air from 4YA on Wednesday evening, June 5.

the King"; Miss V. Christie (contralto), "Theresa"; Mrs. E. Edmonds (soprano), "Maid of Honour."

On Thursday evening at 7.30 Mr. H. Greenwood will give one of his talks on books.

THE studio concert programme on Friday evening will be contributed to by Miss W. Collier (mezzo-soprano), singing "The Green Ribbon" (from "Tom Jones"), "I Sometimes Wonder," and "Alas Those Chimes." Miss Irene Horniblow (contralto) will sing three negro spirituals. Mr. A. Lungley's solos will be "Strange Is it Not," "Passing By," and "Don Juan's Sere-nade." There will be instrumental numbers by the Studio Trio and by the Ritz Broadcasting Orchestra, with solo items by Miss Eva Judd (violinist), Mr. P. J. Palmer (cello), and Mrs. Drake (pianiste).

On Saturday evening 4YA will relay 3YA.

Man-made Man

Eric the Robot

A ROBOT surpassing in ability any mechanical man yet invented was a guest at a dinner of the American Institute (writes the New York correspondent of the "Daily Mail"). He was present on the invitation of his inventor, Mr. John Breisky, of the Westinghouse Electric and Manufacturing Co. Arriving before the other guests, Mr. Eric Robot counted them as they walked through a beam of light. Eric refused to be fooled when sceptics waved their hands through the beam. He coughed, but would not register a number.

He next demonstrated his ability as a fireman. A tank containing an inflammable mixture was placed in a beam of light focused on the electric eyes by means of which the Robot sees and works. A lighted match was tossed into the tank, and the instant the seam was crossed by smoky flames the mechanism released carbon dioxide, which extinguished the fire amid loud applause.

It was proved that Eric could sort materials according to colour or imperfections, and could match fabrics and paint more accurately than the human eye. Small packages were moved before these observant eyes, and if one package was defective or without a label the Robot seized it and placed it on one side. All these activities of the Robot are achieved by the reaction of the photo-electric cell to light.

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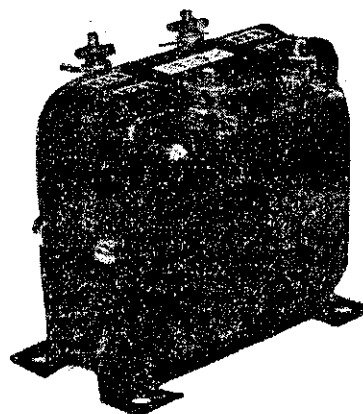
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Full Programmes for Next

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Sunday June 9

1YA, AUCKLAND (333 METRES).—SUNDAY, JUNE 9.

- 3 p.m.: Selected studio items.
 3 p.m.: Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.30: Close down.
 6.0: Children's service, conducted by Big Brother George.
 6.55: Relay of service from St. Andrew's Church—Preacher, Rev. I. E. Bart-ram. Organist, Dr. Neil McDougall.
 8.30 (approx): Relay of concert by Port Nicholson Band, under the conductor-ship of Mr. J. J. Drew, from Grand Opera House, Wellington.
 9.30: Studio items:
 March—Philadelphia Symphony Orchestra, "Rakoczy March" (Berlioz) (H.M.V. Record ED7).
 Violin solo—Isolde Menges, "Ave Maria" (Schubert), (H.M.V. Record D1313).
 9.38: Choral—Philadelphia Choir, "Mass in G Major—Kyrie Eleison" (Schu-bert) (H.M.V. Record D1478).
 9.42: Tenor and bass duet—Caruso and Journet, "Crucifix" (Faure) (H.M.V. Record DB591).
 9.45: Close down.

2YA, WELLINGTON (420 METRES).—SUNDAY, JUNE 9.

- 3 p.m.: Afternoon session—selected studio items.
 4.30: Close down.
 6.0: Children's Sunday service, conducted by Uncle George.
 7.0: Relay of service from the Vivian Street Baptist Church—Preacher, Rev. F. E. Harry. Organist, Mr. J. R. Samson.
 8.15 (approx.): Relay from the Grand Opera House, of concert by the Port Nicholson Silver Band, under the conductorship of Mr. J. J. Drew.
 Close down.

3YA, CHRISTCHURCH (306 METRES).—SUNDAY, JUNE 9.

- 3 p.m.: Afternoon session—selected studio items.
 4.30: Close down.
 5.30: Children's song service.
 6.15: Hymn tunes.
 6.30: Relay of service from Oxford Terrace Baptist Church—Preacher, Rev. J. Robertson, M.A. Organist, Mr. Melville Lawry. Choir conductor, Mr. O. Murray Jones.
 8 p.m.: Orchestral—Philadelphia Symphony Orchestra, (a) "Rakoczy March" (Berlioz); (b) "Samson et Delila—Bacchanale" (Saint-Saens) (H.M.V. Record ED7).
 8.8: Mezzo-soprano solo, Mrs. Hilda Reeve, "My Task" (Ashford).
 8.12: Violin solos—Jascha Heifetz, (a) "Valse Bluette" (Drigo, arrgd. Amber); (b) "Estrellita" (Ponce, arrgd. Heifetz) (H.M.V. Record DA984).
 8.18: Baritone solo—Mr. W. H. Inkster, "The Link Divine" (Piccolomini).
 8.22: Choral—Philharmonic Choir, "Mass in G Major—Kyrie Eleison" (Schu-bert) (H.M.V. Record D1478).
 8.26: Instrumental—Christchurch Broadcasting Trio, "Trio in A Minor—Allegro Apassionata—Presto" (Lalo).
 8.38: Soprano solos—Miss Marjory Miller, (a) "Teach Me to Pray" (Gwynn Williams); (b) "Were I" (Jacobs-Bond).
 8.43: Grand organ solo—Spencer Shaw, "Salut d'Amour" (Elgar) (Zonophone Record 5162).
 8.46: Mezzo-soprano solos, Mrs. Hilda Reeve, (a) "The Gift" (Behrend); (b) "I Know A Lovely Garden" (d'Hardelet).
 8.53: Orchestral—New Light Symphony Orchestra, "Peer Gynt Suite, No. 2" (Grieg): 1. Ingrid's Lament. 2. Arabian Dance (H.M.V. Record C1571).
 9.1: Weather report.
 9.6: Orchestral—New Light Symphony Orchestra, "Peer Gynt Suite, No. 2" (Grieg): 1. Return of Peer Gynt. 2. Solveig's Song (H.M.V. Re-cord C1572).
 9.14: Baritone solos—Mr. W. H. Inkster, (a) "Shipmates o' Mine" (Sander-son); (b) "On the Shores of the Aegean Sea" (Marsh Little).
 9.20: Soprano solo—Miss Marjory Miller, "A Cottage in God's Garden" (Jacobs-Bond) (special introduction by nightingales and church bells).
 9.28: Close down.

4YA, DUNEDIN (463 METRES).—SUNDAY, JUNE 9.

- 3.0 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.30: Close down.

- 5.30: Children's song service, conducted by Big Brother Bill.
 6.30: Relay of service from St. Paul's Cathedral:
 Preacher: Canon Nevill.
 Organist: Mr. E. Heywood, F.R.C.O.
 8.5: Relay from His Majesty's Theatre of concert by the Dunedin Tramways' Band.
 Close down.

Monday, June 10

1YA, AUCKLAND (333 METRES).—MONDAY, JUNE 10

SILENT DAY.

2YA, WELLINGTON (420 METRES).—MONDAY, JUNE 10.

- 3.0 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 3.40: Relay from Messrs. Kirkcaldie and Stains' Tea-rooms of music by the Trio.
 4.0: Studio items.
 4.30 and 4.55: Sports results to hand.
 5.0: Children's session, conducted by Uncle Jeff.
 6.0: Dinner session:
 Orchestral—Orchestra Symphonique de Paris, "Ballet Egyptien—Allegro and Allegretto" (Luigini) (Columbia Record 02785).
 Bass solo—Peter Richardson, "The Temple Bells" (Woodforde-Finden) (Zonophone Record 5173).
 6.12: Tacet.
 6.15: Orchestral—Orchestra Symphonique de Paris, "Ballet Egyptien—Andante and Finale" (Luigini) (Columbia Record 02786).
 Bass solo—Peter Richardson, "Kashmiri Song" (Woodforde-Finden) (Zonophone 5173).
 6.27: Tacet.
 6.30: Orchestra—J. H. Squire's Celeste Octet, (a) "Mignon-Introduction et Romance"; (b) "Mignon-Polonaise" (Thomas) (Columbia Record 02749).
 Bass solo—Peter Richardson, "Less Than The Dust" (Woodforde-Finden) (Zonophone Record 5172).
 6.42: Tacet.
 6.45: Orchestral—Chicago Symphony Orchestra, (a) "Xerxes-Largo" (Han-del); (b) "Slavonic Dance In G Minor" (Dvorak) (H.M.V. Record D1432).
 Bass solo—Peter Richardson, "Till I Wake" (Woodforde-Finden) (Zonophone Record 5172).
 6.56: Tacet.
 7.0: News session, market reports and sports results.
 7.29: Lecturette—Mr. R. M. Oliver, "The Tarawera Eruption."
 7.40: Lecturette—Mr. A. J. Nicholls (Representative Hutt Valley Horticul-tural Society), "Gardening."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Raymond" (Thomas).
 8.9: Soprano solos—Mrs. W. Fraser Morrish, (a) "The Blackbird" (Hel-mund); (b) "The Auld Man" (Trdl.).
 8.16: Baritone solo—Mr. Wilbur Davies, "The King's Minstrel" (Pinsuti).
 8.20: Suite—Orchestra, "By The Lake of Geneva" (Part 2), (Bendel: 1. The Grove at Julie. 2. Moonlight Sail to Lovers' Isle.
 8.28: Mr. Victor S. Lloyd will relate another experience.
 8.42: Contralto solo—Miss Hilda Chudley, (a) "The Time of Roses" (Quil-ter); (b) "A Young Girl's Song" (Quilter).
 8.48: Tenor solos—Mr. Eric Rishworth, (a) "Inquirer"; (b) "Impatience" (Schubert).
 8.54: Instrumental—Orchestra, Repeat Number.
 9.2: Weather report.
 9.3: Soprano solo—Mrs. W. Fraser Morrish, "Thank God for a Garden" (Del-Riego).
 9.6: Baritone solo—Mr. Wilbur Davies, "Brian of Glenaar" (Graham).
 9.10: Relay from Concert Chamber, Town Hall, of Pianoforte and 'Cello Recital by Miss Thelma Willoughby (winner of 1928 L.A.B. Schol-arship) and Miss Greta Jespersen:
 Pianoforte solo—Miss Thelma Willoughby (aged 16 years), "Ballade in F" (Chopin).
 9.17: Contralto solo—Miss Hilda Chudley, "To Sing Awhile" (Drummond).
 9.21: Tenor solo—Mr. Eric Rishworth, "Ah Moon of My Delight" (Lehmann).
 9.25: Relay from Town Hall of Pianoforte and 'Cello Recital—'Cello solos—Miss Greta Jespersen (aged 12 years), (a) "Elegie" (Faure); (b) "Harlequin" (Popper).
 Pianoforte solo—Miss Thelma Willoughby, "Concerto" (Arensky), (accompaniment on second piano played by Mr. Gordon Short).

Week-all Stations-to June 16

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9.55: Suite—Orchestra, "Joseph and his Brethren" (Schmidt); (1) "Pre-lude. (2) Caravan Dance. (3) Bacchanalian Dance.
10.5: Close down.

3YA, CHRISTCHURCH (306 METRES)—MONDAY, JUNE 10.

3.0 p.m.: Afternoon session—Gramophone items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's Hour "Scatterjoy."
7.0: News session.
7.30: Talk—Mr. E. J. Bell, "Book Review."
8.0: Chimes.
Band programme featuring Derry's Military Band, under the conduct-
orship of Mr. J. Scott, and assisting artists.
8.1: March—Band, "Mt. St. Louis Cadets" (Laurendeau).
Morceau—Band, "A Turkish Patrol" (Michaelis).
8.11: Mezzo-soprano solo—Miss Lucy Fullwood, "When Song is Sweet"
(Souci).
8.15: Bass with chorus—Paul Robeson, "Plantation Songs" (H.M.V. C1585).
8.19: Instrumental Trio—Christchurch Broadcasting Trio, "Trio No. 2"
(Bohm).
8.27: Tenor solo—Mr. Arthur Couch, "From the Land of Sky Blue Waters"
(Cadman).
8.31: Waltz—Band, "Donan Wellen" (Ivanovici).
8.38: Comedy songs—Basil Johnson, "I Went to Wembley with Em'ly" (Cast-
ling); "Eat More Fruit" (Rule).
8.47: Recitation—Mr. J. J. Flewellen, "How to Live to be 200" (M.S.).
8.51: Fantasia—Band, "Carmen" (Bizet).
9.0: Weather reports and Announcement.
9.5: Mezzo-soprano solos—Miss Lucy Fullwood, "Husheen" (Needham),
"Can't You Hear Me Callin'" (Caro Roma).
9.12: Bass with chorus—Paul Robeson, "Plantation Songs" (H.M.V. Record
C1585).
9.16: Instrumental Trios—Christchurch Broadcasting Trio, (a) "Isola"
(Coleridge Taylor); (b) "Serenade" (Espoff); (b) "Spanish
Dance" (Moskowski).
9.26: American Sketch—Band, "Down South" (Myddleton).
9.33: Tenor song—Mr. Arthur T. Couch, (a) "Waiata Maori" (Alfred Hill);
"Home Little Maori Home" (Alfred Hill).
9.40: Descriptive Fantasia—Band, "A Hunting Scene" (Ellenberg).
9.47: Comedy songs—Basil Johnson, "Maud Your Mother Wants You"
(Weston).
9.52: Recitation—Mr. J. J. Flewellen, "Bobbed and Shingled" (M.S.).
9.57: March—Band, "The Great Little Army" (Alford).
10.2: Close down.

4YA, DUNEDIN (463 METRES)—MONDAY, JUNE 10.

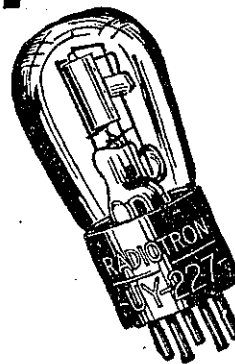
3.0 p.m.: Town Hall chimes.
3.1: Selected gramophone items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Town Hall chimes.
6.1: Children's session, conducted by Uncle Allan.
7.0: News session.
7.30: Lecture—Mrs. Denton Leech (Dominion Secretary, League of Nations
Union)—"The Work of the League of Nations in New Zealand."
8.0: Town Hall chimes.
8.1: Orchestra—Classic Symphony Orchestra, "Carmen" selection (Bizet,
arrgd. De Groot) (Regal Record G30009).
8.9: Soprano solos—Miss Freda Elmes, (a) "Gentle Shepherd" (Pergolesi),
(b) "Love Triumphant" (Brahms).
8.16: Instrumental—4YA Broadcasting Trio, "Nina" ("Tre Giorni"),
(Kreisler).
8.20: Baritone solos—Mr. Cecil Hawes, (a) "Toreador's Song" ("Carmen");
(b) "The Sweeper" (Kramer).
8.27: Orchestra—Budapest Philharmonic Orchestra, "Hungarian Rhapsody
No. 1 in F" (Liszt) (Columbia Record 02728).
8.39: Recitals—Miss Beryl Cooper, (a) "Medes and Persians" (Milne); (b)
"The Ocean" (Byron).
8.49: Cello solo—Mr. P. J. Palmer, "Sonata in A Major" (Pasquelini).
8.53: Vocal duet—Misses Elmes and Skinner, "Where the Daisies Grow"
(Haydn Wood).
8.58: Chorus with orchestra—D'Oyly Carte Opera Company, (a) "With
Ducal Pomp"; (b) "On the Day When I was Wedded" (Sullivan)
(H.M.V. Record D1344).
9.2: Weather report.
9.4: Contralto solos—Miss Dorothy Skinner, (a) "He Shall Feed His Flock"
(Handel); (b) "Four by the Clock" (Mallinson).
9.11: Pianoforte solo—Mrs. Ernest Drake, selected.

9.16: Tenor solos—Mr. J. Montague, (a) "Parted" (Tosti); (b) "Who Is
Sylvia?" (Schubert).
9.23: Recitals—Miss Beryl Cooper, two selections from Kipling, (a) "The
Thousandth Man"; (b) "The Overland Mail."
9.33: Violin solo—Miss Eva Judd, selection (Sarasate).
9.38: Soprano with chorus—Florence Austral, "Inflammatus" (Rossini).
9.42: Baritone solo—Mr. Cecil Hawes, "Fishermen of England."
9.46: Instrumental—4YA Broadcasting Trio, "Reve Angelique" (Rubinstein).
9.51: Tenor solo—Mr. J. Montague, selected.
9.55: Orchestral—J. H. Squire's Celeste Octet, (a) "Mignon-Introduction et
Romance"; (b) "Mignon-Polonoise" (Thomas), (Columbia Record
02749).
10.3: Close down.

Tuesday, June 11

1YA, AUCKLAND (333 METRES)—TUESDAY, JUNE 11.

3.0 p.m.: Afternoon session—selected studio items.
4.0: Literary selection by the Announcer.
4.8: Studio items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's session, conducted by Uncle George.
7.0: News session.
7.15: Talk—Mr. Geo. Campbell, "Motoring."
7.30: Market reports.
8.0: Chimes.
8.1: Relay of orchestral overture from Majestic Theatre.
8.11: Baritone solo—Mr. G. Colledge, "In Happy Moments" ("Maritana")
(Wallace).
8.15: Instrumental—Studio Trio, (a) "Sailors' Song" ("Flying Dutchman")
(Wagner); (2) Three scenes from Musical Picture Book (Volk-
man): (a) "At the Mill"; (b) "By the Sea"; (c) "The Cuckoo and
the Traveller."
8.25: Soprano solo—Miss Dorothy Youd, "One Fine Day" ("Madame Butter-
fly") (Puccini).
8.28: Orchestral—Columbia Symphony Orchestra, "Maritana Overture"
(Wallace), (Columbia Record 02682).
8.36: Tenor solo—Mr. Lambert Harvey, "Let Me like a Soldier Fall"
("Maritana") (Wallace).
8.40: Relay of entracte from Majestic Theatre.
8.50: Contralto solo—Miss Martha Williamson, "Without Thee" (Gounod).



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WELLINGTON.

- 8.54: 'Cello solo—Miss Mollie Wright, "Adagio" (Bargiel).
 8.59: Vocal duet—Miss Dorothy Yound and Mr. Lambert Harvey, "Miserere" ("Il Trovatore") (Verdi).
 9.8: Weather report.
 9.5: Vocal quartet—The Olympians, "Pretty Little China Girl" ("Belle of New York") (Kerker).
 9.10: Baritone solo—Mr. G. Colledge, "My Heart with Woe O'eraken" ("Maritana") (Wallace).
 9.14: Instrumental—Studio Trio, Selections from the opera, "Samson and Delilah" (Saint-Saens).
 9.24: Tenor solo—Mr. Lambert Harvey, "There is a Flower that Bloometh" ("Maritana") (Wallace).
 8.28: Contralto solo—Miss M. Williamson, "Ingrid's Song" (Kjerulf).
 9.32: Presentation of the opera "Tristan and Isolde" Act 3 (Wagner): (First Instalment) (H.M.V. Records D1418-15):

Synopsis: Of all Wagner's achievements "Tristan and Isolde" is possibly the greatest. It is one of the most extraordinary artworks ever written, and even to the present time no work has been produced that can approach it, even although seventy years have elapsed since Wagner commenced to write it. The theme is Love—a terrible unsatisfied and insatiable love that must wreck all obstacles in its path, even if those obstacles constitute the lovers themselves. Tristan, a Cornish knight of royal birth, has fought successfully in Ireland on behalf of his uncle, King Mark of Cornwall. He brings Isolde, an Irish princess, as an unwilling bride for the King, but discovers that he himself loves Isolde. They hide their love, and her marriage with the King is carried out. But the lovers cannot be denied. During one of their secret meetings the King surprises them, and one of his followers stabs Tristan, who will not defend himself. The great Third Act, half of which will be presented this evening, comes as a fitting climax to the opera. Nowhere than in this Act did Wagner achieve a more vivid expression of deep human emotions. As the Act unfolds, the full explanatory story will be told).

10.2: Close down.

2YA, WELLINGTON (420 METRES)—TUESDAY, JUNE 11.

- 8.0 p.m.: Chimes of the G.P.O. clock.
 8.1: Selected gramophone items.
 4.30 and 4.55: Sports results to hand.
 5.0: Children's session, conducted by Uncle Jim.
 6.0: Dinner session:
 Orchestral—Edith Lorand Orchestra, "Tales From the Vienna Woods" (Strauss) (Parlophone Record E10624).
 Comedian—Johnny Marvin, "Happy Days and Lonely Nights" (Rose) (H.M.V. Record EA465).
 6.12: Tacet.
 6.15: Pianoforte solo—Herschel Henlere, "Tinkering With Home, Sweet Home" (Parlophone Record A2643).
 Baritone solo—Dennis Noble, "I'm the Factotum of the Town" ("Barber of Seville") (Rossini) (Columbia Record 02748).
 6.26: Tacet.
 6.30: Soprano solo—Corinne Rider-Kelsey, "By the Waters of Minnetonka" (Lieurance) (Columbia Record 03625).
 Medley—Band of H.M. Grenadier Guards, "Sir Harry Lauder Medley" (Lauder) (Columbia Record 02750).
 Waltz—Chicago Symphony Orchestra, "Artists' Life" (Strauss) (Columbia Record 02577).
 6.41: Tacet.
 6.45: Accordion solo—Johnny Sylvester, "By the Waters of Minnetonka" (Lieurance) (Regal Record G20352).
 'Cello solo—W. H. Squire, "Melody in F" (Rubinstein-Popper) (Columbia Record 04178).
 6.56: Tacet.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Representative of the Agricultural Department, "For The Man On The Land."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Peter Schmolli" (Weber).
 8.9: Baritone solo—Mr. Charles Wilkie, "The Jolly Tinker" (Arrgd. Newton).
 8.13: Accordion solo—Johnny Sylvester, "Mighty Lak A Rose" (Nevin) (Regal Record G20352).
 Hawaiian—Liahona Glee Club, "Na 'Lili' Kuahiwi" (Columbia Record 01259).
 8.19: Humour—Mr. Len Ashton, "Nellie Bly."
 8.26: Instrumental—Orchestra, "Lightning Switch" (Alford).
 8.34: Popular songs—Mr. Billy Hart, "Roses of Yesterday" (Berlin); (b) "To-morrow" (Hirsch).
 8.41: Grand organ solos—Emil Velazco, (a) "By the Waters of Minnetonka" (Lieurance); (b) "A Perfect Day" (Jacobs-Bond).
 8.47: Soubrette—Mrs. N. R. Lightbody, "Agatha Green" (Cooper).
 8.52: Baritone solo—Mr. C. Wilkie, (a) "Just Smiling" (Wells); (b) "The Sleigh" (Kountz).
 8.59: Instrumental—Orchestra, Repeat Number.
 9.7: Weather report.
 9.9: Humour—Mr. Len Ashton, "I'm Gonna Dance With the Guy wot Brung Me" (Yellen).
 9.16: Selection—Orchestra, "Sometime" (Friml).
 9.26: Popular song—Mr. Billy Hart, "Ten Little Miles From Town" (Berlin).
 9.30: Soubrette—Mrs. N. R. Lightbody, "Hello Tu-Tu" (Scott-Gatty).
 9.34: Instrumental—Orchestra, (a) Waltz, "The Skaters" (Waldteufel); (b) March, "American Patrol" (Meacham).

- 9.40: "His Master's Voice" Dance Programme:
 Foxtrot with vocal refrain—Jack Hylton's Orchestra, "Blue-bird, Sing Me a Song" (Davis) (H.M.V. Record EA448).
 Foxtrot—Shilkret's Orchestra, "My Man" (Pollack) (H.M.V. Record EA483).
 Waltz with vocal refrain—Jack Hylton's Orchestra, "Spanish Rose" (Pearson) (H.M.V. Record B5481).
 9.50: Tenor solo—Browning Mummery, "Love Went A'Riding" (Bridge) (H.M.V. Record B2756).
 Foxtrot with vocal refrain—Ted Weems' Orchestra, "Me and the Man In The Moon" (Leslie) (H.M.V. Record EA490).
 Foxtrot—Ambrose and his Orchestra, "Sweet Sue, Just You" (Young) (H.M.V. Record EA492).
 Foxtrot with vocal refrain—Geo. Olsen's Music, "I Faw Down an' go Boom!" (Brockman) (H.M.V. Record EA490).
 10.3: Baritone solo—Maurice Elwin, "There's Something about a Rose" (Fain) (Zonophone 5190).
 Foxtrot with vocal refrain—Paul Whiteman's Orchestra, "The Calinda" (Hupfeld) (H.M.V. Record EA476).
 Waltz with vocal refrain—Jack Hylton's Orchestra, "The Angelus was Ringing" (Damarell) (H.M.V. Record B5481).
 Foxtrot with vocal refrain—Nat Shilkret's Orchestra, "Gotta be Good" (Schertzing) (H.M.V. Record EA489).
 10.16: Comedian—Johnny Marvin, (a) "Sweethearts on Parade" (Newman); (b) "Where the Shy Little Violets Grow" (Kahn) (H.M.V. EA477).
 Foxtrot with vocal refrain—Hamps' Kentucky Serenaders, "I Fell Head Over Heels in Love" (Parsons) (H.M.V. Record EA492).
 Foxtrot—Zez Confrey's Orchestra, "Jack In The Box" (Confrey) (H.M.V. Record EA495).
 10.30: Comedian—Johnny Marvin, "There's a Rainbow Round My Shoulder" (Olson) (H.M.V. EA465).
 Waltz with vocal refrain—The Troubadours, "Dolores" (Crossman), (H.M.V. Record EA447).
 10.40: Male quartet—National Cavaliers, "The Song I Love" (de Sylva) (H.M.V. Record EA474).
 Male voices—Salon Group, "Jeannine, I Dream of Lilac Time" (Gilbert) (H.M.V. Record EB35).
 Hawaiian—Hilo Hawaiian Orchestra, "Along Miami Shore" (Snodgrass) (H.M.V. Record EA415).
 Wuritzer organ solo—Jesse Crawford, "Roses of Yesterday" (Berlin), (H.M.V. Record EA443).
 10.53: Tenor solo—Franklyn Baur, "I Loved You Then as I Love You Now" (Macdonald) (Zonophone Record EE182).
 Chorus and Orchestra—Victor Arden, Phil Ohman, chorus and orchestra, selections from "Funny Face" (H.M.V. Record EB28).
 Foxtrot—Warings' Pennsylvanians, "How About Me?" (Berlin) (H.M.V. Record EA478).
 Foxtrot—Nat Shilkret's Orchestra, "I'd Rather Be Blue" (Fisher) (H.M.V. Record EA483).
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—TUESDAY, JUNE 11.

SILENT DAY.

4YA, DUNEDIN (463 METRES)—TUESDAY, JUNE 11.

- 3 p.m.: Town Hall chimes.
 3.1: Relay from Ritz—Instrumental music.
 4.25: Sports results.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Big Brother Bill.
 7.0: News session.
 7.30: Lecturette—Professor Fisher (under the auspices of the Workers' Educational Association)—"Why Incomes are Unequal."
 8.0: Town Hall chimes.
 Studio concert by the St. Kilda Band, under the conductorship of Mr. James Dixon, and assisting artists:
 8.1: March—Band, "Guard of Honour" (Harris).
 8.5: Tenor solos—Mr. A. J. Parker, (a) "Obstination" (Fontenailles); (b) "Vale" (Russell).
 8.12: Intermezzo—Band, "Rendezvous" (Aletier).
 8.17: Sketch—Miss Sheila Neilson and Mr. J. B. McConnell.
 8.27: Baritone solo—Fraser Gange, "The Two Grenadiers" (Schumann) (Columbia Record 02573).
 8.31: Trombone solo with band accompaniment, "The Trumpeter" (Dix).
 8.36: Male quartets, (a) National Cavaliers, "The Song I Love" (de Sylva); (b) The Revellers, "Dusky Stevedore" (Razaf) (H.M.V. Record EA474).
 8.42: Mezzo-soprano solos—Miss Agnes Guy, (a) "Arise, O Sun" (Day); (b) "A Japanese Love Song" (Brahe).
 8.49: Fantasia—Band—"Harmonious Blacksmith" (Hume).
 9.1: Weather report.
 9.3: Chorus with orchestra—Light Opera Company, vocal gems from "The Vagabond King" (Friml) (H.M.V. Record C1346).
 9.7: Tenor solo—Mr. A. J. Parker, "Spirit Flower" (Tipton).
 9.11: Hawaiian—Hilo Hawaiian Orchestra, (a) "Kawaihau Waltz" (Kealakai); (b) "My Hula Love" (H.M.V. Record B2799).
 9.17: Humorous selection—Band, "Lasses and Lads" (Truman).
 9.25: Sketch—Miss Sheila Neilson and Mr. J. B. McConnell.
 9.35: Baritone solo—Fraser Gange, "On the Road to Mandalay" (Speaks) (Columbia Record 02573).

- 9.30: Waltz—Band, "Tesoro Mio" (Beucchi).
 9.45: Tenor solo—Franklyn Baur, "At Dawning" (Cadman) (Zonophone Record 5204).
 9.48: Mezzo-soprano solo; Miss Agnes Guy, "Pokarekare" (Hill).
 9.52: Chorus with orchestra, D'Oyly Carte Opera Company, (a) "I Am a Courtier Grave and Serious"; (b) "Here is a Case"; (c) "Now Let the Loyal Lieges Gather Round" ("The Gondoliers") (Sullivan) (H.M.V. Record D1345).
 10.0: March—Band, "The Evertonian" (Greenwood).
 10.5: Close down.

Wednesday, June 12

1YA, AUCKLAND (333 METRES)—WEDNESDAY, JUNE 12.

- 12.30 p.m.: Relay of community singing from the Town Hall.
 1.30: Close down.
 3.0: Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Uncle Tom.
 7.0: News and information session.
 8.0: Studio concert by the Auckland Artillery Band under the conductorship of Mr. Wynne J. Smith, and assisting artists.
 Chimes.
 8.1: March—Band, "Waldmere" (Losey).
 Overture—Band, "Rose Marie" (Stothard).
 8.16: Vocal quartet—Minster Quartet, "A Spring Song" (Pinsuti).
 8.20: Humour—Mr. T. T. Garland, Some Mirth.
 8.28: Contralto solos—Miss M. Davison, (a) "Star Eyes" (Speaks); (b) "The Little Road to Kerry" (Cadman).
 8.33: Cornet solo—Bandsman K. Smith, "Farewell" (Hartman).
 8.38: Tenor solo—Mr. A. L. McPherson, "Hail, Caledonia!" (Stroud).
 8.42: Hawaiian—Kane's Hawaiians, (a) "Drowsy Waters" (Ailan), (b) "Hilo Hawaiian March" (Zonophone Record 2992).
 8.48: Soprano solos—Miss Gladys Hosking, (a) "Everywhere I Look" (Carew), (b) "If You Pass Through My Garden" (Kountz).
 8.55: Selection—Band, "Prelude" (Rachmaninoff).
 9.0: Vocal quartet—Minster Quartet, "Here's a Paradox for Lovers" (German).
 9.4: Weather report.
 9.7: Medley—Band, "Harry Lauder Songs" (Hume).
 Intermezzo—Band, "In a Monastery Garden" (Reimer).
 9.20: Baritone solos—Mr. Roy Stephenson, (a) "Requiem" (Homer), (b) "Wayfarer's Night Song" (Martin).
 9.27: Humour—Mr. T. T. Garland, Some More Mirth.
 9.33: Soprano solo—Miss G. Hosking, "Give Me a House on the Hillside" (Penn).
 9.37: Selection—Band, "Stradella" (Flotow).
 9.45: Tenor solo—Mr. A. L. McPherson, "Parted" (Tosti).
 9.49: Violin and guitar—Giulietta Morini, "Harlequin's Serenade" (Drigo) (Zonophone Record EE134).
 9.52: Contralto solo—Miss Davison, "My Jewels" (Sanderson).
 9.56: Vocal quartet—Minster Quartet, "The Shades of Night Around Us Steal" (Roberts).
 10.0: March—Band, "Wellington" (Zehle).
 10.5: Close down.

2YA, WELLINGTON (420 METRES)—WEDNESDAY, JUNE 12.

SILENT DAY.

3YA, CHRISTCHURCH (306 METRES)—WEDNESDAY, JUNE 12.

- 3 p.m.: Afternoon session—Selected gramophone records.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Mother Hubbard and Uncle Frank.
 7.0: News session.
 7.15: Lecture—Mr. Frederick Morse, "The Cultivation of Roses".
 7.30: Addington Stock Market Reports.
 8.0: Chimes.
 Programme featuring excerpts from "The Dollar Princess" (Fall), presented by the Radiolians.
 8.1: Overture—National Symphony Orchestra, "Light Cavalry" (Suppe) (Zonophone Record EE102).
 8.9: Chorus—Radiolians, "We're the Household" (Fall).
 Soprano solo—Mrs. Claris Shaw, "A Self-made Maiden" (Fall).
 8.17: Orchestral—New Light Symphony Orchestra, "Prelude in G Minor" (Rachmaninoff) (Zonophone Record EF24).
 8.21: Chorus—Radiolians, "Castles in the Air" (Fall).
 Tenor solo—Mr. Greg. Russell, "Dream of Love" (Fall).
 8.30: Orchestral—New Light Symphony Orchestra, "Prelude in C Sharp Minor" (Rachmaninoff) (Zonophone Record EF24).
 8.34: Instrumental—The Bohemian Quintet, (a) "Preamble" (Woods); (b) "Norfolk Folk Tune" (Woods); (c) "Slow Air Jig" (Woods).
 8.45: Contralto and bass duet—Radiola Duo, "Shall I Do?" (Fall).
 Chorus—Radiolians, "Tennis" (Fall).

- 8.53: Kinema organ—Stanley McDonald, (a) "Was it a Dream?" (Coslow); (b) "Nicolette" (Batten) (Regal Record G20401).
 8.59: Weather report and announcement.
 9.4: Lecture—The Right Rev. F. A. Bennett, first Bishop of Aotearoa, "Maori Subjects, embracing Language and Legends."
 9.14: Instrumental—Bohemian Quintet, (a) "Bouree"; (b) "Air"; (c) "Gigue" (Bach).
 9.28: Bass solo and chorus—Mr. W. J. Richards and Radiolians, "Chewska" (Fall).
 Contralto and bass—Radiola Duo, "Follow Me Round" (Fall).
 9.36: Vibraphone solo—Rudy Star Three, "Diane" (Rapee).
 Xylophone novelty—Rudy Star Three, "Polly" (Zamecnik) (Parlophone Record A2548).
 9.42: Chorus—Radiolians, "The Dollar Princesses" (Fall).
 9.47: Duet, soprano and tenor—Radiolian Duo, "Then You Go" (Fall).
 9.51: Monologue—Gillie Potter, "Mr. Potter Visits Southend" (Potter) (Columbia Record 01385).
 9.57: Instrumental—Bohemian Quintet, (a) "Minuet" (Mozart); (b) "Chanson Sans Paroles" (Tchaikowsky); (c) "March Militaire" (Schubert).
 10.8: Contralto and bass duet—Radiola Duo, "Tramps" (Fall).
 Chorus—Radiolians, "Hip Hip Hurray" (Fall).
 10.13: Sketch—The Roosters, "Army Reminiscences" (Route March) (Merri-man) (Regal Record G20372).
 10.19: Close down.

4YA, DUNEDIN (463 METRES)—WEDNESDAY, JUNE 12.

- 3 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Aunt Anita.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Relay from St. Andrew's Street Church of Christ of the dramatic cantata, "Esther," rendered by a choir of forty voices.

Soloists:

Mr. J. Swan (Mordecai the Jew)	Tenor
Miss R. Stubbs (Esther the Jewess)	Soprano
Mr. J. H. Ferguson (Ahaseuras the King) ..	Bass
Mr. W. H. McKenzie (Haman)	Baritone
Miss V. Justice (Theresa)	Contralto
Mrs. E. Edmonds (Maid of Honour)	Soprano

- 9.30: "His Master's Voice Dance Programme:
 Overture—Marek Weber's Orchestra, "Vienna by Night" (Komzak). (H.M.V. C1507).
 Foxtrot with vocal trio—Horace Heidt's Orchestra, "Golden Gate" (Jolson) (H.M.V. EA359).
 Foxtrot—Art Hickman's Orchestra, "Dream House" (Foxe) (H.M.V. EA434).
 Foxtrot with vocal chorus—Horace Heidt's Orchestra, "What a Wonderful Wedding that Will Be" (Kahal) (H.M.V. EA359).

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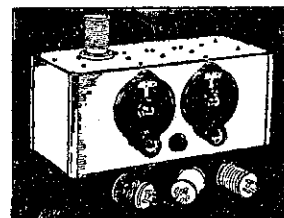
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- 9.48: Tenor solo—Jno. McCormack, "I Hear You Calling Me" (Marshall) (H.M.V. DA958).
 Foxtrot—Victor Arden and Phil. Ohman's Orchestra, "Kiddle Kapers" (Shilkret) (H.M.V. EA401).
 Pipe organ, piano, trombone and harp—Shilkret's Rhythm Melodists, "When You're With Somebody Else" (Gilbert) (H.M.V. EA336).
 Foxtrot—Victor Arden and Phil. Ohman's Orchestra, "Rag Doll" (Brown) (H.M.V. EA401).
- 10.1: Humour—Norman Long, "Good Little Boy and Bad Little Boy" (Weston) (H.M.V. B2454).
 Hawaiian—Kane's Hawaiians, (a) "Drowsy Waters" (Ailan); (b) "Hilo Hawaiian March" (Zonophone 2992).
 Foxtrot—Rhythmic Eight, "So Tired" (Little) (Zonophone EE104).
- 10.11: Tenor solo—Maurice Gunsby, "With All Her Faults I Love Her Still" (Rosenfeld) (Zonophone EE87).
 Wurlitzer organ solo—Jesse Crawford, "Dancing Tambourine" (Ponce) (H.M.V. EA301).
 Baritone solo—Maurice Elwin, "Just Give the Southland to Me" (Sissle) (Zonophone EE117).
- 10.21: Humour—Jno. Henry and Blossom, "Joe Murgatroyd Says" (Henry) (H.M.V. B2120).
 Foxtrot—The Troubadours, "Dream Kiss" (Yellen) (H.M.V. EA269).
 Foxtrot—Jack Hylton's Orchestra, "Souvenirs" (Nicholls) (H.M.V. EA297).
 Waltz—International Novelty Quartet, "Cuckoo" (Jonasson) (Zonophone EE67).
- 10.34: Hawaiian—Hilo Hawaiian Orchestra, "Hawaiian Sunset" (Waltz) (Vandersloot) (H.M.V. B2328).
 Yale Blues—Rio Grande Band, "Every Little Thing I Do" (Hackforth) (H.M.V. EA297).
 Hawaiian—Hilo Hawaiian Orchestra, "Sweet Hawaiian Dream" (Coleman) (H.M.V. B2328).
- 10.44: Male voices—Revellers, "The Varsity Drag" (de Sylva) (H.M.V. EA332).
 Tenor with kinema organ—Gerald Griffin, "At the End of an Irish Moonbeam" (Golden) (Zonophone 2989).
 Scottish comedian—Sir Harry Lauder, "The Pirate" (Lauder) (Zonophone G075).
 Vocal trio—Dalhart, Robison and Hood, "Climin' Up de Golden Stairs" (Golden) (H.M.V. EA382).
 Bass-baritone solo, Peter Dawson, "Follow Me 'Ome" (Ward) (H.M.V. C1427).
- 11.0: Close down.

Thursday, June 13

1YA, AUCKLAND (333 METRES).—THURSDAY, JUNE 13.

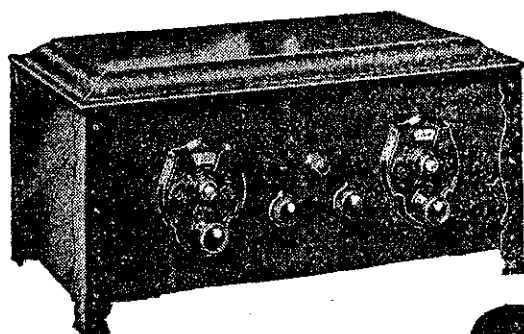
- 3 p.m.: Afternoon session—selected studio items.
 3.30: Talk—Miss Edith Sutherland, "Home Handicrafts."
 3.45: Studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Peter Pan.
 7.0: News session.
 7.40: Talk—Mr. N. R. Richmond, B.A.—"The Tariff Question."
 8.0: Chimes.
 8.1: A novelty entertainment—"The Radio Scamps" will present "A Trip to Tilbury."
 9.30: "His Master's Voice" dance programme:
 Foxtrot with vocal refrain—Aaronson's Commanders, "My Scandinavian Girl" (Tobias) (H.M.V. Record EA460).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "My Tonia" (de Sylva) (H.M.V. EA478).
 Foxtrot with vocal refrain—Hamps' Kentucky Serenaders, "What D'ya Say" (Brown) (H.M.V. EA460).
- 9.40: Tenor solo—Franklyn Baur, "Marie" (Berlin) (Zonophone EE135).
 Waltz with vocal refrain—The Troubadours, "Live and Love" (Klages) (H.M.V. EA478).
 Wurlitzer organ solo—Jesse Crawford, "Me and the Man in the Moon" (Leslie) (H.M.V. EA491).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "I Still Keep Dreaming of You" (Davis) (H.M.V. EA461).
- 9.53: Bass solo and chorus—Paul Robeson, "Plantation Songs" (H.M.V. C1585).
 Hawaiian—Kolomoku's Honoluluans, "Aloha-oe" (Liliuokalani) (Zonophone EF23).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "Cross Roads" (Klages) (H.M.V. EA461).
 Hawaiian Orchestra—Kolomoku's Honoluluans, "Three o'clock in the Morning" (Robledo) (Zonophone EF23).
- 10.6: Tenor solo—Franklyn Baur, "Cross Roads" (Klages) (Zonophone EE135).
 Orchestral—London Orchestra, "On With The Show" (Nicholls) (Zonophone 5187).
 Wurlitzer organ solo—Reginald Foort, "Worryin'" (Fairman) (H.M.V. EA491).

- 10.19: Tenor solos—Walter Glynn, (a) "Jeunesse" (Barry); (b) "I Love the Moon" (Rubens) (H.M.V. B2761).
 Foxtrot—Rhythm Band, "There are Eyes" (Keyes) (H.M.V. EA469).
 Foxtrot with vocal refrain—Rhythmic Eight, "Saskatchewan" (Gilbert) (Zonophone EE126).
 Foxtrot with vocal refrain—New Mayfair Dance Orchestra, "Why is the Bacon so Tough?" (Prentice) (H.M.V. EA469).
- 10.35: Male quartette—Masters Lough and Mallet, and Messrs. Dixon and Hastwell—"Drink to Me Only With Thine Eyes" (arrgd. Ball) (H.M.V. B2770).
 Saxophone duet—Rudy Wiedoeft and Arnold Brilhart, "The Swallow" (Zonophone EE129).
 Foxtrot with vocal refrain—Aaronson's Commanders, "I'll Get By As Long As I Have You" (Turk) (H.M.V. EA466).
 Waltz with vocal refrain—The Troubadours, "Dolores" (Grossman) (H.M.V. EA447).
- 10.48: Accordion and banjo—P. Frosini, "Silver Moon" Waltz (Frosini) (Zonophone EE129).
 Foxtrot with vocal refrain—McEnelly's Orchestra, "Sleep, Baby, Sleep" (Tucker) (H.M.V. EA466).
 Waltz with vocal refrain—The Troubadours, "Love Dreams" (Harris) (H.M.V. EA475).
 Foxtrot with vocal refrain—Geo. Olsen's Music, "Sonny Boy" (H.M.V. EA441).
- 11.0: Close down.

2YA, WELLINGTON (420 METRES).—THURSDAY, JUNE 13.

- 3.0 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sports results to hand.
 5.0: Children's session, conducted by Uncle George.
 6.0: Dinner Session:
 Band selection—Bande Garde Republicaine de France, "Carmen" entracte (Bizet) (Columbia Record 0274).
 Tenor solo—Alfred O'Shea, "The Old Refrain" (Kriesler) (Columbia Record 03614).
- 6.13: Tacet.
 6.15: Selection—H.M. Coldstream Guards, "Iolanthe" (Sullivan) (H.M.V. Record C1368).
 Tenor solo—Alfred O'Shea, "Lilies of Lorraine" (Grey) (Columbia Record 03614).
 Cello solo—W. H. Squire, "Silver Threads Among The Gold" (Arrgd. Squire) (Columbia Record 04178).
- 6.28: Tacet.
 6.30: Accordion solo—P. Frosini, "Silver Moon" Waltz (Frosini) (Zonophone Record EE129).
 Saxophone duet—Rudy Wiedoeft and Arnold Brilhart, "The Swallow" (Zonophone Record EE129).
 Baritone solo—Alexander Carmichael, "Turn Ye To Me" (Arrgd. Moffatt) (Columbia Record 01390).
- 6.41: Tacet.
 6.45: Solo and chorus—Zonophone Light Opera Company, Vocal Gems from "The Mikado" (Sullivan) (Zonophone Record A344).
 Waltz—Edith Lorand Orchestra, "Vienna Waltz" (Drda) (Parlophone Record E10531).
- 6.56: Tacet.
 7.0: News session, market reports and sports results.
 7.34: Lecturette—Mr. W. J. Fergie, Publicity Branch, New Zealand Railways.
 7.40: Lecturette—Miss Margaret O'Connor, "Dancing."
 8.0: Chimes of the G.P.O. clock.
 8.1: "Uncle George's Evening."
 Overture—Budapest Philharmonic Orchestra, "Rakoczy March" (Berlioz) (Columbia Record 02729).
 Choral—Maranui Methodist Sunday School Choir, (a) "The Honour Of His Name" (Meredith); (b) "He Watches Over You and Me" (Meredith).
 Vocal solo—Master Peter Wells, "Oh For The Wings Of a Dove" (Mendelssohn).
 Violin solo—Mr. Keith Knapp, "Entrancement" (Telma).
 Vocal duet—Misses Amy and Myrtle Carter, "God Made The World So Happy" (Tullar).
 Character sketch—Mr. W. J. Mason, "Squeers Opens School" (Dickens).
 Vocal solo—Miss Iris Paterson, "A Little Gleam Of Sunshine" (Drummond).
 Humorous sketch—Petone Church of Christ Young Peoples Club, "A Visit To A Picture Show."
 Bass solo—Uncle George, "When The Ebb Tide Flows" (Gordon).
 Recital—Miss Betty Day, selected.
 Orchestral—Classica Symphony Orchestra, "Carmen" selection (Bizet) (Regal Record G30008).
 Weather report.
 Choral—Lyall Bay Baptist Sunday School Choir, (a) "Raise a Song" (Williams); (b) "The Banner of Love" (Williams).
 Vocal solo—Master Peter Wells, "Droop, Sacred Head" ("Olivet to Calvary") (Mauder).
 Monologue—Miss Betty Rickard, "The Pillar Box."
 Violin solo—Mr. Keith Knapp, "Serenata" (Toselli).
 Vocal trio—Misses Mollie and Betty McClellan and Vera Smelt, "Ye Banks and Braes."
 Humour—Mr. W. J. Mason, "I Forget."
 Vocal solo—Miss Irish Paterson, "The Dream Flower Tree" (Drummond).

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Recital—Master Laurie Rickard, "Father's Chicken."
Bass solo—Uncle George, "Good Company" (Adams).
Dialogue—Betty and Laurie Rickard, "The Postponed Wedding."
Close down.

3YA, CHRISTCHURCH (306 METRES)—THURSDAY, JUNE 13.

- 3.0 p.m.: Afternoon session—Selected gramophone items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's hour, conducted by Uncle John.
7.0: News session.
7.30: Talk—Major Stafford, M.R.C.V.S., under the auspices of the Progress League.
8.0: Chimes.
8.1: Overture—H.M. Grenadier Guards, "Poet and Peasant" (Suppe) (Columbia Record 9087).
8.9: Quartet—The Melodious Four, "O Maiden Dearest" (Brahms).
Contralto solo—Miss Belle Renaut, "Caro Mio Ben" (Giordani).
8.16: Cello solo—Mr. Harold Beck, "Traumeri" (Schumann).
8.20: Baritone song—Mr. T. D. Williams, "The Erl King" (Schubert).
8.24: Pianoforte items with introductory remarks—Mr. Sydney Francis Hoben, (a) "Paraphrase on the Barcarolle from Offenbach's 'Tales of Hoffmann'" (Moskowski); (b) "Dance of the Elves" (Jensen); (c) "Barcarolle in G Op. 27" (Moskowski).
8.40: Duet soprano and tenor—Melodious Duo, "Dear Love of Mine" (Goring Thomas).
Cavatina tenor—Mr. Russell Sumner, "All Hail Thou Dwelling Pure and Lowly" (Gounod).
8.48: Instrumental Trio—Christchurch Broadcasting Trio, "Andante-Expressivo"; "Scherzo" (Mendelssohn).
8.59: Operatic soprano solo—Miss Frances Hamerton "Shadow Song" (from "Dinorah") (Meyerbeer).
9.4: Weather report and announcements.
9.9: Orchestral—La Scala Orchestra, "The Secret of Suzanna" (Wolf) (H.M.V. Record D1488).
9.13: Vocal quartet—The Melodious Four "Evening Has Lost Her Throne" (Bantock).
Contralto solos—Miss Belle Renaut, (a) "Sapping Ode" (Brahms); (b) "Woodland Thoughts" (Franz).
9.23: Cello solos—Mr. Harold Beck, (a) "Song of the North" (Schumann); (b) "Songs My Mother Taught Me" (Dvorak).
9.27: Baritone solo—Mr. T. D. Williams, (a) "The Birds of Passage" (Jeris Read); (b) "Slow, Horses Slow" (Mallenson).
9.34: Instrumental Trios—Christchurch Broadcasting Trio, (a) "Ballet Music from Rosamund" (Schubert); (b) "Entr'acte from Rosamund" (Schubert).
9.42: Tenor solo—Mr. Russell Sumner, "Down Her Soft Cheek" (Donizetti).
Duet Contralto and Baritone—Melody Duo, "Night Hymn at Sea" (Goring Thomas).
9.49: Instrumental—Philadelphia Symphony Orchestra, "Dance of the Fire Bird" (Stravinsky) (H.M.V. Record D1427).
9.53: Soprano solos—Miss Frances Hamerton, (a) "Skylark and Nightingale" (Ireland); (b) "Your Brother has a Falcon" (Ireland).
Vocal quartet—Melodious Four, "O Peaceful Night" (German).
Close down.

4YA, DUNEDIN (463 METERS)—THURSDAY, JUNE 13.

SILENT DAY.

Friday, June 14

1YA, AUCKLAND (333 METRES)—FRIDAY, JUNE 14.

- 3 p.m.: Afternoon session—selected studio items.
4.0: Literary selection by the Announcer.
4.8: Studio items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's session, conducted by Nod and Aunt Jean.
7.0: News session.
7.40: Talk—Mr. R. Howard-Taylor, "The Care of the Feet."
8.0: Chimes.
8.1: Orchestral—Classica Symphony Orchestra, "Carmen" selection (Bizet) (Regal G30009).
8.9: Baritone solo—Mr. Laurie North, "Onaway, Awake" (Cowen).
8.13: Vocal trio—Celeste Trio, "Gliding! Drifting!" (Geibel).
Soprano solo—"The Sun Whose Rays" (Sullivan).
8.21: Instrumental—Studio Trio, (a) "Autumn Song" (Tchaikowsky); (b) "Minuet" ("Military Symphony") (Haydn).
8.30: Contralto solos—Mrs. B. Jellard, (a) "In My Wild Mountain Valley" (Benedict); (b) "I'm Alone" ("The Lily of Killarney" (Benedict).
8.37: Organ and vocal—Mr. Arthur E. Wilson (organist), and Mr. Laurie North (baritone), "Twenty Minutes with Handel"—(a) "Overture to the Occasional Oratorio"; (b) baritone aria, "The Trumpet Shall Sound" ("Messiah"); (c) "Largo."
8.57: Vocal trio—Celeste Trio, (a) "A Celtic Lullaby" (Robertson) (b) "A Spring Song" (Pinsull).
9.4: Weather report.

- 9.7: Orchestral—J. H. Squire's Celeste Octet, (a) "Mignon—Introduction and Romance" (Thomas); (b) "Mignon—Polonaise" (Thomas) (Columbia Record 02749).
9.15: Soprano solo—Florence Austral, "Inflammatus" (Rossini) (H.M.V. Record D1506).
9.19: Pianoforte solo—Mr. Eric Waters, "Spinning Song" (Raff).
9.24: Contralto solo—Mrs. B. Jellard, "My Prayer" (Squire).
9.28: Organ and vocal—Mr. A. E. Wilson and Mr. L. North, (a) "Night Song" (Harris); (b) "La Cinquantaine" (Marie); (c) baritone solo, "Alleluia" (Morris); (d) "Allegro Pompose" (Galbraith).
9.48: Vocal trio—Celeste Trio, (a) "To a Wild Rose" (MacDowell); (b) "With Splendour" (Macdowell).
9.56: Instrumental—Studio Trio, "Scherzo—Trio in F Major" (Schumann).
10.4: Orchestral—Orchestre Symphonique de Paris, (a) "L'Arlesienne—Farandole"; (b) "L'Arlesienne—Marche des Rois" (Bizet) (Columbia Record 01328).
10.10: Close down.

2YA, WELLINGTON (420 METRES)—FRIDAY, JUNE 14.

- 3 p.m.: Chimes of the G.P.O. clock.
3.1: Selected gramophone items.
4.30 and 4.55: Sports results to hand.
5.0: Children's session, conducted by Big Brother Jack.
6.0: Dinner session: Orchestral—Budapest Philharmonic Orchestra, "Hungarian Rhapsody, No. 1, in F" (Liszt) (Columbia Records 02728/9).
6.12: Tacet.
6.15: Fantasia—Edith Lorand Orchestra, "Cavalleria Rusticana" (Mascagni) (Parlophone Record E10569).
Baritone solo—Fraser Gange, "On the Road to Mandalay" (Speaks) (Columbia Record 02573).
6.26: Tacet.
6.30: Fantasia—Dajos Bela Orchestra, "La Traviata" (Verdi) (Parlophone Record A4027).
Baritone solo—Fraser Gange, "The Two Grenadiers" (Schumann) (Columbia Record 02573).
6.41: Tacet.
6.45: Vocal duet—Hardy Williamson and Robert Rowe, "The Flowers that Bloom in the Spring" (Sullivan) (Parlophone Record A2544).
Baritone solo—Robert Rowe, "Rising Early in the Morning" (Sullivan) (Parlophone Record A2544).
Waltz—Dajos Bela Orchestra, "Dancing Demoiselle" (Fall) (Parlophone Record A4008).
6.56: Tacet.
7.0: News session, market reports, and sports results.
7.40: Lecturette—Mr. D. McKenzie, "The Laws of Rugby."
8.0: Chimes of the G.P.O. clock.
8.1: Overture—Orchestra, "Light Cavalry" (Suppe).
8.9: Soprano solo—Miss Ena Rapley, "Love Will Find a Way" ("Maid of the Mountains") (Fraser-Simpson).
8.13: Baritone solo—Mr. Arthur Brady, "A Wandering Minstrel I" ("The Mikado") (Sullivan).
8.17: Recital—"Kohn" will relate the origin and meaning of the famous "Kamate" Haka.
8.24: Selection—Orchestra, "Cavalleria Rusticana" (Mascagni).
8.34: Tenor solo—Mr. Edwin Dennis, "Questa o Quella" ("Rigoletto") (Verdi).
8.38: Contralto solo—Miss Madge Freeman, "A Quaker Girl" (Monckton).
8.42: Vocal duet—Miss Ena Rapley and Mr. Edwin Dennis, "Parted" (Tosti).
8.46: Instrumental—Orchestra, repeat number.
8.54: Weather report.
8.56: Presentation of the opera "Tristan and Isolde," Act 3 (Wagner), second instalment (H.M.V. Records D1415/17):

SYNOPSIS: The final scene of the last Act of "Tristan and Isolde" will be presented this evening. The preceding acts have told how Tristan, a Cornish Knight of royal birth, who has fought successfully in Ireland on behalf of his uncle, King Mark of Cornwall, brings Isolde, an Irish princess, as an unwilling bride for the king, but discovers that he himself loves Isolde. They hide their love, and her marriage with the King is carried out. But the lovers cannot be denied. During one of their secret meetings the King surprises them, and one of his followers stabs Tristan, who will not defend himself.

The great Third Act, the second half of which will be presented this evening, comes as a fitting climax to the opera. Nowhere than in this act did Wagner achieve a more vivid expression of deep human emotions. As the Act unfolds, the full explanatory story will be told.

Tristan lies dying in his castle in Brittany. He longs to see Isolde once again. When, at last she comes, he is delirious, and leaps from his couch, dying in her arms. Isolde sings her Death Song over his body, and in a transport of passionate love, falls, lifeless.

- 9.28: Instrumental—Orchestra, violin solos with orchestral accompaniment, (a) "Meditation" (Gounod-Bach); (b) "Serenata" (Moszkowski).
9.36: Soprano solo—Miss Ena Rapley, "Songs My Mother Taught Me" (Dvorak).
9.40: Vocal duet—Miss Madge Freeman and Mr. Edwin Dennis, "When Song is Sweet" (Sans-Souci).
9.44: Recital—"Kohn" will recite some Maori legends.
9.51: Contralto solo—Miss Madge Freeman, "A Highland Lament" (Shaw).

- 9.55: Selection—Orchestra, "The Gondoliers" (Sullivan).
 10.5: Tenor solo—Mr. Edwin Dennis, "The Moon Drops Low" (Cadman).
 10.10: Baritone solo—Mr. Arthur Brady, "Devonshire Cream and Cider" (Sanderson).
 10.14: Vocal quartette—Philharmonic Quartet, "Annie Laurie" (trdtl).
 10.18: Waltz—Orchestra, "Thru' the Night" (Logan).
 March—Orchestra, "Captain Goodridge" (Hildreth).
 10.28: Close down.

3YA, CHRISTCHURCH (306 METRES).—FRIDAY, JUNE 14.

- 3 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.
 8.0: Chimes.
 8.1: Overture—(rebroadcast of 2YA, Wellington).
 8.8: Opening chorus—Valencia Quartet, "God Defend New Zealand" (J. J. Woods).
 8.12: Soprano solo—Mrs. Lucy O'Brien, "A Brown Bird Singing" (Haydn Wood).
 8.16: Dance music—Bailey-Marston Dance Orchestra, (a) "Fountainette" (Nusbaum); (b) "A Room With a View" (Coward).
 8.24: Tenor solo—Mr. W. Bradshaw, "Once Again" (Sullivan).
 8.28: Contralto solo—Miss Mary Taylor, "The Hills of Donegal" (Sander-son).
 8.32: Instrumental—Christchurch Broadcasting Trio, (a) "Viennoise March" (Kreisler); (b) "Dialogue" (Bachmann); (c) "Syncopation" (Kreisler).
 8.44: Vocal quartet—Valencia Quartet, "It Was a Lover and His Lass" (Morley).
 8.48: Baritone solo—Mr. E. J. Johnson, "The Norseman's Song" (Allitsen).
 8.52: Dance music—Bailey-Marston Dance Orchestra, (a) "Sweet Sue" (Alberts); (b) "I Can't Give You Anything But Love" (McHugh).
 9.0: Weather report.
 9.5: Medley—H.M. Grenadier Guards Band, "Sir Harry Lauder Medley" (Lauder) (Columbia Record 02750).
 9.9: Vocal quartet—Valencia Quartet, "Come Back to Erin" (Fletcher).
 9.18: Soprano solo—Mrs. Lucy O'Brien, "I Dream of a Garden of Sunshine" (Lohr).
 9.17: Dance music—Bailey-Marston Dance Orchestra, (a) "Sally of My Dreams" (Kernall); (b) selected.
 9.25: Vocal duet—Valetta Duo, "Sing, Sing, Bird on the Wing" (Nutting).
 9.29: Tenor solo—Mr. W. Bradshaw, "Sally in Our Alley" (Carey).
 9.33: Dance music—Bailey-Marston Dance Orchestra, (a) "Thirsty for Kisses" (Davis); (b) "Mia Bella Rosa" (Koehler).
 9.41: Contralto solo—Miss Mary Taylor, "The Perfect Day" (Bond).
 9.45: Accordion solo—P. Frosini, "Silver Moon" waltz (Frosini).
 Saxophone duet—Rudy Wiedoeft and Arnold Brilhart, "The Swallow" (Zonophone EE129).
 9.51: Baritone solo—Mr. E. J. Johnson, "The Deathless Army" (Trotter).
 9.55: Dance music—Bailey-Marston Dance Orchestra, (a) "Fascinating Vamp" (Nusbaum); (b) "Over the Waves" waltz (Rosas).
 10.3: Dance music by Bailey-Marston Dance Orchestra, interspersed with the following vocal numbers:—
 Tenor solos—Alfred O'Shea, (a) "The Old Refrain" (Kreisler); (b) "Lilies of Lorraine" (Grey) (Columbia Record 03614).
 Contralto solos—Sophie Braslau, (a) "I Love You, Truly" (Bond); (b). "Just a Wearying for You" (Bond) (Columbia Record 03618).
 Tenor solo—Franklyn Baur, "Just a Sweetheart" (Dreyer) (Zonophone Record EE132).
 11.0: Close down.

4YA, DUNEDIN (463 METRES).—FRIDAY, JUNE 14.

- 3 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Big Brother Bill and Aunt Sheila.
 7.0: News session.
 7.30: Lecturette—Mr. H. Greenwood—"Book Review."
 8.0: Town Hall chimes.
 8.1: March—Musique de la Garde Republicaine de France, "Le Pere De La Victorie" (Ganne) (H.M.V. Record EA450).
 8.4: Baritone solos—Mr. Arthur Lungley, (a) "Strange, is it Not?" (Ashleigh); (b) "Passing By" (Purcell).
 8.11: Instrumental—4YA Broadcasting Trio—"Military Symphony—Menuet" (Haydn).
 8.16: Recitals—Mr. Lester Moller, (a) "The Fuller Life" (Sterne); (b) "The Trooper's Defence" (anon.).
 8.26: Contralto solos—Miss Irene Hornblow, negro spirituals, (a) "Steal Away" (Burleigh); (b) "Swing Low" (Burleigh).
 8.33: Cello solo—Mr. P. J. Palmer, "Sonata in A Minor" (Martini).
 8.38: Mezzo-soprano solos—Miss W. Collier, (a) "The Green Ribbon" (German); (b) "I Sometimes Wonder" (Woodforde-Finden).
 8.45: Pianoforte solo—Mrs. Ernest Drake, selected.
 8.50: Contralto solo—Miss Irene Hornblow, "I Stood On De River" (negro spiritual) (Burleigh).

8.54: Violin solo—Miss Eva Judd, "Star of Eve" (Wagner).

8.59: Weather report.

9.1: Orchestral novelty—Orchestre Symphonique de Paris, "Carnival of Animals" (Saint-Saens) (Columbia Records 02760-1-2-3):
 (Synopsis: This "Grand Zoological Fantasy" was written in 1886 as a joke, for a private concert. In it Saint-Saens gives musical portraits of fish, flesh, and fowl, and indulges in ironical wit, in a little satire upon the human animal. For some reason he insisted that the work as a whole should not be published until after his death. One Movement escaped the ban, and became extremely popular—the charming 'cello solo entitled "The Swan."

1. Introduction and Royal Lion's March.
2. Hens and Cocks.
3. Hemioni (swift animals).
4. Tortoises.
5. The Elephant.
6. Kangaroos.
7. The Aquarium.
8. Long-eared Personages.
9. The Cuckoo in the Depths of the Wood.
10. The Aviary.
11. Pianists.
12. Fossils.
13. The Swan.
14. Finale.

9.37: Relay from Ritz of special feature by Orchestra.

9.47: Baritone solo—Mr. Arthur Lungley, "Don Juan's Serenade" (Tschalkowsky).

9.51: Recital—Mr. Lester Moller, "Spanish Waters" (Masfield).

9.58: Soprano solo—Miss W. Collier, "Alas! Those Chimes" ("Maritana") (Wallace).

10.2: Instrumental—4YA Broadcasting Trio, (a) "Hungarian Dance, No. 1" (Brahms); (b) "Hungarian Dance, No. 2" (Brahms).

10.12: Close down.

Saturday, June 15

1YA, AUCKLAND (333 METRES).—SATURDAY, JUNE 15.

2.45 p.m.: Relay description of Rugby football match from Eden Park.

4.30 (approx.): Close down.

6.0: Children's session, conducted by Cinderella.

7.0 News session.

8.0: Chimes.

8.1: Overture—Orchestra, "Hungarian Lutspliel" (Bela).

8.11: Mezzo-soprano solos—Mrs. L. Parry, (a) "Oh, To Be In England" (Brahe); (b) "The Year's At The Spring" (Brahe).

8.18: Recital—Mr. Clarence Paine, "Hints On Health."

8.23: Novelty—Snappy Three, (a) "High Up On A Hill-top" (Ball); (b) "Sonny Boy" (de Sylva); (c) Jazz Piano Solo—Selected.

8.32: Variety—The Peripatetic Pair, Novelty and Nonsense.

8.47: Ballet suite—Orchestra, "Ballet Egyptian" (Luigini).

8.57: Weather report.

9.0: Solo and chorus with orchestra, Zonophone Light Opera Company—Vocal Gems from "The Mikado" (Sullivan), (Zonophone A344).

9.8: Mezzo-soprano solo—Mrs. L. Parry, "I Heard You Singing" (Coates).

9.12: Recitals—Mr. C. Paine, (a) "Pensby Mine" (Conan Doyle); (b) "Carry On."

9.20: Suite—Orchestra, "Chopiniana" Part 2 (Finck).

9.30: Novelty—Snappy Three, (a) "Someday, Somewhere...; (b) "You're Wonderful" (Fields).

9.36: Variety—The Peripatetic Pair, Novelty and Nonsense.

9.46: Instrumental—Orchestra, (a) Waltz, "Wine, Women and Song" (Strauss); (b) March, "New Colonial March" (Hall).

9.56: "Brunswick" Dance Programme:

Novelty foxtrot—Jesse Stafford's Orchestra, "Kewpie" (Rose) (Brunswick Record 4249).

Foxtrot with vocal chorus—Jesse Stafford's Orchestra, "A Precious Little Thing Called Love" (Davis), "Brunswick Record 4249).

Waltz with vocal chorus—Hal Kemps' Orchestra, "One Kiss" (Romberg) (Brunswick Record 4216).

Waltz (pianoforte solo)—Rosita Renard, "Blue Danube" (Strauss) (Brunswick Record 4202).

10.12: Vocal duet—Francis Luther and Jack Parker, "Carolina Moon" (Davis) (Brunswick Record 4202).

Foxtrot with vocal chorus—Brunswick Orchestra, "Lover, Come Back to Me!" (Romberg) (Brunswick Record 4216).

Foxtrot with vocal chorus—Gerunovich's Roof Garden Orchestra, "I'm Telling You" (Rose) (Brunswick Record 4190).

Foxtrot with vocal chorus—Joe Rines' Orchestra, "Sweetheart Of All My Dreams" (Fitch) (Brunswick Record 4190).

10.24: Soprano with string quartet and harp—Marie Tiffany, "Little Grey Home In The West" (Wilmot) (Brunswick Record 15197).

Foxtrot with vocal chorus—Gerunovich's Roof Garden Orchestra, "I Found You Out When I Found You In" (Ponce) (Brunswick Record 4190).

Novelty foxtrot—Joe Rine's Orchestra, "Fashionette" (Glougan) (Brunswick 4199).

Vocal duet with novelty accompaniment—Frank Luther and Carson Robison, "Wednesday Night Waltz" (Williams) (Brunswick Record 297).

- 10.37: Vocal duet—Francis Luther and Carson Robison, "You Can't Take My Memories From Me" (Davis) (Brunswick Record 4202).
 Foxtrot with vocal chorus—Ray Miller's Orchestra, "No One In The World But You" (Robison) (Brunswick Record 4194).
 Foxtrot—Brunswick Orchestra, "Dardanella" (Fisher) (Brunswick Record 4218).
 Waltz with vocal chorus—Regent Club Orchestra, "Poor Punchinello" (Lewis) (Brunswick Record 4206).
 10.50: Soprano solo—Marie Tiffany, "Pale Moon" (Indian Love Song) (Logan) (Brunswick Record 15197).
 Foxtrot with vocal chorus—Brunswick Orchestra, "Redskin" (Zamecnik) (Brunswick Record 4218).
 Waltz with vocal chorus—Regent Club Orchestra, "Loneliness" (Polack) (Brunswick Record 4206).
 11.0: Close down.

2YA, WELLINGTON (420 METRES)—SATURDAY, JUNE 15.

- 8.0 p.m.: Chimes of the G.P.O. clock.
 8.1: Relay description of football match from Athletic Park.
 8.0: Children's session, conducted by Uncle Toby.
 8.0: Dinner Session:
 Overture—Grand Symphony Orchestra, "Light Cavalry" (Suppe) (Parlophone Record A4001).
 Baritone solo—Leslie Pearce, "Lucky In Love" (de Sylva) (Parlophone Record A2575).
 11.2: Tacet.
 8.15: Selection—Frank Westfield's Orchestra, "Lilac Time" (Schubert-Berte) (Parlophone Record A2543).
 Baritone solo—Leslie Pearce, "The Best Things In Life Are Free" (de Sylva) (Parlophone Record A2575).
 Selection—Frank Westfield's Orchestra, "Lilac Time" (Schubert-Berte) (Parlophone Record A2543).
 8.25: Tacet.
 8.30: Foxtrots—Piccadilly Band, (a) "Try To Learn To Love"; (b) "A Room With a View" (Coward) (Columbia Record 01420).
 Vocal duet—Layton and Johnstone, "Blue Grass" (de Sylva) (Columbia Record 01429).
 8.40: Tacet.
 8.45: Foxtrots—(a) Ben Selvin's Orchestra, "If You Want The Rainbow" (Rose); (b) The Cavaliers, "I Loved You Then As I Love You Now" (Axt) (Columbia Record 01401).
 Vocal duet—Layton and Johnstone, "Wherever You Are" (Dowling) (Columbia Record 01429).
 8.55: Tacet.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. A. E. Wilson (of the Government Tourist Department) "Tourist and Holiday Resorts."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Zampa" (Herold).
 8.9: Vocal quartet—Melodie Four, "Ice Cream" (King).
 8.13: Instrumental—Mrs. Mildred Kenny's Steel Guitar Trio, (a) "My Hula Girl of Waikiki" (Clarke); (b) "Dream Boat" (Novello).
 8.20: Tenor solo—Mr. Sam Duncan, "Then You'll Remember Me" (Balfe).
 8.24: Instrumental—Orchestra, "Musical Jig Saw" (Aston).
 8.32: Humour—Mr. Henry Desmond, "What's The Good of Hanyfink" (Chevalier).
 8.39: Baritone solo—Mr. R. S. Allwright, "Yeoman's Wedding Song" (Poniatowski).
 8.43: Saxophone solo—Rudy Wiedoeft, "Melody" (Daves) (Columbia Record 01180).
 8.47: Contralto solo—Miss Mona Carrick, "True Till Death" (Scott-Gatty).
 8.51: Instrumental—Orchestra, Repeat Number.
 8.59: Weather report.
 9.1: Vocal quartet—Melodie Four, "I Wish I Had My Old Girl Back Again" (Henry).
 9.5: Instrumental—Mrs. Mildred Kenny's Steel Guitar Trio, (a) "With Thee" (Foden); (b) "Hawaiian Islands Waltz" (Smith and Cusenza).
 9.12: Tenor solo—Mr. Frank Bryant, "The Little Lady Of The Moon" (Coates).
 9.16: Instrumental—Orchestra, (a) Xylophone solo with orchestral accompaniment, "Log Cabin Blues" (Green); (b) "The Trumpeter" (Dix); (c) March, "The Deep Purple" (Kelley).
 9.24: Humour—Mr. Henry Desmond, "Who'll Buy?" (Chevalier).
 9.31: Bass solo—Mr. W. W. Marshall, "Chorus, Gentlemen" (Loehr).
 9.35: Mandolin band—(a) "Turn to Surriento" (de Curtis); (b) "Stephanie Gavotte" (Czibulka) (Columbia Record 01210).
 9.41: Contralto solo—Miss Mona Carrick, "My Dear Soul" (Sanderson).
 9.45: Vocal quartet—Melodie Four, "Someday, Somewhere, We'll Meet Again" (Rapee).
 9.49: Instrumental—Orchestra, Dance Novelties.
 10.0: Brunswick Dance Programme:
 Foxtrot with vocal chorus—Brunswick Orchestra, "Id Rather Be Blue" (Rose) (Brunswick Record 4213).
 Foxtrot—Red Nicholls and His Five Pennies, "I Never Knew" (Kahn) (Brunswick Record 4243).
 Foxtrot with vocal chorus—Brunswick Orchestra, "My Man" (Polack) (Brunswick Record 4213).
 10.10: Vocal solo—Nick Lucas, "Heart O' Mine" (Rose Silvers) (Brunswick Record 4215).

- Foxtrot with vocal chorus—Los Angeles Biltmore Hotel Orchestra, "Wedding Of The Painted Doll" (Brown) (Brunswick Record 4232).
 Foxtrot with vocal chorus—Los Angeles Biltmore Hotel Orchestra, "Broadway Melody" (Brown) (Brunswick Record 4231).
 Waltz with vocal trio—Los Angeles Biltmore Hotel Orchestra, "Love Boat" (Brown) (Brunswick Record 4232).
 10.22: Vocal solo—Nick Lucas, "Old Timer" (Rose Silvers) (Brunswick Record 4215).
 Foxtrot with vocal trio—Los Angeles Biltmore Hotel Orchestra, "You Were Meant For Me" (Brown) (Brunswick Record 4231).
 Foxtrot—The Jungle Band, "Tiger Rag" (La Rocca) (Brunswick Record 4238).
 10.34: Tenor solo—William O'Neal, "Softly, As In A Morning Sunrise" (Romberg) (Brunswick Record 4208).
 Foxtrot—Barnes' Royal Creolians, "It's Tight Like That" (Dorsey) (Brunswick Record 4244).
 Foxtrot with vocal chorus—Paramount Hotel Orchestra, "I'll Never Ask For More" (Turk) (Brunswick 4208).
 Foxtrot with vocal chorus—Hotel Roosevelt Orchestra, "I Want To Be Bad" (de Sylva) (Brunswick Record 4204).
 One-step, Rhythm Aces, "Jazz Battle" (Smith) (Brunswick Record 4244).
 10.49: Tenor solo—William O'Neal, "Stout Hearted Men" (Romberg) (Brunswick Record 4208).

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 Foxtrot with vocal chorus—Hotel Roosevelt Orchestra, "Button Up Your Overcoat" (de Sylva) (Brunswick 4204).
 Foxtrot—Red Nicholls and His Five Pennies, "Who's Sorry Now?" (Kaimar) (Brunswick Record 4243).

11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—SATURDAY, JUNE 15.

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

4.25: Sports results.

4.30: Close down.

6.0: Children's session, conducted by Aunt Pat.

7.0: News session.

7.30: Sports results to hand.

8.0: Chimes.

8.1: Rebroadcast of 2YA, Wellington.

10.0: "Brunswick" Dance Programme.

11.0: Close down.

4YA, DUNEDIN (463 METRES)—SATURDAY, JUNE 15.

2.45 p.m.: Relay description of Rugby football match from Carisbrook Ground.
 5.45: Close down.

6.0: Town Hall chimes.

6.1: Children's session, conducted by Uncle George.

7.0: News session.

8.0: Relay of 3YA, Christchurch, (rebroadcast of 2YA, Wellington).

10.0: "His Master's Voice" Dance Programme:

Foxtrot—Jack Hylton's Orchestra, "Swords and Sabres" (Bennett) (H.M.V. Record B5160).

Foxtrot with vocal chorus—Rhythmic Eight, "Possibly" (Gibbons) (Zonophone Record EE97).

Wurlitzer organ solo—Jesse Crawford, "Jeannine, I Dream of Lilac Time" (Gilbert) (H.M.V. Record EA425).

10.9: Baritone solo—Peter Dawson, "Believe Me If All Those Endearing Young Charms" (Moore) (H.M.V. Record DA886).

Wurlitzer organ solo—Jesse Crawford, "Ten Little Miles From Town" (Kahn) (H.M.V. Record EA426).

Foxtrot—Jack Hylton's Orchestra, "Palace of Dreams" (Waller) (H.M.V. Record B5159).

Foxtrot—Jack Hylton's Orchestra, "Babying You" (Ruby) (H.M.V. Record B5160).

Waltz with male quartet—The Troubadours, "Beggars of Life" (Bronnan) (H.M.V. Record EA441).

10.24: Tenor solo—Jno. McCormack, "Mother Ma Chree" (Ball), (H.M.V. Record DA958).

Tango Argentino—International Novelty Orchestra, "El Choclo" (Viloldo) (H.M.V. Record EA364).

Waltz—Troubadours, "Beautiful Heaven" (H.M.V. Record EA349).

Foxtrot with vocal refrain—Kahn's Orchestra, "In a Bamboo Garden" (Donaldson) (H.M.V. Record EA435).

10.36: Scottish comedian—Sir Harry Lauder, "The Pirate" (Lauder) (H.M.V. Record D1434).

Chorus with orchestra—Light Opera Company, "Hit the Deck" Vocal Gems (Youmans) (H.M.V. Record C1433).

Foxtrot—Jack Hylton's Orchestra, "Don't Forget" (Hanley) (H.M.V. Record B5159).

Foxtrot with vocal chorus—Rhythmic Eight, "There's a Ricketty Racketty Shack" (Tobias) (Zonophone EE97).

Hawaiian—Ferera and Paaluh, "Killma Waltz" (Trdtl.), (H.M.V. Record B2369).

Marimba orchestra—"When It's Love Time in Hawaii" (Heagney) (Zonophone Record 3852).

Foxtrot—Paul Whiteman's Orchestra, "O, Ya, Ya" (Klages) (H.M.V. Record EA340).

Foxtrot—Shilkret's Orchestra, "Sometimes I'm Happy" (Youmans) (H.M.V. Record EA253).

11.0: Close down.

Sunday, June 16

1YA, AUCKLAND (333 METRES)—SUNDAY, JUNE 16.

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 Pitt Street Methodist Church:

Preacher: Rev. L. B. Dalby.

Organist: Mr. Bickerton.

Choirmaster: Mr. Leatherton.

8.30 (approx.): Relay from Whangarei of concert by the Whangarei Band.

10.0: Close down.

2YA, WELLINGTON (420 METRES)—SUNDAY, JUNE 16.

3 p.m.: Relay from Town Hall of Citizens' Thanksgiving Service for the recovery of His Majesty the King from his long and serious illness. (His Worship the Mayor, Mr. Geo. A. Troup, presiding. Organist, Mr. Bernard Page.)

6.0: Children's song service, conducted by Uncle George.

7.0: Relay of service from St. Thomas' Anglican Church, Wellington South:

Preacher: Rev. C. V. Rooke.

Organist and Choirmaster: Mr. W. Gatheridge.

8.15 (approx.): Relay from His Majesty's Theatre of recital by the Wellington Municipal Tramways' Band under the conductorship of Captain T. Herd).

Close down.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, JUNE 16.

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

4.30: Close down.

5.30: Children's song service.

Relay of special Thanksgiving Service from St. Barnabas Church (Anglican), Fendalton:

6.15: Chimes of the church bells (Bellringer, Mr. G. Clayden).

6.30: Thanksgiving service:

Preacher: Rev. H. S. Leach.

Organist and Musical Director: Mr. Alfred J. M.

7.45: Gramophone recital.

8.15: Rebroadcast of 2YA, Wellington (relay from His Majesty's Theatre of concert by the Municipal Tramways' Band, under the conductorship of Captain T. Herd).

Close down.

4YA, DUNEDIN (463 METRES)—SUNDAY, JUNE 16.

11.0 a.m.: Relay of Thanksgiving Service from St. Paul's Cathedral:

Preacher: Canon Nevill.

3.0 p.m.: Town Hall chimes.

3.1: Afternoon session—Selected gramophone items

4.30: Close down.

5.30: Children's song service, conducted by Big Brother Bill

6.30: Relay of Thanksgiving Service from Moray Place Congregational Church:

Preacher: Rev. A. Mead.

Organist: Mr. Towns.

Choirmaster: Mr. McMillan.

8.5: Relay from His Majesty's Theatre of concert by the St. Kilda Band, under the conductorship of Mr. James Dixon.

9.15: Close down.

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Notes and Comments

By
"SWITCH"

THE Wellington Radio Society was unfortunate in the matter of the weather which prevailed on the evening of the annual meeting. The cold southerly wind no doubt prompted not a few to remain at home near a good fire, listening in, in preference to attending a meeting. Thirty individuals can by no means be regarded as representative of the hundreds of listeners resident in Wellington city and suburbs.

AS in many other public movements, the masses leave it to the few to do the work, and so it is with the attitude of the general body of listeners in Wellington towards the Radio Society. One listener wrote to the honorary secretary of the Radio Society declining to join that body as he disagreed with the statement of that official that

there is a general feeling of satisfaction in the work of the Broadcasting Company and its programmes. Now, if that gentleman were dissatisfied he should join the society, come to the meetings and urge his case.

THE Wellington Society has undoubtedly done good work, and its constant and successful endeavours to secure the inclusion of a dinner music session may be cited as not the least of its achievements. The society was active in the effort to persuade the Racing Conference to permit the broadcasting of race meetings, as is the practice in Australia, and when the time is opportune the society will, no doubt, move in the matter again if only for the sake of those unhappy bed-ridden "diggers," and patients in the public hospital.

AN interesting incident occurred in connection with the annual meeting of the Wellington Radio Society. Mr. J. H. Owen, the ex-president of the society, who had been abroad for a year, and who had proved such an ideal president for years, could not be overlooked when nominations for the position of president for the ensuing year were called for. On the other hand, Mr. Byron Brown, who had held the position during Mr. Owen's absence, had endeared himself with all. Mr. Brown protested that he had accepted office only to "keep the seat warm" during Mr. Owen's absence. At Mr. Owen's request Mr. Brown finally agreed to accept nomination, and he was elected unopposed. Mr. Owen was then elected chairman, the post next to president.

SPEAKERS at the meeting said it was jarring to the musical sense to hear "2YA, Wellington," called by the announcer during the dinner music session while the music was on the air. A suggestion was made that it would be preferable that the station call sign be announced immediately before or after an item, as is the custom in Australia.

THE Sunday afternoon sessions of 2YA, Wellington, especially during the cold winter months, when families prefer to remain at home, are all too brief, according to the expressed opinions of a number of those present at the annual meeting of the Wellington Radio Society. Therefore it was decided to request the Broadcasting Co. to extend the Sunday afternoon sessions till 5 p.m.

THERE are people who adopt an attitude far too critical towards broadcast announcing, and they have written to the Press airing their opinions. Actually one would have to be hypercritical to find serious fault with the work of the announcer at 2YA, Wellington. His enunciation and method of delivery are better than many which we hear from Australia. There are, of course, other attributes, but on the whole the Wellington man is well above the average. The Radio Society is to be commended for dis-

sociating itself with the adverse Press criticism of the announcer at 2YA.

BY thirteen votes to seven (actually twelve votes to eight) the meeting of the Wellington Radio Society expressed a desire that the broadcasting of football matches be reduced to international, intercolonial, interprovincial and finals of club matches, music to be put on the air on Saturday afternoons with the above exceptions. Of a meeting of thirty only twelve voted for the resolution; by inadvertence a vote was cast for the resolution, which was intended to be cast against it. Ten declined to vote at all on the motion. Naturally the resolution is an expression of opinion, but if only twelve people out of thirty vote for it, what weight can it have with the Broadcasting Company? Also, is the opinion of twelve out of hundreds of city listeners to be accepted as representative?

A NEW addition to the executive of the Wellington Radio Society is Mr. Tom Donovan, who has been appointed an active vice-president of the society. This carries with it an ex-officio place on the committee. Mr. Donovan has been associated for many years with a business catering for public entertainment. He is an enthusiastic broadcast listener. As a man of enterprise and a keen critic of public entertainment he is a desirable acquisition to the executive.

ANOTHER happy appointment was that of Mr. W. M. Dawson (of the Philips Lamps (N.Z.), Co., Ltd.) as technical adviser of the Wellington Radio Society. Mr. Dawson is regarded as being one of New Zealand's leading radio technicians. He has had an extensive experience in both the transmitting and receiving end, and is well versed in the scientific and theoretical side of radio as well as the practical side. His lectures to the Radio Society are always brimful of instructive information.

NOT a few Wellington listeners have been picking up the new broadcast station at Wanganui. There is relatively little fading, and the tone is good. Volume is very fair on some evenings, dependent, as to be expected, on atmospheric conditions, 4YA, Dunedin, also comes in with good volume, but on some nights fading is intense.

AN amazing instance of valve longevity is reported by V.G.B.K. (Dunedin), who writes: "I have four American valves which have been in daily use since June, 1926, and have run over 3000 hours. Thinking that they might need replacing I had them tested, and, to my surprise, found that they were up to the standard of new valves. I certainly do not think that the makers owe me anything. I use a six-volt A battery and B eliminator at 180 volts." Can anyone beat this?

GOVERNMENT control of broadcasting in Australia, which is to be inaugurated shortly does not impress some folks as being desirable. It

is interesting to note that the only States in which there has been a decrease in licenses are those in which there is already Government control, viz., Queensland and West Australia. It was thought by many that when the Government took over the services in the western state there would be an immediate improvement, and a corresponding increase in the issue of licenses; but this has not been the case. Instead, the quota of licenses per one hundred of population has gradually fallen off until now it is as low as 93, as against 4.69 for the whole Commonwealth, and 8.17 for Victoria, which latter quota is a world's record.

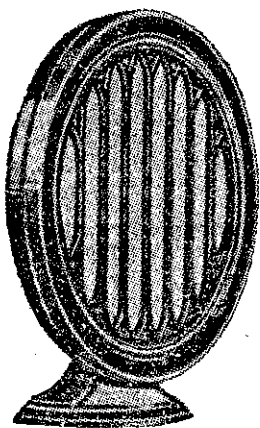
AN acquaintance who has recently returned from a tour of the United States told "Switch" that the next great accomplishment in radio will be the transmission of moving pictures, of the kinema type, to the homes of the populace. He said some wonderful work is in progress in America, perfecting the radio-kinema. People will no longer need to go out of their homes to see and hear the talkies, he said. An expert who was engaged in the development of this scheme in America told him that the radio-kinema scheme was a hundred times easier than radiovision proper.

A YOUNG Hungarian inventor, Denes V. Mihaly, has already achieved wonders in the radio transmission of cinema pictures. The main difference between actual radio-vision and the radio-cinema, of course, is that while in connection with the former the various parts of the persons radiovised have to be scanned by reflected light, the case in connection with the radio-cinema is the same as with transmission of lantern-slides—viz., that only transmitted light is used. This, of course, entails an enormous simplification of the television transmitter. Another difference is that the cinema film already comprises a decomposition of the original movement into successive stages, each separate picture corresponding to a different stage. In fact, all that is required is to scan the whole length of the film once at a certain minimum rate—i.e., ten individual images per second. What an impetus to radio cinema scheme will give!

THOSE few New Zealanders who regret that the Broadcasting Co. of New Zealand has not taken up radio-vision will be interested in the latest news that Baird, the British radio inventor, sceptically declares that radio-vision, though it may be available to the public within a few months as a commercially-made job will not come into its own for a number of years. Baird's invention, it will be remembered, has been greatly boomed at Home.

THE mellow-voiced announcer at 2FC, Sydney, Mr. Cochrane, "The Hello Man" of the children's sessions, was given a birthday party in Messrs. David Jones's tea-rooms by five of his bed-time story-hour nieces recently. Mr. Cochrane was also presented with an illuminated address.

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A Different View.

IN a letter to the "Radio Record" of the 31st inst., a person states that the programmes of 2YA lately have been a disgrace. On glancing through some past programmes I cannot find anything in them which is disgraceful. Also last Saturday night's vaudeville fare was a very enjoyable one. One would think that this man has a new set of which the novelty is just beginning to wear off. He has only to read recent letters of appreciation of 2YA to point out how wrong he is.

The dinner session has not proved a great disappointment, but a great boon to all classes.

All the old tunes which he gives as being repeated are pieces which any sound-minded listener delights in hearing more than once. Can the writer name a better waltz than "The Blue Danube"?

This person also states that it is high time that the company gave listeners a good return for their money. I must remind him that a license costs thirty shillings at the beginning of the season and decreases as the year goes on, and thirty shillings is cheap for good entertainment. I would like to suggest to this man that he had better buy a gramophone in order that he may select his own programmes. He would then find out that it costs more than thirty shillings per year to keep him in good entertainment.

It is not to be expected that 2YA can please everyone, especially the type of person who is always inclined to run against the grain. In finishing I wish to congratulate 2YA on their splendid programmes and also on their relay from Masterton.—"Satisfied" (Wellington).

Our Mail Bag

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

Eating Dinner to Foxtrot Time.

WE radio enthusiasts of Shannon wish to know whether you are catering for a select few or for the general public with the music supplied during the dinner-time session. The music is of a very mournful nature and not, I am sure, the class of entertainment that the majority would care to listen to while having dinner. In the country districts where most people have their dinner early and go to bed early, they close down rather than listen-in during that hour. It would not be so bad if you put on foxtrots, waltzes, etc., once or twice a week, but there seems no variation from the mournful stuff. We are not all Beethovens, and therefore do not understand the high-class music unless we can beat time with our foot. Then again the tacet seems to be a waste of good juice. We sometimes sit five minutes waiting, often wondering whether a connection has broken or whether we are going to get any more. Surely the country districts, who do not have the same opportunities as the city folk, are worth considering, it is a big field for new members. Personally I do not see any improvement in the programmes than before the competition held about 12 months ago. Trusting you get your committee together and put something on for the poor cow-cocky, who goes to bed early and gets up early in the morning.—A. G. Mason (Shannon).

[Our friend may save his "juice" somewhat by noting that the dinner session is run on the basis of approximately ten minutes on and five minutes off. The purpose of the silence is to permit a little polite conversation in the course of the meal. Foxtrots are not recommended by the medical fraternity as an item on the menu, as mastication to this time conduces to dyspepsia.—Ed.]

Saturday Football.

I SINCERELY hope 2YA will not entertain the resolution adopted by the Wellington Radio Society at their annual meeting on Monday last, that 2YA abstain from relaying descriptions of football matches on Saturday afternoons. It appears to me this society do not represent the majority of listeners-in, want everything their own way. Fancy wanting to deprive hun-

dreds of a real pleasure by a paltry vote of 13 to 7. We get music five afternoons and six nights a week, and if that is not enough for the society they ought to disband.—T. H. Wyeth (Petone).

Not Crying for the Moon.

AS a beginner I would like to express my views and appreciation of the programmes from the YA stations. Unlike your correspondent "Fed Up," I understand that what does not suit me may bring pleasure to others, this I tender appears to be "crying for the moon," and if given it would not be satisfied. The dinner session is a treat, and with slight improvements such as cutting out the station call and beating the clock to it would be excellent. The silence is gold, and adds a charm and distinction to this session. 3YA is my favourite station. It seems to be most consistent with the most varied programmes, and little fading. 2YA seemed to come back with some of its old volume last Tuesday night, but slipped back the following evening, worse luck. In conclusion, I would like to ask why Brunswick recordings are not put over the air. These are equal to the world's best, and would be a welcome asset to the present fine recordings used. Again thanking you, I remain a satisfied listener.—W.L. (Greenmeadows).

Dinner Music.

THE dinner music from 2YA comes in quite well here on good receivers, and in numbers of homes there is doubtless a controversy as to whether father and mother should hear Wellington's dinner programme or the children should enjoy Cinderella and the children's hour from 1YA. Like some people in the south, the writer is of the opinion that the elimination of the announcements, except at the beginning and end of the dinner music session, would be an improvement. But isn't there a regulation which prevents this being given effect to?—"Aucklander."—(Yes.—Editor.)

Sundays Appreciated.

ALLOW me to express to all concerned my family's appreciation of the programmes broadcast on Sunday afternoon from 2YA. After today's concert we feel it would be ungrateful on our part to keep silent after such delightful and satisfying music. I believe there must be thousands who feel the same about it and like myself intend to write, but put it off and then forget it. The children's hour and the dinner music is also appreciated.—Wanganui.

Sunday Concert

WE thoroughly enjoy the concerts, lectures, etc., which are broadcast and appreciate the improvements in the programmes during the past year. But is it possible to improve the quality of the concerts relayed on Sunday evening. I am aware that you have to cater for all tastes and am not asking for what might be termed high-brow music, but am sure that the majority of listeners-in would prefer good records from the studio to vaudeville items.—H. M. Jenkins (Blenheim).

Power of 2YA.

SINCE the storm some time ago, 2YA has seemed to have lost its former power; it seems almost as if its power has been decreased from 5000 to 1000 watts. We live just midway between Auckland and Wellington, and 1YA comes in with almost the volume of 2YA, whereas before, 2YA had at least four times the volume of 1YA. This is particularly noticeable in daylight reception. We enjoy the dinner music very much and greatly appreciate 2YA's step forward. We think the Radio Broadcasting Company gives very good service indeed, although it is impossible to please everyone. We in the country would like more news and sports items.—R. T. Colthart (Rae-tihi).

Band Music for Auckland.

LONG may the foolish ones of the Auckland City Council have their way, and the privilege and the pleasure of withholding their Municipal Band concerts from the country listeners, if meanwhile the Broadcasting Company will give us such fare as they relayed from Wellington. The Port Nicholson Band's excellent concert on Sunday last was doubly enjoyable because of the fact that one felt that the best was procurable in spite of the Auckland Council. The council has turned me against its band, and I doubt whether I would welcome it on the air if it were available.—A.E.W. (Hamilton).

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Their Construction and Uses

By "MEGOHM"



THE chief uses of audio frequency chokes are for smoothing out the ripple in the rectified current of A or B eliminators, or in conjunction with a fixed condenser as an output filter, or as the "impedances" in choke-coupled amplifiers, and in valve plate leads with the object of preventing feed-back through battery or eliminator. This stops the tendency to "motor-boating."

This type of choke coil has invariably an "iron" core, or so it is usually called, though the actual core material now generally used is stalloy. For this purpose it is superior to iron in every respect. Stalloy carries a much greater number of lines of magnetic flux to the inch than does common iron, and this property is of great importance in the construction of chokes, especially those which are to pass current amounting to more than a few milliamperes.

The purpose of an audio choke is to allow the passage of direct current such as that in a valve plate circuit, and at the same time prevent the passage of alternating current such as the speech frequencies imposed upon the plate current. The "choking" of these alternating impulses depends upon the suitable construction of the coil for the purpose, though the latitude in this respect is very great, and offers no stumbling-block in construction.

An audio choke should offer a very high impedance to frequencies between 100 and 5,000, but the resistance of the wire composing the winding must not be so great as to reduce unduly the voltage of the direct current traversing it.

It should be stated here that "impedance" sums up the opposition offered to alternating current, by combining the effects of resistance and "react-

ance," or "inductance," which latter depends upon magnetic effect, this being greatly increased by the presence of the core material.

Reactance varies according to the frequency applied to the coil, and the lower the frequencies to be held back, the greater must be the impedance of the coil. Thus it is seen that the coil must be large enough to hold back the lowest frequencies (lower notes) handled, otherwise reproduction will be impaired. The inductance of a choke is expressed in units known as "henrys."

Saturation of Cores.

IT is a well-known fact that a direct current flowing in an insulated winding round a bar of iron will cause the iron to become magnetised whilst the current is flowing. This is known as an "electro-magnet." The strength of the magnetic field in the iron increases as the number of turns of wire are increased in number, the current remaining the same, until a certain point is reached, when the iron is said to be "saturated" with magnetism, and no increase of turns or current will further strengthen the electro-magnet.

Exactly the same action takes place in a choke coil. Usually the current used is comparatively small, but the number of turns is large, quite sufficient to "saturate" a core of unreasonably small dimensions. And when the core of a choke is even approaching saturation, its inductive value begins to drop. When saturation is reached, it is seriously impaired. This shows that if a choke is to function properly, means must be taken to prevent magnetic saturation of the core.

The inductance of a choke is increased—

- By increasing the number of turns.
- By increasing the cross-section of the core.
- By reducing the "gap" (if any). Saturation is produced by—
 - Passing more than the specified current through the windings.
 - By using too thin a core.
 - By too many turns of wire.
 - By too small a "gap" or none at all.

Function of the "Gap."

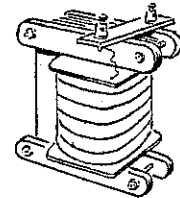
IT will be seen from the above that to obtain a high value of inductance by increasing the number of turns, there is a danger of approaching the saturation point. A much safer plan is to increase the cross-section of the core, but where much current is to be carried, another means of avoiding saturation is adopted. This consists in having one or more distinct breaks through the core, which is in two or more separate sections of piled-up laminations. At these breaks or "gaps" the two adjacent sections of the core are not allowed to come into metallic contact, a piece of cardboard or thick paper being introduced, which allows of pressure between the two sections. The "gap" is usually given in specifications in one measurement, but if there is more than one gap, this measurement must be divided equally between the two or more. If 1-32 of an inch is specified for the gap, then two gaps would be made 1-64 each. If a choke is found to be saturating when tested by holding a piece of iron near the gap, the latter can be increased, but at the same time it must be remembered that this decreases the inductance, and cannot be carried very far.

Chokes can be constructed without gaps, but only when the maximum direct current to be passed is known. Such chokes are small and compact, as the absence of a gap greatly reduces the number of turns required for a given value, and if the required inductance is not high, will also allow of a reduction in the size of the core. The reduction of turns is a good feature, because it reduces the direct-current resistance.

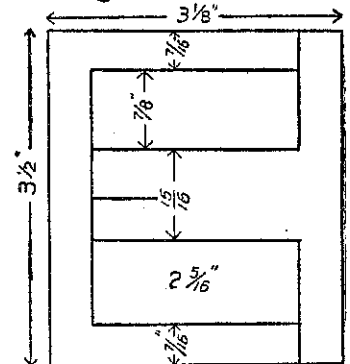
It is not recommended that the home

constructor should make eliminator smoothing chokes except in the case of a small eliminator for a two-valve crystal amplifier. Output filter, amplifier plate and grid chokes, plate feed chokes, and those for other suitable purposes may be constructed without gaps if made and used according to specification.

Inductance varies as the square of the turns and proportionately to the cross-section of the core. That is to say that if the number of turns is



Completed Choke



Stalloy Stampings—Half Scale

Completed Choke and Stalloy Stampings

halved the inductance drops to one-quarter the value, but if the cross-section of the core is halved or doubled, the inductive value will be halved or doubled, as the case may be.

With this short survey of the main points affecting the inductive value of chokes, we will proceed to deal with their construction, especially with a view to the special purpose for which they may be required.

General Construction.

THE general construction of a choke coil is much the same as that of a transformer, and so far as the core is concerned, if no gap is provided, the laminations are built up exactly as in a transformer. If a gap, or usually two gaps are to be provided, then the

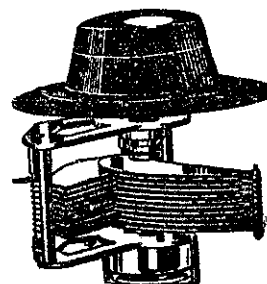
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pieces of stalloy comprising the core are in four different sizes instead of two, and the assembling is different.

Cutting of stalloy strips is usually carried out by the home constructor with a pair of snips, and this process unfortunately puts a slight curve in the end of every piece, which necessitates tapping the ends flat on an iron surface. The size is easily gauged by holding a piece of the required size on the long strip, and cutting close against the end of the gauge. In both Auckland and Wellington there are firms which supply stalloy cut to sizes ready for assembly. If the stalloy is not coated with insulation, it must be thinly coated with shellac dissolved in

overlapping edges on the outside makes a good protective covering.

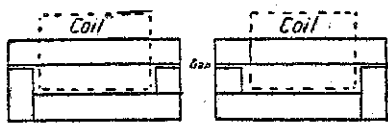
Double cotton-covered wire is used only when it is important that the self-capacity of the coils should be kept down, but this is not usually an important point, so enamelled wire is used on account of the great saving in space thereby effected. In very thin sizes of wire the double cotton-covering increases the total cross-section to several times that of the same gauge of enamelled, so that on account of the great increase in bulk, its use would in many cases be impossible. Reference to the table on page 57 of the "Guide" shows that 27,389 turns of 38's enamelled wire will occupy a square inch, only 5,625 turns of the same gauge can be put into that space if the wire is double cotton-covered. This table will be found particularly useful in the construction of chokes, as by its aid the space to be occupied by any number of turns can be decided.

Supposing that the window of a choke core measures two inches by half an inch, its area is one square inch. Deduction must then be made for space occupied by spool ends, for insulation round the core and outside, and for the fact that the turns will not pack as closely as the mathematical reckoning indicates. It would be safe to deduct 30 per cent. and reckon 2-3 square inch available for the wire. Then this space wound with enamelled wire would take 5000 turns of 32's, 6700 34's, 10,000 36's and so on. In most cases the window size will be decided after the winding has been carried out, so that the table will be used to determine the dimensions of the spool, especially with the object of preventing the length from being too short. From 1½ to 2 inches is the usual length, in proportion to the thickness of wire. For 30's and larger, the length may be over 2in. if the number of turns is large.

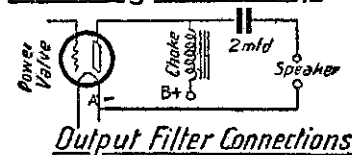
IN spite of the advantages to be gained by the use of a choke-condenser output filter following the last valve of a receiver, a great many listeners still neglect to instal this comparatively small and inexpensive addition to the circuit. Its use on a short-wave receiver cuts out quite an amount of capacity and other trouble. Several good makes can be purchased ready made, but constructors can easily make the coil and purchase the 2mfd. condenser, which should be of high test to stand up to the plate voltage of the power valve.

A neat 20-henry choke to suit the average receiver with power-valve is made with a core ½in. square, spool 2in. long inside, and wound with 8000 turns of 36's enamelled wire. Window, 2½ x 1in. Gap each end, thin card in each. One dozen 3ft. strips of stalloy required. This will have a direct current resistance of about 700 ohms.

Space does not permit of further treatment of this subject, but the article will be concluded next week, when two useful tables of chokes with and without gaps will be included.



Even Layers Odd Layers
Assembling Core with Gap



Output Filter Connections

Output Filter

methylated spirits and applied with a brush, each piece being treated separately after cutting.

A set of very useful stalloy stampings is now available for constructors at Thos. Ballinger's, Wellington. These stampings consist of T's and U's which fit together, each pair forming a complete layer. They can be assembled brick-wise without gap, or all one way, which leaves three gaps. A diagram is given of these stampings, showing the dimensions. They have the usual insulating composition on one side and oxide on the other, and require no shellac coating. They are absolutely flat and truly cut, and pack together very snugly. Besides being very suitable for eliminator chokes, they will also make good transformers—a matter which will very shortly be dealt with in these pages.

A diagram shows the appearance of a home-built choke coil, whether with or without gap. A pair of wooden clamps of suitable thickness secures the laminations at either end of the spool by means of brass or iron bolts of correct length. Threaded brass rod is handy for bolting, as it can be cut with a hack-saw to any length. The actual construction of spools to hold the winding, and the process of winding is fully dealt with on page 57 of the "Listeners' Guide."

In the case of a choke coil there is only one winding, usually of enamelled wire, which is wound on without much insulation of various portions, in fact the winding appears about the same as that upon the spools containing the wire when purchased.

A layer of adhesive tape wound with

IF one of the joints in a crystal detector is suspected of being imperfect (for instance, the joint between the outer terminal and the cat's-whisker), a distinct improvement will often be noticed if a flexible lead is soldered between these points.

AN American station is planning to include novel sound effects in a series of programmes for dogs and cats. Quite a stir is expected along canine row when whines and barks and meows begin to emanate from loud-speakers.

RADIO DIRECTORY

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- T.C.C. CONDENSERS** A. D. Riley and Co., Ltd. Anzac
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Finer Details of Radio

Correspondent Comments on Valve Curves

"RHEOSTAT" (Wadestown) writes. —I was much interested in your article on "The Three-Electrode Valve as an Amplifier," appearing in the "Radio Record" for May 10, but am somewhat at a loss in reconciling one or two points with what I have learnt regarding alternating currents. I must admit that my knowledge of radio is rather limited and not nearly so extensive as my grounding in A.C. work, but it seems to me that the principles are identical.

Your article leads one to the conclusion that the "operating point" of the valve describes a line transverse to a number of curves corresponding to the static curves of the valve with differing plate voltage—that the operating point is always on that line, only its extent of travel varying according as the signal voltage varies.

Possibly you intended to imply that the "operating curve" varied as to slope according to the frequency of the applied A.C. Would you please make me clear on this point? It seems to me that the frequency must alter the

slope, as it certainly alters the impedance of the load in the plate circuit of the valve.

That is not my real difficulty, however. What is, is this: The load in the plate circuit of the valve is surely almost wholly inductive, since the grid to filament resistance of the next succeeding valve is, or should be, practically infinite. This will result in the current being considerably out of phase with the voltage. Since the load is inductive, the current will lag the voltage, the extent of the lag being dependent on, among other things, the frequency of the applied voltage since the ratio of inductive to resistive load will be varied thereby. Assuming that it is true that the current lags the voltage it seems to me impossible that the path described by the "operating point" can, even for a single frequency, be in the form of a single finite line. The voltage across an inductive load is a maximum when the current is changing most rapidly. In dealing with a sine wave, therefore, the voltage is a maximum when the current is a mini-

mum—that is, when the operating point has, after its excursion towards positive grid voltages, returned to its initial position, or, to be more accurate, a point vertically above its initial position.

Since the load is not wholly inductive, the maximum voltage will be reached somewhat before this point, but my idea is that the voltage applied to the plate, and consequently the plate current, must be a maximum, not when the negative grid voltage is a minimum, but some time after the grid voltage has commenced to retreat to its former position. Applying the same reasoning at different points of the cycle, it seems to me that the path traced by the "operating point" for any single frequency and applied voltage must be of an oval shape.

"Pentode" Replies.

OUR correspondent is, of course, correct on both counts. It will be obvious, from an elementary consideration of resistance-capacity coupling, that the slope of the operating curve of a valve varies with the resistance (or impedance) in the plate circuit, the slope becoming less with an increasing resistance. Since an inductance possesses an impedance varying with frequency, the slope of the operating curve will clearly lessen at the higher frequencies when the impedance is a maximum.

The fact that the "operating point" of a valve with an inductive load describes an ellipse is also well-known. At the same time, we do not think that a discussion of a question of this character has its proper place in a journal having a popular appeal; and since the "operating curve" described in the article in question lies wholly within the described ellipse for any particular frequency, it seems that the simplification attempted has some justification. In passing, it may be pointed out that the shape of the ellipse varies with frequency, so that to attempt a full treatment would involve considerable space and the risk of confusing readers unduly.

Valve Developments

Review by Dr. Fleming

DR. J. A. FLEMING, the famous scientist and inventor of the thermionic valve, has recently given a review of the subsequent development of his invention, together with some observations as to the possible future lines of discovery. Coming from one so intimately associated with the subject as Dr. Fleming, these remarks are of peculiar interest.

You will remember that he discussed the question as to the source of the electrons which are emitted from the filament of a radio valve. It would appear that in the case of a pure metal filament—tungsten, for example—heated by an electric current in a high vacuum, the electrons which escape from the filament as thermions are simply the free-moving electrons which are considered to move in the inter-atomic spaces, and which are responsible for metallic conduction.

If this theory be correct, then obviously the electrons come originally from the batteries. You will find it very interesting to consider whether

Radio Programmes

What England Spends

SOME figures from London recently give an idea what percentages of the license revenue are spent by the British Broadcasting Corporation in programmes, management, and engineering, states an Australian journal.

The net revenue received by the B.B.C. for license fees for the year just ended was £771,763, of which 68.54 per cent. was spent in programmes, copyright fees, etc. Plant maintenance, engineering, and other details associated with the transmission of the programmes showed a percentage of 20.8 per cent., and the balance of the license revenue, 10.66 per cent., goes towards the cost of management and other expenses. In addition to the revenue from license fees the B.B.C. made £120,000 clear profit from the various publications controlled by them.

This gives a basis upon which to compare the conditions laid down in the tender which is being called for the provision of programmes throughout the whole of the Commonwealth for the next three years.

In Australia, the Commonwealth Department will take 40 per cent. of the license revenue (8s. from each license fee) for the engineering and plant maintenance, the building of relay stations, and the provision of trunk lines, etc. This compares with 20.8 per cent. used by the B.B.C.

This will leave for the successful programme contractor 60 per cent. of the license fees, or 12s. in the £1, to provide programmes, copyrights, management, and certain mechanical costs. Against the 60 per cent. available here for those channels, the B.B.C. spends nearly 80 per cent., and as they have a complete network of stations to operate with, it is possible to relay the greater portion of the London programme to the majority of the provincial stations.

The programme contractor for the national broadcasting scheme will have eight stations at the present moment to cater for, with nearly 300,000 listeners spread over the huge area of the Commonwealth, and with less than a quarter of the revenue available to those controlling wireless in England, he has to spread his programme over three million square miles of country, finding sufficient talent in every State of the Commonwealth to furnish a daily programme which, in the aggregate, will total 75 hours per day.

they come from the low-tension filament heating battery, or from the high-tension battery. As you know, you can get a considerable amount of electron emission by the use simply of a low-tension heating battery without any high-tension battery at all, and therefore in his case it is clear (assuming the electrons are not due to changes in the atoms of the filament themselves) that they come from the filament heating battery.

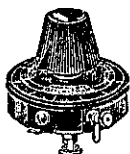
On the other hand, where a high-tension battery is used, it is clear that this passes a current between the filament and anode, which current consists of an electronic stream, and, therefore, it is reasonable to suppose that the current comes from the high-tension battery.



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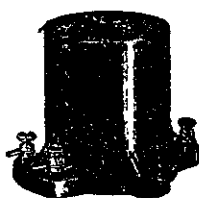
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Radio and the Motor

Possibilities of the Portable

THE following account of the use of portable sets has been written by R. W. Beare, to an English daily. It is interesting and highly instructive, and in view of the increasing popularity of this type of receiver is worth republishing.

One of the features of this motoring Easter has been—and still is—the immense number of roadside picnic parties that have been enlivened, or otherwise, by the strains of wireless music. In some cases "strain" is just the right word for it. My own personal opinion is that the portable set carried on the car ought to be used with discretion, and quite a lot of it. It is all right to listen to your own radio set; but if the party in the next glade is pumping out 5GB while you are receiving 2LO—well, you see where the strain comes in?

However, there is quite a knack in using a portable to best advantage, and out of the considerable number of motorists who have purchased sets of this type during the winter there must be many who are now using them in proper conditions—that is, as real portables, carried on the car—and who are not yet up to all their little tricks.

In the first place, while the majority of portables have quite good range-getting qualities, there are only two or three stations which can be received in a manner suitable for outdoor listening. They are the nearest main local station and the two Daventrys. Unless the music is fairly powerful it is liable to be dissipated to the four winds immediately it leaves the loudspeaker, and the result is worse than the tinniness of a bad gramophone.

Distant stations, especially in the daylight conditions in which the portable is almost invariably used—until, at least, a heat wave makes midnight motoring popular again—can seldom be received with that roundness of tone that alone makes wireless worth listening to.

How to Improve Results.

THE moral is obvious—don't try any tricks with the wireless set out of doors. Be content with the good reception of the nearest main station, because, although you personally may

be tickled to death to get Radio Toulouse in daylight, other people within hearing have not your theoretical and technical interest.

Very often, also, results can be improved enormously by attaching a length of rubber-covered flex to the aerial or earth terminal, if these are fitted, and slinging the free end of the wire over the highest branch of a tree that can be reached. With the majority of portables this has the effect of completely destroying whatever pretensions to selectivity they may have had, so that it is impossible to tune out the local station. Since, in the public interest, you ought not to want to receive anything but the local, this does not matter, and your reception will have that fullness of which I have spoken as being so vital to satisfactory outdoor reception.

Using an external aerial or earth, or both, in this way also neutralises the natural directional tendencies of the frame aerial contained within the cabinet. This becomes now merely a large tuning coil, and it is necessary to turn the whole set this way and that in order to find the best position for any given station. If the outside aerial is not used, however, it should be remembered that this directional tendency is very strongly marked, and that quite a small movement either way may make a disproportionately large difference in both quality and strength of reception.

Car Interference.

THERE are two other points that might be mentioned. Firstly, it will often be found that much better results can be obtained if the set is placed on a light picnic table, or even if it can be securely slung by a cord from the low branches of a tree, than if it is placed directly on the ground. And, secondly, do not be too disappointed if it proves impossible to have a wireless accompaniment to the movement of the car. It is very seldom. Indeed, that such reception is entirely free from interference from the dynamo and other electric gear of the engine, and usually the noise is simply ghastly.

Even if there were no such interference, I am not at all sure that it is a good thing to risk taking the driver's attention off his job.

"The Unseen Hand"

JUST because a faint motor "honk" interrupts the 2YA, Wellington, items occasionally, some listeners have voiced criticism. A shot fired in the KGO, Oakland, California, studio the other night just as one of the station's sopranos reached high O caused thousands of listeners to spring out of their easy chairs to watch their loudspeaker in amazement. Screams, moans, muffled voices and the sound of a police gong followed in quick succession, after which someone shouted, "It's all right," adding to the confusion of listeners. Concern for the soprano was turned to laughter when the KGO audience was informed that a transmitter technical error caused the broadcasting of the rehearsal of a blood-curdling episode of radio drama, "The Unseen Hand."

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

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

Research in Australia

Radio University Scholarship

IN the hope of improving radio transmission and reception, a radio research scholarship was established at the Sydney University for the period of three years, carrying a grant from the broadcasting companies of £500 per annum. A vast amount of technical work has been the outcome of this action and it ultimately became the nucleus of a very important extension of radio research in Australia. Professor Madsen, of the P. N. Russell School of Engineering at the University of Sydney, recently conveyed to the directors of the New South Wales Broadcasting Company, Limited, a report on the work of Mr. Baker, the expert who has been carrying on research for several years past. This showed that very considerable progress has been made. It is, however, with the future of the Radio Research Board that Professor Madsen's communication mainly dealt.

He reports: "Mr. Baker is at present completing an investigation into the design and operation of suitable apparatus for the determination of field intensities of the order which would be met with at distances, greater than, say, 50 miles from a generating station of normal power. This apparatus is now almost complete, and as soon as it is assembled with suitable transport, Mr. Baker will undertake an investigation into the field strengths in districts lying between 50 and 150 miles from Sydney. When this work is complete, Mr. Baker will commence upon an investigation of fading, paying particular attention, in the first instance, to the conditions which arise in the neighbourhood of Newcastle. The work will consist of two parts. First, a very general investigation to

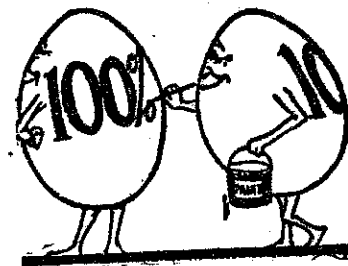
see exactly what the effects of fading are in such districts upon the reception obtained here. The second portion will consist in a repetition and extension of the experimental work which has been initiated and carried out in England by Professor Appleton. We have most of the apparatus available for the investigations and there are certain matters in connection with the work which is of considerable interest from the scientific point of view as well as from the more practical. It is not anticipated that we will be able to complete the work of fading within the year, but we will certainly have been able to break a considerable amount of ground."

Continuing, Professor Madsen writes: "I am also very pleased to say that in addition to the co-operation which the Council for Scientific and Industrial Research extended through the Radio Research Board in this work, the council has now taken a very serious step. Acting upon the advice of the Radio Research Board, it has decided, in co-operation with the Postmaster-General's Department, to carry out a systematic scheme of investigation into radio problems, primarily in Victoria and New South Wales, extending in the first instance, over a period of three years. It has agreed to expend a sum amounting to £2700 per annum in each State, and this will mean employing the services of two additional investigators in addition to Mr. Baker. The action of your Broadcasting Company in inaugurating the Radio Research Exhibition in New South Wales has been a very important factor in leading to this last development."

A PART from the galena type of crystal with which a fine wire or cat's-whisker is used, the oldest known crystals in use for detectors are those of the perikon type, in which two crystals are in contact with each other (generally zincite and copper pyrites, or zincite and bornite).

REMOVAL NOTICE

Electric Gossip



"RELAYED"

The shop lately known as Paramount Millinery, 120 Willis Street, will now be known as "Macquarrie's."

Radio Sales and Service, is what we have given to every customer, and now that we are in bigger premises, no doubt the sales will increase, but our service will still be of the same high standard.

DYNACONE SPEAKERS, ETC.

Crosley Battery and Electric Model Receivers, Speakers: Cone, Horn, Cabinet, Exponential, Moving Coil. Anything from earth to aerial.

SO YOU SEE

If you want it good, it is 10 to 1 we have it at 120 Willis Street, 2 doors from Boulcott Street. And you'll hear The Radio (sometimes).

G. G. Macquarrie Ltd.

Crosley Radio Sales and Service 120 WILLIS STREET, WELLINGTON.

Amateur Radio Society of Wellington.

The next General Meeting of the above Society will be held on—

JUNE 11th

in the CAMBRIDGE TERRACE CONGREGATIONAL CHURCH

HALL, at 8 p.m.

MR. H. A. FIRTH, of Messrs. Kirkcaldie & Stains, Ltd., will demonstrate and lecture upon the new "Majestic" Receiver.

European Broadcasting Systems

Co-operation for World Peace

THERE is no doubt about it (says A.G.A. in "World Radio") broadcasting is one of the chief factors in the promotion of understanding between nations—which again is the only means of transferring war from the battlefield to the conference table. For, if we understand our neighbours and those that are further away, or, if we at least know something of them, at first hand, and not through the medium of antiquated school books, we can talk, and do not require to resort to cruder means of defending our point of view.

Let us pass in review, before our mental eye, what is being done in the heart of Europe, ten years after the war and five years or so after the birth of broadcasting in those countries. I, of course, refer to activities in the broadcasting world.

GERMANY has the largest number of listeners on the Continent. The largest percentage, we are told, of the world, and not only of Europe, is to be found in Denmark. This latter country, however, is beyond the scope of this article. Austria, Germany, Holland, Hungary, Switzerland, and Czecho-Slovakia are the six countries which go to make up what is geographically termed Central Europe.

So many countries, so many different ways of organising broadcasting! In Austria, to take just one instance, the fees payable by listeners are graduated according to private income. The listener in Germany pays 140 per cent. more per annum for his broadcasting than do we in Britain, and 40 per cent. of their license money is retained by the State, the remainder going to the broadcasting company, which, though

only responsible for the programme side of radio, has to pay for the technical transmission as well. In Holland, no fees whatever are paid by listeners beyond an initial few pence for the registration of his set.

Broadcasting is subsidised from voluntary contribution in the case of the neutral organisations, and from party or other funds in the case of the other companies.

IN Hungary the listener pays about 1s. 10d. a month, of which part goes to the broadcasting company, and part is retained by the postal authorities who, in Hungary, are not only responsible for the technical side of transmission, but also pay for it. In Switzerland the listener pays a little more than in Britain, and here we have approximately the same system as our own, which means to say that one company is responsible both for the transmitters and for the programmes, and pays for both. There is one fundamental difference, however. In Switzerland there are five different broadcasting companies, one for each of the five transmitters. In Germany the programme control is decentralised, but the technical side is under single control.

Finally, in Czecho-Slovakia, we find listeners paying about the same fees as in Switzerland—about 13s., of which two-fifths go to the programme company, the remaining three-fifths—from which the complete technical service is paid—being retained by the postal authorities.

THUS in Austria we have, on the programme side, one company with its central seat in Vienna; in Germany nine regional, independent companies, constituents of the co-ordinating central company in Berlin; in Holland no central control, but private companies hiring transmitters from other private companies; in Hungary central control, one company; in Switzerland five companies members (all of an "amicable union"); in Czecho-Slovakia, finally, central control; one company with its central seat in Prague.

In spite of this great diversity in the organisation of broadcasting in Central Europe, there is one factor which we find in every country: a certain amount of State or Government control over the programmes. This may be exercised indirectly as in Switzerland, by means of provisions in the concession or directly, as perhaps in Germany, by means of local control boards.

The State is therefore in a position to use, if it thinks it desirable, the broadcasting stations as a means of propaganda not only for its own country, but also, perhaps, against other countries. Luckily, this eventuality is not the case. The "protocole amiable" of Geneva, which was signed by the Central European stations, together with many others, states that no station will broadcast any matter likely to be regarded as propaganda against another.

Broadcasting is, of course, widely used throughout Central Europe for the right kind of propaganda, or let us say advertisement—namely, the adver-

New Zealand's Wireless Trade

Potential and Actual Market

THE following was published in a recent issue of the "British Export Gazette":—

Although the number of wireless receiving sets licensed in New Zealand at December 31 last totalled 42,801, this figure showing an increase of 4616 over 1927, even a brief moment's consideration of the facts should convince dealers in Auckland, Wellington, etc., and also the manufacturers supplying them, that only the fringe of the market's possibilities has been touched. At a rough estimate, there are 800,000 dwelling houses in New Zealand today, besides about 1350 hotels and probably 4000 boarding houses, and on this basis, which is a very fair one, there are therefore something like 305,350 possible customers for wireless sets. As the licenses issued show, only 42,801 of these "possibles" have been persuaded to purchase sets, and thus the "sales field" still open is obviously considerable, for only a comparatively small number of occupiers of dwelling houses possess such diminutive incomes as to be unable to purchase a simple set for the purpose of receiving the programmes broadcast from the stations at Auckland, Wellington, Christchurch, and Dunedin.

Portable Sets Good Line.

THE type of receiving set now selling in New Zealand varies from the crystal and one or two-valve instruments in use in the urban areas to higher-powered receivers for the country districts, and it must be admitted that hitherto sets of United States manufacture have had it more or less their own way on account of the progressive manner in which their merits have been advertised both to the importer and the user. But British sets have lately gained ground, and dealers anxious to tackle the new business awaiting attention might well make inquiries regarding the extremely efficient portable four and five-valve sets which a number of British manufacturers are now producing at a price which enables them to be retailed at well under £20 for the complete outfit. As the New Zealander is fond of camping out, and of open-air life generally, it should be easy for the local dealer to work up an important demand for such portable sets. In the case of sets

tising of the country's own special "features." Every firm advertises its wares, to make them better known, so why should a country not do the same, also to become better known, and subsequently better understood, by its neighbours?

Central Europe, the scene of hundreds of battles throughout the centuries, the geographical name for a conglomeration of States with sometimes widely mixed population, and also the part on our globe where the greatest diversity of broadcasting organisation systems exist, Central Europe, we can safely say, is the very place for broadcasters to show the world how nation can "speak peace unto nation."

for indoor use, it should be remembered that the percentage of the dwellings in New Zealand equipped with electricity is extremely high, and that receivers which will work off the mains are likely to be popular. A reasonably-priced battery eliminator is also a sure seller. The market, however, is wide, and almost every modern receiver and accessory is saleable—a fact which makes it the more surprising that the 1411 wireless dealers in New Zealand registered at the end of last year have only succeeded in selling some 42,800 sets in a field where at the very least 200,000 should be in use.

News Items

ALTHOUGH station KNX, Hollywood, is reported carrying into the eastern section of America with more power than any other distant broadcaster, station officials wanted even greater service from the 5000-watt transmitter, and have installed massive tower insulators in each of the "legs" of the 250-foot towers. All of the power generated in the transmitter will now be hurled from the aerial, and none of the signal strength will be grounded.

SO far, the results of the League Broadcasts are not properly known, for reports are still coming in from distant parts, but it is believed that there is sufficient interest in these reports to justify the erection of a special high-power short-wave station which can be used for broadcasting and for carrying on the League's own business.

AS an experiment, the sessions have been broadcast over PCLL, Kootwijk, Holland, on a wavelength of 18.4 metres, with a power of 25 k.w. The announcements were made in English, French, Dutch and Japanese, and all listeners were asked to write and report the strength and clarity of signals.

THROUGHOUT the DOMINION

Mack's Radio Service Spreads!

Just some things that can be added to your set. A Volume Control or a Gramophone Pick-up Jack, or My Famous Short-Wave Set or Adapter, or else the lot can be added and bring your set up to date.

MACK'S RADIO

76 KENT TCE., WELLINGTON.

Telephone 20-798.

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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.

STALLOY-TRANSFORMER.—Strips 36 x 1 inches 2/- doz. Other widths proportional. Also supplied cut, punched. Special quantity quotations. Johns Ltd., P.O. Box 471, Auckland.

BREMER-TULLY Power six, guaranteed order; very selective, perfect condition; handsome Oak Cabinet. What offers?—Williams, P.O. Dominion Road.

FOR SALE Ferranti 25.1 output Transformer, £1; Ferranti AF3, 17/6; Jefferson 30-Henry Choke, 12/6; Claritone Junior Speaker, £2; all good order, postage paid. "Audio," Box 584, Dunedin.

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.

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

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