

THE RADIO RECORD

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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 Un-Knightly Knight.



ROMANTIC but tragic story is connected with each of the Chopin "Ballades." In the music Chopin gives the impression of the story—the moods evoked by the occasion rather than its episodes in detached sequence.

In the Ballade in A Flat, Op. 47 (which Mr. Cyril Towsey will play at IYA next Wednesday) Chopin tells the story of a knight who fell in love with a fairy creature whom he met one evening walking by the shores of the lake. Her loveliness resembled the light upon the water—her delicacy, the evening mists. She yielded to his ardour, but imposed the condition that he should first prove his constancy by an enforced absence of but a single month, at the end of which time she would return, and if he still loved her she would become his bride.

Wandering again by the lake, haunting the spot where he had left her, and pining for the day of her coming, he met another yet lovelier creature. In the joy of the new adventure his early love and his plighted word were forgotten.

In her arms he was borne on the evening mists far out over the lake. Suddenly she threw off her disguise and assumed the form of his earlier love, for it was none other than she who had taken a different shape to test his fidelity. She cursed him for his faithlessness, and, in spite of his protests, left him to sink to his death in the abyss, which opened to receive him in the dark waters below.

The Arabian Nights Musically Portrayed.

FROM 4YA will be broadcast next Friday (March 22) two movements from a famous Symphonie Suite, "Scheherazade," Op. 35, by Rimsky-Korsakoff, the Russian composer. The suite is founded upon episodes taken from the fantastic "Arabian Nights." To translate the barbaric gorgeousness and Oriental flavour of these stories into his glittering music is the task accomplished by a genius. This was done by a picturesque usage of the orchestra such as few have been able to command. The composer has prefaced his score with the following programme:—"The Sultan Scharish impelled to the belief that all women are false by nature had sworn to put each of his successive wives to death on the morrow of the nuptials, but the Sultana Scheherazade saved herself by exciting his interests in the tales she told him during a thousand and one nights. Driven by curiosity, the Sultan deferred his wife's execution from day to day, until finally he revoked his murderous resolve."

The two episodes to be broadcast are "The Sea and Sinbad's Ship," and "The Story of the Kalandar Prince." The former tale is too well known to need telling again in these columns, but the second story treats of the Kalandar, who was, in reality, a mendicant Monk whose adventures are not so familiar as those of Sinbad. Three sons of kings go about disguised as ladies, and their beards and heads and eyebrows are shaven. By a curious fate all three are blind of the left eye. They are addicted

to gluttony and will not leave the table so long as they can breathe, so long as any food remains unconsumed. How admirably the composer depicts the stirring incidents of the Tales is evident to all who hear the Suite, and the sheer joy of this music will send listeners back to renew their acquaintance with the delights of the Arabian Nights' Entertainments. This much broadcasting frequently does for us. No wonder we look forward to hearing anew old favourites, or hearing for the first time music inaccessible by any other means.

Melody in F (Rubenstein).

THE world at large identified Rubenstein from his Melody in F. It wots not of his hundred odd other works for piano, voice, orchestra and other instrumental combinations and soli. At ten, young Anton aroused the admiration of Liszt and Chopin by his recitals in Paris. As one of the greatest pianists of all time, as a distinguished musical author, and as a notable composer, he has earned the gratitude of the musical world. But to return to the most familiar of all his many pieces, with what freshness and charm its loveliness falls upon the ear! It comes like a song without words to be sure, but for all that eloquently and tenderly telling its own romantic tale. The world has found it beautiful, and it will ever remain among the brightest jewels that adorn music's crown of favourite and forgotten tunes. Here is an instance of public instinct for a good thing.

Continued on page 2.

Broadcast Music

(Continuation of Cover page.)

Liszt himself said of Rubenstein, "He is King of all pianists—he must carry all before him." The tribute of a master to a master. The famous "Melody in F" will be played as a cello solo at 8YA on Friday (March 22) by Mr. Harold Beck.

Chanties and the Negro.

AS two typical sea chanties, (1) Shenandoah, and (2) Rio Grande (both arranged by Sharpe), will be sung at 2YA next Thursday (March 21), by the Lyric Quartet, a few remarks on the origin of these interesting songs will be quite in order. The majority of the chanties are Negroid in origin and these two are no exception. As is well known the Negroes of the Southern States of America and the West Indies are most musical and sing on every possible occasion. They have songs to suit all kinds of collective action, such as working at a pump, loading or unloading a ship, or digging in the fields. One of the gang called the Chantyman is told off to act as a sort of precentor. He sings the tune, improvising the words after the starting verse, the rest of the gang roaring out the choruses, working with the swing and rhythm of the music.

The melodies used are traditional and have been handed down from generation to generation. Many of the chanty tunes bear a strong resemblance to hymn tunes of the Moody and Sankey type. After the American Civil War troupes of Negro singers toured the Northern States, and it was this introduction of their traditional slave tunes that brought about the mix-up with religious hymns. Thus it will be seen that American revival hymns and

chanties have a common source—Negro music. The two chanties in question are what are called windlass and capstan chanties, of which Rio Grande is probably the finest extant. It seems to appeal to all, giving, as it does, such splendid possibilities of sound to open vowels. To hear it pealing over a quiet anchorage with the musical clatter of the windlass pawls adding a quaint accompaniment unlike that of any orchestration ever attempted, must have been a memorable experience.

The days of sailing ships and chanties are quickly passing, but we do appreciate their rendition by our male quartets, reviving memories of a bygone day and generation.

Brahms and Chopin.

LISTENERS to 3YA will have the pleasure of hearing miss Dorothy Davies in a bracket of two fine piano solos on Thursday, March 21. At one of these, the Brahms number, "Capriccio, Op. 72, No. 2, B Minor," the average listener might well shy clear. But we must not worry over its formidable title, rather let us listen with attention to what is just a "caprice" reflecting the greatest of modern classicists in lighter mood. The piece suggests in its gay dance rhythms the background for a ballet of care-free sprites. The clever shifting of accents and the extraordinary variety of tone-colour give the pianist unique opportunities not present in the usual run of piano solos.

Coming to Chopin's "Nocturne, Op. 15, No. 2, in F Sharp Major," this solo is full of details of ravishing beauty. A delicious warmth of colour gives it almost an Oriental atmosphere, painting, as one writer says, "the palm and the cypress, the rose thicket, and the great stars burning low in the Southern Sky." It opens with a melody of heavenly beauty,

lavishly bejewelled with such art that the very embellishments become a part of the melody itself.

The whole nocturne is instinct with a fervour, yet repose, that reveals the true Chopin, writing from his heart and not for salon display. At the close we hear again the haunting melody of the opening, here its indescribable calm touches one like a benediction.

Famous Hymn Tunes.

FOR nearly a quarter of a century bands in New Zealand have taken a deep and abiding interest in hymn tunes and have studied them with excellent results. They play them so well that they have become regular items on their programmes, and next Tuesday (March 19) the St. Kilda Band will play two well-known hymns at 4YA. The expression that is put into their rendition by our New Zealand bands would do credit to the Besses o' th' Barn, or the Black Dyke Band. These tunes are in reality more folk tunes than many of the freakish ditties that research students would foist upon us, and ninety-nine out of a hundred listeners really enjoy hearing hymns. "Fierce Raged the Tempest" was written by a clergyman, the Reverend Godfrey Thring, one time Prebendary of Wells, and editor of "The Church of England Hymn Book." He says he wrote this particular hymn, to picture to himself the scene on the Lake of Genesareth which he had visited some time previously. No doubt the words owe much to their magnificent setting by a fellow cleric, the Reverend John Bacchus Dykes. The tune "St. Aelred," is one of the reverend doctor's finest efforts, and is "chock full of fat for the lucky basses."

"Sun of My Soul," a notable inspiration of John Keble, the poet-parson, and author of the "Christian Year," has three tunes to it, Sir Herbert S. Oakley's tune "Abends," shares popularity with "Hursley," composed by Paul Ritter. The third tune is called "Keble," but is not often sung.

Wireless Receiver Developments

Progress of 1928

THE exhibition of wireless receiving apparatus at Olympia in September was of great use to the broadcast listener who does not follow the technical journals closely in assisting him to realise the trend of progress in both components and receivers, states the wireless correspondent of the "London Times." Although at the time even the experts were unable to follow in detail all the lines of development illustrated at the exhibition, the interval of the last three months has made it possible to view the material in better perspective, so that certain outstanding features now emerge.

Just as 1927 had its special valve novelty in the shape of the screened-grid valve, so the year 1928 has given

us the pentode, the new valve for the loudspeaker stage which has been introduced into many standard receivers. The pentode, as its name implies, is a five-electrode valve, and it is best described as being similar to a screened-grid valve with the addition of an extra earthed electrode between the screening grid and the anode. By the addition of this third grid an undesirable transference of electrons (initially bombarded out of the anode) from anode to screen grid is prevented. With the pentode a remarkably wide grid range of undistorted output is obtained. For a grid swing of 15 volts a change of anode current of 16 milliamperes is obtained, which is ample for average loudspeaker purposes.

The success of both the screened-grid valve as a high-frequency amplifier and the pentode as a power valve has led to the prediction, in some quarters, that the standard three-valve set of the future will be one incorporating both these features with a detector stage of normal type in between the two. At present, however, there are some excellent new three-valve sets built on what one might call straightforward lines, which can be recommended to the listener who, originally a crystal user and thus accustomed to faithful reproduction, wishes to obtain good reception from local stations with the possibility of hearing some Continental stations. Such sets should not be judged by the number of stations they can bring in, but by the standard of reproduction of the local station with a good loudspeaker.

The general adoption of an "all-from-the-mains" policy will undoubtedly come in time, and there have appeared during the year some interesting sets for which the only external connections are those to a power socket, aerial, earth, and loudspeaker. It is difficult to say at present what will be the ultimate trend of this development—e.g., whether unrectified alternating current will be used for the filaments of the amplifying stages together with an indirectly heated cathode valve for the detector, or whether the tendency will be to use a rectifier to produce direct current to run filaments in the ordinary way. The problem is an interesting one, and the year 1929 will be one of intensive experimenting in both these directions. At present the tendency seems to be to go on using existing sets with a high-tension eliminator and a trickle-charger for the low-tension accumulator. For both these devices the copper-oxide rectifier has been found to be eminently suitable and reliable.

A year ago there were many who were of opinion that the "moving-coil" loudspeaker would gradually replace the old "moving-iron" type, because at that time the best moving-iron instruments could not compare with the moving-coil types either in quality or in the power they could handle. Extensive research on the part of a small band of workers has, however, produced an instrument which has shown such an opinion to be quite erroneous.

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The Television Puzzle**Baird Co. Assume Secrecy**

REPORTS have been current in England that the British Broadcasting Corporation is now willing to provide facilities for furthering the Baird experiments. These have been promptly denied by the B.B.C. in an emphatic statement as follows: "On October 17 we stated that a demonstration of the Baird Television Development Company on October 9 had failed to fulfil the conditions which would justify trial through a B.B.C. station, but that any claim of improvement would be examined. The Baird Television Company has not yet intimated to the B.B.C. any claim to improvement. Any such improvement would be examined by the B.B.C. with a view to determining whether the above decision should be modified."

THE Baird Company feel that the B.B.C. has not treated them fairly, for, it is asserted they never communicated personally with Mr. Baird on the matter. Those closely in touch with the developments believe that further negotiations have since taken place between the Post Office authorities and Mr. Baird. It is even stated that the P.M.G. has personally witnessed an experiment and has expressed his approval.

"It would seem," states Capt. O. G. Hutchinson, managing director of the Baird Telephone Company, "that other countries in Europe, not to mention Australia and New Zealand, were sufficiently impressed to order transmitting sets with a view to considering broadcasting in the near future." Capt. Hutchinson added that the real facts he is unable to reveal, and is surprised at the statement issued by the B.B.C. Important negotiations have been concluded with several of the continental broadcasting stations. The German Government is particularly interested in the developments of the Baird Company. Capt. Hutchinson, in view of what he described as "his secret negotiations," is confident that the B.B.C. will not remain adamant much longer.

Television Experiments

TELEVISION experiments, made by two Sydney radio amateurs, Messrs. W. G. Nichols and W. C. Pinnell, have yielded results which are arousing much interest in wireless circles. Messrs. Nichols and Pinnell constructed a television receiver, but found that American, British, and European stations were too far away to tune in. They are constructing a television transmitter, but in the meanwhile have tuned in the ordinary signals of 2BL.

As received through the television, these signals are transformed into light, and Mr. Nichols states that they show exceedingly beautiful designs. A violin solo, for instance, causes beautiful transverse rods of light to pass across the television aperture in an undulating motion. Then, changing suddenly, they will take on a curved motion like incoming ocean waves.

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Auckland Notes

(By Listener.)

THE best news of the week here is that Auckland is to have a Radio Society—a live body which will do something for radio. In the outline of its objectives the new society displays wide vision. It aims at fostering and developing a love of radio, and a deeper interest in its technical side. In these days when the service man is continually called in by those who are not even certain how to connect up a dry battery there is great need for a body which will undertake elementary technical instruction. The understanding of how and why his set functions is as necessary to a listener as is the knowledge of his engine to a motorist. In undertaking to provide this knowledge for all listeners who are members the society will be conferring a benefit upon the whole radio community, who should therefore accord it whole-hearted support. It will mean better results in the home, lessened interference, and an increasing popularity for the cult of listening in.

IT is interesting, too, to note the attitude which the society will adopt to the Broadcasting Company. Speakers at the inaugural meeting stressed the fact that the best results for all would be secured only by co-operation

with the company, and the local station director, Mr. Hayden, who was present, assured them that co-operation would be welcomed. Hence, any criticism which emanates from the new body will be of a distinctly constructive character, and will take into consideration all the limitations which exist upon a local broadcasting service. Under these circumstances, it would not be surprising if the society were asked later to nominate a representative upon the local advisory committee which works so enthusiastically for IYA.

IT is the intention of the new society to obtain suitable premises for club-rooms, which will be provided with the necessary equipment for constructors' use, and with files of radio magazines and handbooks upon radio. A club-room of this type should become the very heart of radio interest in the city. Membership fees have been fixed, according to classification of members, from 10s. to 2s. 6d. per annum. The society is fortunate in securing as president such an enthusiast over broadcasting as Mr. E. E. Nalder, well known locally in cricket and other sporting circles. All radio fans will extend their best wishes to the young body. They can do more. By enrolling as members they can ensure its full success. The secretary, Mr. H. B. Arthur, resides at Lawrence Street, Ponsonby, and he will be glad to hear from all who wish to further the objects of the society.

WE are all hoping that there will be a relay of the historic Ngaurua-hia regatta on Saturday next, and a relay also of the excellent entertainment which can be provided by the big gathering of Maoris who will assemble on the Waikato on that day.

THERE is to be a broadcast of unusual attractiveness on Tuesday evening. Mr. Alan Wilkie has granted permission for a relay of several scenes from his presentation of Henry V. An event such as this must do much to popularise radio. Thousands of keen students of Shakespeare patronise a Shakespearean season here, and many other thousands would do so were they aware of the treat that awaits them. Merely, however, because it is "Shakespeare" they regard a performance as too "high-brow." The relay on Thursday next will certainly do a great deal to convince these people of the attractiveness of the works of the immortal bard. It will have a stimulating effect both upon patronage of Shakespearean drama and upon the welfare of broadcasting.

NEXT week, also, the Little Theatre Society enters into active participation in radio programmes. Among New Zealand dramatic organisations this body holds a unique position, and it has a reputation for attention to minute detail in all its productions which has given it a wonderful popularity with the theatre-going public in Auckland. In undertaking to broadcast "Outward Bound," Mr. Kenneth Brampton and his artists have made a wise choice. The play is one in which the spoken word is everything. It is an ideal one for the air.

MADAME AINSLEY, under whose direction so many popular excerpts from operas, heavy and light, have been broadcast from IYA, has not yet returned from Sydney. In consequence the awaited features of our Tuesday night programmes have not been resumed since the holiday season. We are all waiting for "Chu Chin Chow."

One-act Play

35 Entries

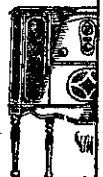
THE IYA Musical and Dramatic Committee received no fewer than 35 entries for the One-act Play Competition recently conducted. Many of the entries were of a very high order of merit indeed. The committee, after full and careful perusal, has reduced the number to six for final consideration. The decision as to the award will be announced we hope in next issue.

Radio Revue Company

A CHANCE out of the ordinary is offered vocalists and aspirants for artistic fame in connection with the proposed establishment of a Revue Company to interpret one-act plays, sketches and revues over the air from 2YA. Mr. Victor Lloyd, who has had a great deal of amateur dramatic experience in London, and who is a keen enthusiast in amateur dramatic art, is desirous of securing the co-operation of those who have ambitions in this direction. Mr. Lloyd makes no stipulation as to prior experience: he is prepared himself to give the necessary training of suitable talent for this class of work. All that is required in the first instance is the ambition and the necessary keenness and quickness of apprehension in absorbing instructions.

Those who are prepared to co-operate with Mr. Lloyd are invited to write him c/o The Director, 2YA, Wellington.

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"Making Love to Mars"

A LONDON writer says: "Dr. Mansfield Robinson still makes love to Mars. It is now reported that he has hopes of getting through to that planet from Brazil, on 22,000 metres. I am pretty well acquainted with the business capabilities of the chief of the Rio de Janeiro station, and should not be surprised to hear that he has fixed up a contract with Dr. Robinson, providing for one call per week per annum, and, for an extra fee, a guaranteed reply, with the Mars postmark on it. After all, the doctor's money is as good as anybody else's!"

"But the principle back of Dr. Robinson's experiments is not so fantastic as might at first be thought. I have doubts about Mars, but why should we confine speculation and experiment to the insignificant scattering of dust which we call our solar system?"

"There are millions more suns, each with its system of satellites. Is it so incredible that in an infinite universe peopled by countless millions of worlds there should be only one world on which intelligent life exists? I think not! But I am not at all sure that 22,000 metres is the right wave-length to get at it."

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"YOUR ESTATE"

Radio Round the World

A PUBLIC wireless telephone service has been opened between Holland and the Dutch East Indies. Calls may be made between The Hague, Amsterdam, Rotterdam and Utrecht, to the four leading towns of the East Indies. The fee is £2 10s. per minute, and two days' notice of the call are required. This is the third long-distance radio-telephone service to be opened in two years.

A STORY from New York says that the radio operator of the "New York Times" failed to get through on the 'phone to a friend in a suburb of that city. Knowing that the friend was listening to the Byrd Antarctic Expedition, 10,000 miles distant, he sent a radio to the operator of the Expedition, who relayed the message back to New York, and so the friend received it.

TACTLESS wireless amateurs are becoming so great a nuisance in Utrecht that a committee of legal experts has proposed a new police regulation, under which "it is forbidden by means of a musical instrument or of an apparatus (receiving set) for making music or the human voice audible, whether in the open air or in an enclosed space, to make a continuous sound which can create serious annoyance in the neighbourhood."

THE absorption of the wave energy by the masts of 2LO, London, was found to be strongly marked over the denser parts of a town on the short-waves. A large number of aeriels in tune with the transmitter have a critical effect on the attenuation of the waves, due to their acting as absorbers of energy. When these aeriels oscillate, however, they actually radiate weak waves which combine with the main waves, so that although a town with many aeriels takes much power from the waves it is unselfish enough to hand some back for the next town.

A FEW weeks ago, Senatore Marconi entertained to dinner forty Marconi employees who had served that organisation for 25 years or more. There were the Kite-flyers of Newfoundland (during his early experimental days), including Mr. G. S. Kemp, still hale, hearty and fluent. There was Dr. J. A. Fleming, who had a great deal to do with the Poldhu station, and there was Mr. R. D. Bangay, whose book on wireless is well known. Quite an historic gathering! Little they thought in 1903 that radio was destined to play such a noble part.

MESSRS. R. H. BARFIELD and G. H. Munro, in a paper read before the Wireless Section of the Institution of Electrical Engineers, London, described their investigation of the effects of buildings, tuned aeriels and transmitting aerial masts in robbing the waves emitted by 2LO, London. A complete survey of S.E. England was made with a receiver on a motor-van, and two distinct minima were observed in W.S.W. and E.N.E. directions, due to the "shadows" of the transmitting

LEAGUE OF NATIONS TO BROADCAST.

THE Secretariate of the League of Nations announces that it intends to resume the short-wave broadcast trials which took place in Geneva in May and June of last year. The special purpose of this second series will be to examine the possibility of transmitting speeches from Geneva to America, Japan, Australia and New Zealand and Oceania. Last year the speeches were broadcast in English, French, Spanish, and Japanese, and the ninety-two reports come from nine different areas of the world. Thirty-eight cases were excellent, and twenty-nine good. The attempt this time will be to broadcast to certain specific regions under conditions which seem most favourable for each of these readings. In this way, we of the Antipodes are being especially considered.

masts. This clearly shows that the masts of a broadcast station capture some of the energy sent out from the aerial of the station.

IT is reported from London that there are rumoured improvements in the Baird television system, and it is a fact that a large number of eminent people have been very much impressed with recent demonstrations. Leading M.P.'s, including Mr. Lloyd George, are reported as having witnessed demonstrations, arranged by Lord Angus Kennedy, and Sir Edward Manville. What is all this leading to? (remarks a London exchange). Intelligent deduction is not difficult. There are to be trials from B.B.C. stations, presumably conducted with guarantees of secrecy. These were to take place in February, but a fresh development has taken place. One wonders say about what can only be interpreted as a political move against him personally. Whatever happens, there will be some terrific rows, and a lot of fur flying! The B.B.C. has, hitherto, declined to touch television.

A MALGAMATED Wireless has just completed a radio equipment in Wollongong (N.S.W.), Hospital, where each of the 83 beds has been provided with head 'phones. The receiver is operated off the electric mains. Four speakers have been provided, being placed in the matron's room, nurses' quarters, domestic staff dining-room, and isolation block. Owing to some geographical peculiarity the best station received is 2UE, Sydney. The other Syd. stations come in well also, except 2FC, which is not received nearly so clearly. It will be interesting to see whether Wollongong Hospital has the same experience as other institutions, where it has been found that radio tends to shorten the average term of a patient's day.

BY arrangement with the British Admiralty the broadcasting of gale warnings in 1929 now takes place at fixed hours, namely, 1 p.m., 4.45 and 6.15 p.m. on week-days, and 3.30 p.m. on Sundays. The object is that mariners shall tune in at these hours, which it is considered are most convenient for the purpose. The arrangement necessitated an adjustment in the broadcasting of the Greenwich Time Signal, which is now given at 1 p.m., from 5XX (in place of Big Ben at that hour), and a new one at 4.45

p.m., which precedes the former 4 p.m. Time Signal. On Sundays the Time Signal is broadcast at 3.30 instead of Big Ben being given as previously at 4 p.m.

THE folk of North Wales have been asking the British Broadcasting Corporation to erect a broadcast station in that area, but this has been refused. In the British allocation of

wavelengths that is the determining factor in the number of stations to be erected in that country; and because of this factor, the B.B.C.'s Regional high-power station scheme has to be modified, for the simple reason that there are fewer wavelengths available now than was anticipated three years ago.

LITTLE Gladys Harber, twelve years old, came to read poetry during the lunch-hour session for children at 2BL, Sydney. She read the "Village Blacksmith," "Where the Pelican Builds," and "The Last of the Tribe." She read with long nervous fingers swiftly crossing the page, because Gladys is blind, and her books are Braille. Her reading was much better than that of a normal child of twelve. "I thought it was going to be awful," she said afterwards. "I didn't think anyone could hear me." Everyone heard her quite plainly. It is rather pathetic to hear a blind child recite, "They had told me of pastures wide and green."

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

WELLINGTON, FRIDAY, MARCH 15, 1929.

DEALERS' LICENSES.

THE announcement that dealers' licenses for the sale of radio sets and apparatus have been revised, the classes reduced, and the rate of fee slightly increased, will be received with mixed feelings by the trade. There is one section which will be disappointed that the increase had not been of a very much more substantial nature. Others will protest against the increase.

The decision is a very important one and of a far-reaching nature. The occasion for the Post and Telegraph Department licensing radio dealers is based upon the conditions of the service and the nature of the control exercised by the Department. It is an open secret that, because of what was considered to be the attractive nature of radio from a profit-making point of view, the number of radio dealers seeking the trade attendant upon listeners was in excess of actual business requirements. Comparatively small capital was required for entry into the trade; and that reason, together with the absence of real technical qualification imposed upon those seeking a license as a condition of their operation, led to an undue preponderance of dealers to listeners. The commercial reaction from this position has been bad. The rate of business mortality has been high, and the large radio houses have unquestionably suffered heavily from bad debts incurred because of the flimsy nature of many of the small dealer businesses. From the listener's point of view, too, the reaction has not been good. The quality of service of many of the smaller organisations has not been what it should have been, and the same applies in a certain degree to the nature of the equipment sold and the trade done by them. Many small businesses, of course, are quite efficient and satisfactory, but unquestionably a proportion have failed in giving real business service.

FOR the reasons enumerated, a definite movement developed in the more stable sections of the trade in favour of the imposition of heavier license fees. Arguments in favour of that payment were that, by requiring a high financial standing, weaker elements would be eliminated with benefit to the commercial stability of the trade; further, that by raising the standard of the dealers remaining in the business, the service available to listeners would be improved. Naturally such a point of view encountered opposition. This opposition took its stand on the democratic basis that it should be open to any man interested to exploit his skill and capital and engage in the trade. Further, that in the interests of radio no barrier should be erected of the nature

of a close corporation; rather, every facility should be available to the public to secure its radio sets and parts as cheaply as possible and as conveniently as possible.

IN spite of the democratic basis of this reasoning it has not, we think, proved to be commercially sound. An excess of competition does not result in cheapness nor efficient service. Spreading the available volume of trade over too thin a surface leaves all participating in it hungry and unsatisfied and working on too fine a margin. That is not good business. Frankly, therefore, we think the real weight of argument in the special circumstances of the trade lies with those who contend that the betterment of radio calls for a stiffening of the requirements, financial and otherwise, on the part of those engaged in the trade. For this reason we think the increase in the radio license fee imposed by the Department is in the right direction. It has been made only after consultation with the trade itself, and, as indicated, is a compromise between two sections—those who want a much higher rate and those who argue for the right to trade without undue premium. The tendency of the increased license fee will be to make back-door trading unprofitable and drive out of the business the man of straw whose enthusiasm and keenness do not compensate for commercial weakness. In the upshot, concentration of the trade in fewer hands and the avoidance of bad debts, will tend to cheapen rather than increase the cost of radio to the listener. That, after all, is the clear-cut objective—that the listener should secure his requirements on a reasonable basis, and that the trade in its service to the listener should be able to conduct its business efficiently, capably, and at a reasonable but not undue profit for its enterprise.

Overheard

Incidents at 2YA

Ting-a-ling-a-ling-a-ling.

"Is that 2YA?"

"Yes, madam?"

"Do you keep a mallet down there?"

"Yes, madam, we do keep a mallet here."

"What do you use it for?"

"We use it for tapping on the head those artists who do not quite please all our listeners."

"Well, I wish you would tap on the head the person who has just sung that soprano solo. I cannot understand why you keep on spoiling the programme with those cheap sopranos. If you use that mallet quickly, and in addition drop the lady over the bannisters, I would be very grateful."

"Oh! I am very sorry, madam. That lady has quite a reputation as a soprano singer."

"Well, I don't think much of her."

"But really, I assure you she has quite a reputation. A number of people think she is amongst the world's best."

"Oh, indeed! Who is she?"

"Tettrazini, madam."

Another Evening.

Ting-a-ling-a-ling-a-ling.

"When will that wretched violinist finish murdering that piece?"

"Well, madam, I think he won't be very long now. But don't you like it?"

"No, I don't. I think it is a frightful performance. Why can't you get somebody who can really play?"

"Well, madam, he is really quite a good player. It is Heifetz, you know."

"Oh, and who's he? Is he a local gentleman?"

Dealers' Licenses

New Rates from April 1

AS from April 1, a new schedule of charges for dealers' licenses will be operative throughout the Dominion. The new rate represents an increase in the main and a co-ordination of classes.

For the future the license for the three classes of dealers will be as follows:—

Class I.—Dealers in the four centres and adjacent areas, £15 per annum.

Class II.—Dealers in other places, £7 10s. per annum.

Class III.—Portable licenses and dealers, without any fixed place of business, £2.

The main change above mentioned represents an increase of £5, from £10 to £15. Its effect will probably be in the direction of reducing the number of dealers in main centres and elsewhere. While this may represent hardship in some few cases, the general opinion of those most concerned with the good of radio will probably be that it is a move in the right direction. It is an open secret that the number of licensed dealers has been out of proportion to the number of listeners, leaving the turnover for each individual dealer on the small side. A reduction in the number of those competing for the business will naturally tend to increase the turnover of those remaining, with a beneficial effect upon their profits from radio. Listeners will benefit by every improvement that takes place in the status of dealers.

FOR SALE.

1 "B" KODEL ELIMINATOR, as new, been in use only one month. Voltage tappings: B—DET, B90, B150, B180. Price £8, cost £12/10/- new. Reason for selling owner having shifted out of power area. Apply "Radio," c/o Record Office.

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are used in all
big events.

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RADIO
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Batteries are sold
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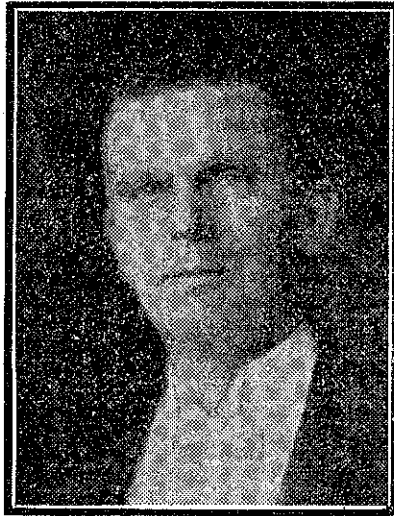
Why?

Why?

1YA and 4YA

Station Managers
Exchanged

MR. LEN. BARNES has taken up the duties of station manager at 1YA, an exchange having been arranged with Mr. S. J. Hayden, who is now station manager at 4YA. During the last few months Mr. Barnes has had a wide experience in broadcasting. Before leaving Wellington he was for a term programme organiser and then acting station manager at 2YA. Following that, Mr. J. W. Webb, station manager at 4YA, resigned, and, it being holiday time in the music teaching world, Mr. Barnes accepted a temporary appointment at Dunedin. Then he



MR. LEN BARNES.

—Andrew, Photo.

agreed to accept a permanent engagement with the company, and was appointed to Dunedin.

Mr. Barnes is well known in musical circles throughout New Zealand. As a boy, he was for five years a chorister in Christchurch Anglican Cathedral, and he has been singing ever since. He was baritone lay clerk for six years, and he sang for choral and orchestral societies in Christchurch and Wellington. In 1919 he went to America and since then his time has been devoted entirely to professional musical work. He studied in America and was extensively engaged in grand and comic opera and cycle work. From America he went to England in 1922 and continued his musical studies there. He was for five months with a concert party in the Isle of Wight, and incidentally it was his engagement with this party which prevented him from singing for the British Broadcasting Corporation, for which he had had an audition and been marked V.G. Since returning to New Zealand five years ago he has been teaching singing in Wellington, where he entered actively into the musical life of the city. He was conductor for the Orpheus Musical Society and of the Wellington Amateur Theatrical Society, and for four years had been choirmaster of the Terrace Congregational Church. For nearly two years Mr. Barnes was a regular singer at 2YA, and some of the performances which he has conducted have been broadcast. While in America Mr. Barnes frequently sang for radio.

What People Want

A Demonstrator's Views

More Dance Evenings

A TRAVELLING salesman writes the following interesting letter, stating a case in regard to programme requirements from a viewpoint other than that of the individual listener:—

"I take it most of your correspondents write as listeners pure and simple (though I know each one claims to know the popular taste), but I would like you to regard my remarks as coming from one who has constantly been demonstrating night after night for over four years.

"In this time I have probably given more demonstrations and to a larger number of people than anyone in New Zealand, and it has been absolutely necessary, to make my business a success, to study what people like, and in this direction I have had exceptional opportunities of observing. However I do not propose to suggest any particular class of item, but to put before you some general observations, with which I feel you are bound to agree. My particular reason for writing to your station, is your last Tuesday night's programme (26th inst.), which seems to indicate that you have possibly decided on an innovation which I have long desired.

"(1) We have for too long suffered from a plethora of popular music on Saturdays and a dearth of it for the rest of the week. It seems unnecessary to compel all listeners to listen to dance music from all stations on Saturday night, and to withhold it from everyone for the remaining nights. Many a demonstration has fallen flat for want of a little life—dance music, a comic song, etc., and I have times without number had to fall back on the gramophone—with consequent loss of radio sales, and benefit to gramophone companies. Last Tuesday night was a splendid programme of the right type and was directly responsible for selling a £70 outfit. Probably many other sales may have been brought about by it—all to the benefit of the Broadcasting Company as well as us dealers.

"(2) Why have drums in a Broadcasting Orchestra? The best loudspeakers reproduce drums as static, or distortion and 98 per cent. of the speakers in use are of an inferior type. Try it yourself and listen to the result.

"(3) A couple of Sundays ago no fewer than three stations broadcast services of the Church of Christ simultaneously. This is bad management, you will admit. I trust you will continue to make Tuesday night a popular programme night. Saturday is not a good night for this class of programme as it is the universal night for going to pictures, dances, etc., and many sets are idle."

THE general manager in the course of his reply wrote:

"We have noted your remarks concerning our service with particular interest, as we appreciate that the circumstances under which your comments have been made are such that the latter may be considered representative of the general opinion of the listeners with whom you have come into contact.

"In regard to our programmes, as you are aware it is not practicable for us to please everyone at all times, but we arrange our items as far as we possibly can so that a definite type of entertainment is broadcast on a definite evening. Further, the programmes from each station are so co-ordinated that on any one night of the week a listener with a sufficiently powerful set capable of receiving all our stations has the choice of four different types of programmes each evening.

"Saturday evening has been set aside at each station for a vaudeville programme of the lighter type, as on this evening more people are utilising radio for entertainment purposes than on any other night of the week.

"In respect to dance music, you will be interested to learn that we have introduced an additional dance programme at each of our stations. In the case of Wellington it will be featured on Tuesday evenings, in Dunedin on Wednesday, in Auckland on Thursday, and on Friday in Christchurch. This innovation commenced with the programme from 2YA on the evening of Tuesday, February 26.

"In respect to the 2YA orchestra, we are afraid that we could not dispense with the drums and obtain satisfactory results. We appreciate that on many sets the drums do not reproduce well, and in fact so much is this the case that we have found it necessary to eliminate to a large extent the drum in band performances. The position is somewhat different, however, in the case of an orchestra, although the greatest care is taken to secure a satisfactory balance, and one which will not give a predominance of the drums.

"Concerning the broadcasting of church services, we have, as you are no doubt aware, church committees co-operating with each of our stations, and services are broadcast in accordance with their recommendations. The various Sundays in the year are allotted to the more prominent denominations, and the committees, which are representative of their denominations, determine the sequence in which the services will be broadcast. Up to the present time it has not been practicable for the respective committees to co-ordinate their deliberations to the extent that an arrangement can be assured whereby a different service shall be broadcast by each station, but this is a point which will no doubt receive consideration in due course."

No Relay This Time

Ngaruawahia Maori
Entertainment

A VERY interesting Maori celebration is to take place at Ngaruawahia on Saturday, March 16, but unfortunately it has not been possible to arrange for the broadcasting of it. Every effort was made by 1YA to that end, but the opposition to broadcasting was too strong.

This is to be regretted, not only because radio listeners missed the opportunity of hearing a unique entertainment but because such a broadcast was in the interests of the Maoris themselves.

Listeners in to 2YA have pleasant recollections of the fine Maori entertainment which was relayed from Otaki and of the historic Maori radio pageant performed by a party from the Wanganui district. It is hoped that on a future occasion it will be possible to carry out a relay from Ngaruawahia.

SLIGHT clicks and scratching noises in your set may be due to a neighbour who is adjusting his H.T., or to a "crystal fiddler."

Your
Chance!

THOUSANDS
OF I.C.S. MEN
SUCCEED
EVERY YEAR.

Make your
folk proud
of you, too!

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ILLUSTRATION
METHOD
MAKES HOME
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Sirs,—Please send me a free prospectus giving full particulars of all branches of the profession or occupation before which I have marked X (If your subject is not on this list, write it here).

—Architect,	—General Bookkeeper,
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—Aeroplane Engineer,	—Dressmaking,
—Aeroplane Rigger,	—Millinery,
—Textile Expert,	—Shorthand Typing,
—Plumber,	—Bus. Correspondence
—Mathematician,	—(There are over 4,000,000 I.C.S. Students, over 19,000 of these being in New Zealand).

ENQUIRIES COST NOTHING—POST NOW

Name.....

Age..... Occupation.....

Address.....

R.R.

A Popular Tenor**Renewing Licences****Radio becomes Fully Established**

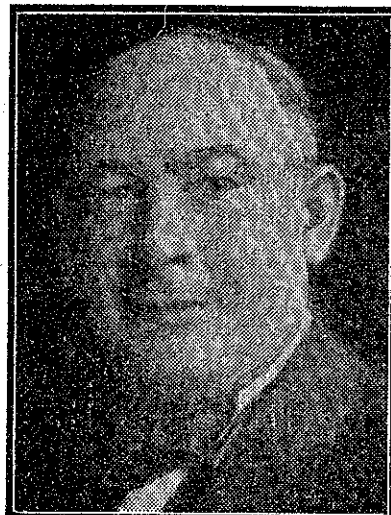
THAT popular tenor soloist, Mr. Herbert F. Wood (of the De Luxe Theatre), has been engaged for concert work at 2YA on March 25. It is rather interesting to record that Mr. Wood was the first artist to sing by wireless in Australasia, as he was associated with the first demonstration of sound

How Austria Meets the Problem

EVERY radio subscriber in Austria has to give notice to terminate his subscriptions at the end of the year if he does not wish to continue it, and must fill up a form at the nearest post-office, between December 1 and 25. After that date he is liable for the whole of next year, and there is no appeal.

If he dies his executors must pay the full subscription for him, collected monthly, and give notice during the first twenty-five days of the following December, the only time at which such notices can be handed in.

In the mountainous districts, where many new subscribers have lately come in, as the provincial stations have been set going, many protests have been made against this system, for the nearest post offices are often a long way off and snow-drifts may block the way in December; and farmers do not understand why they cannot give notice at other seasons.



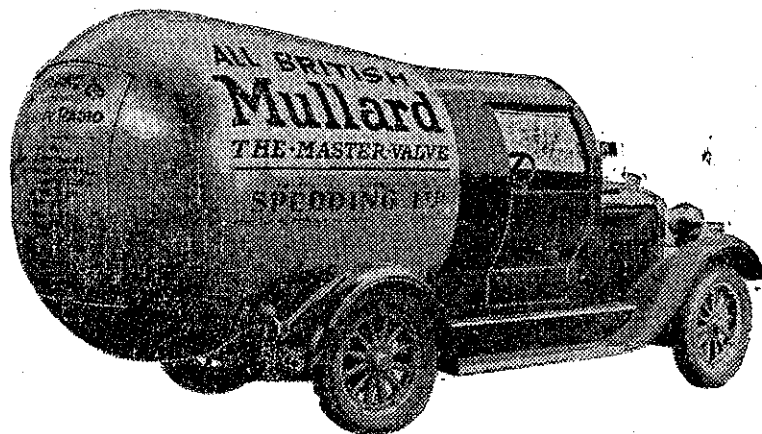
amplification on April 7, 1922. "Tony" Wood (as he is familiarly known) has sung in nearly every theatre of New Zealand and Australia. As an interpreter of Gilbert and Sullivan, the late Tom Pollard paid the highest possible tribute to Mr. Wood. Who hasn't heard him sing "Take a Pair of Sparkling Eyes," "A Wand'ring Minstrel," "I Love You in Velvet," etc? A few seasons back he was engaged to sing in

Sydney, Melbourne, and Adelaide, and so successful was his appearance that the Melbourne "Punch" wrote: "Herbert F. Wood is one of the finest tenors in Australasia, we welcome him, New Zealand may well be proud of him." His services are in constant demand in Wellington, and at the Sunday band concerts held last year the audience would not let him off the stage until he had sung five or six times.

THAT the radio trade is now becoming an established business is evidenced by this novel "Mullard" traveller's car.

In every new industry the enthusiasm of those with progressive ideas often carries them over the bounds of

The dimensions of the valve are identically proportionate to those of an actual Mullard valve. The inside of the van is practically square, the floor and sides having been squared off, which gives a considerable amount of space between the outer circumference and



Novel travelling van in the form of a Mullard Valve.

the possibilities which exist in that industry at the particular time. This phase of the radio industry has been passed through, first in America, then in England. Australia passed through it before we did, and settled down on to a solid foundation in 1927. There is no doubt that New Zealand has now reached that stage in 1929.

The world has been culled over by manufacturers' representatives, importers and agents to select the lines which are leaders in their respective classes; and sufficient time has now elapsed for the various lines which have been imported into New Zealand to be tried out, and for the ascendancy of the tried and proven products to be established. The result is that today we have the culling process completed, and the world's best lines are holding the ascendancy in New Zealand, as they do in other countries. The dealer can trade with more confidence and concentrate on the established lines, knowing that he is not going to be upset by some low-priced inferior article. Many times the dealer has been tempted to try out these products, and has learnt by experience that the standard lines are the only ones worth concentrating on. That is why the radio trade in 1929 can be said to have a really solid foundation. With the world's leading manufacturers thoroughly established, the public and dealers can purchase radio equipment with confidence.

A typical example of the confidence now prevailing in the radio trade is the placing on the road of a unique traveller's car by the New Zealand Mullard selling agents, Messrs. Spedding, Limited, of Auckland. This Mullard car is unique in both appearance and interior design. The actual body of the valve is 8ft. 9in. long, with a diameter in proportion to the length of a Mullard valve. The base of the valve provides the driver's cab, and with the sliding doors pulled down, completely encloses the driver, making a very fine all-weather outfit, enabling the driver to proceed in any weather with absolute comfort.

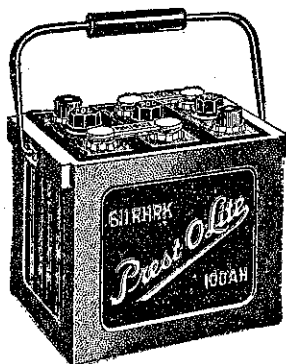
the interior lining, in some cases a depth of more than twelve inches. This space has been divided off into compartments, each compartment being numbered, which facilitates the quick location of any type of valve required. The interior space, part from these compartments, enables a large quantity of material to be carried, and it is hard to conceive any method of construction which could make provision for a greater amount of material in a similar space.

A novel installation is housed in four of the rear compartments. This comprises a power amplifier, using the Mullard P.M.3 and P.M.24-5 electrode valve, and two Mullard transformers. In the compartment below is a gramophone motor and electric pickup. The other compartments are taken up with dry B. & C. batteries, and a lead from the car batteries is taken to a plug-in terminal immediately alongside the B batteries. From two small plug-in terminals it is possible to demonstrate on any speaker the enormous amplification of these Mullard valves. In the case of a dynamic speaker being used, the field current is taken from the plug-in terminal mentioned above.

This outfit has created an immense amount of interest as it has passed through the various towns in the North Island, and the same interest is being displayed in the South Island, of which it is now making a complete tour.

The substantial cost of such an outfit touring through New Zealand is ample evidence of the confidence displayed in the future of the radio business in New Zealand.

**Longest
Life,
Honest
Rated
Capacity**



Voltage	Capacity Amp.	Price
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6	80	5 5 0
6	100	6 5 0

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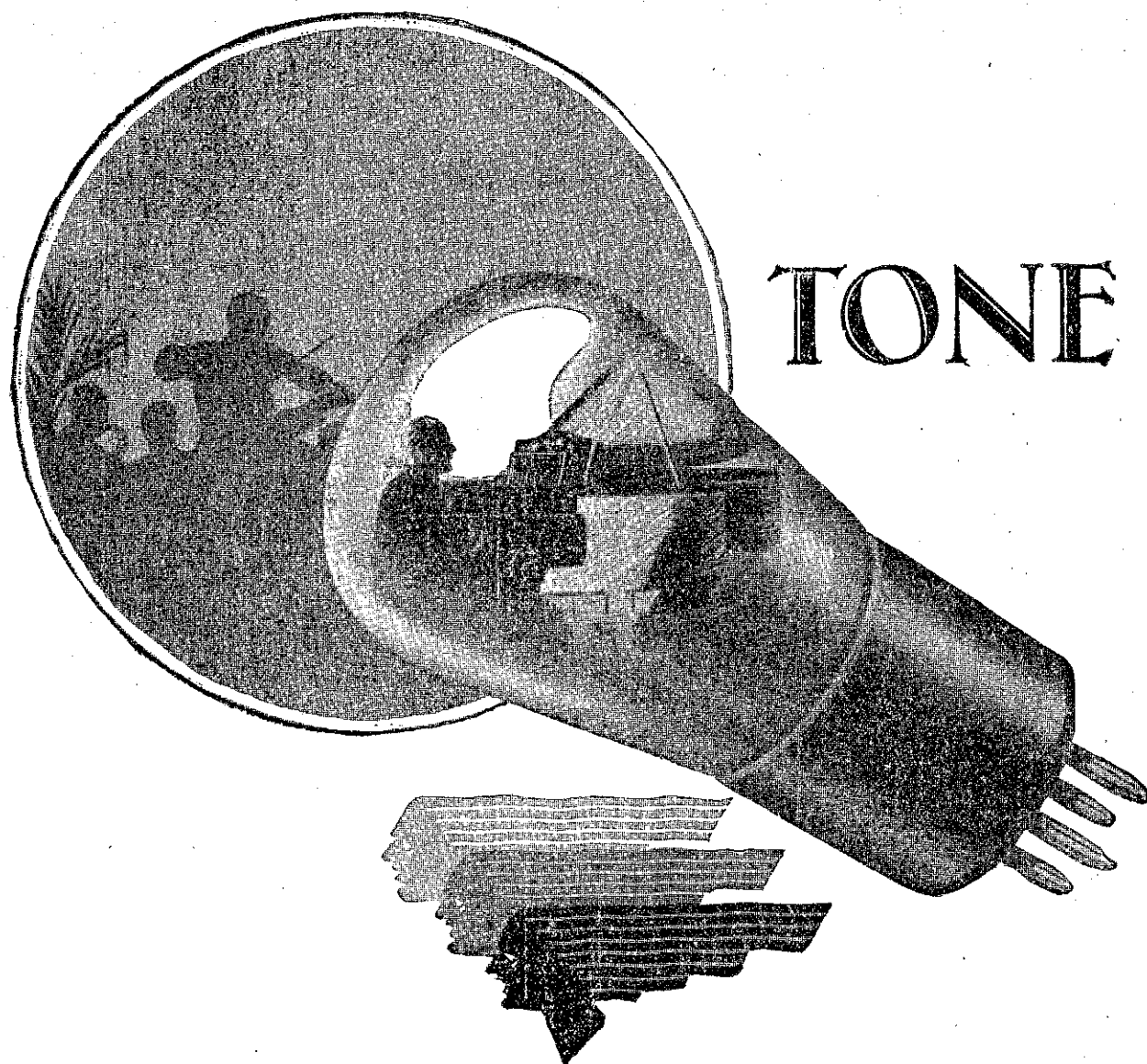
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**NEW PLYMOUTH
WELLINGTON — PALMERSTON**



Tone—the character of a sound . . . quality . . . harmony . . . light and shade . . .

You realise how true a description that is as soon as you put Mullard 1929 P.M. Radio Valves in your Receiver. Then it is that your radio takes on character—and tone—only equalled by the original performance itself.

The secret of the remarkable tone you enjoy with Mullard Valves is in the wonderful 1929 Mullard P.M. Filament—4 years ahead in design. Ask your radio dealer to-day for a set of Mullard P.M. Valves for your receiver.

Mullard
THE MASTER VALVE

ADVT. THE MULLARD WIRELESS SERVICE CO. LTD., DENMARK HOUSE, DENMARK STREET, LONDON, W.C.2

A Vertical Aerial.

"B.G.B." (Picton) is indeed fortunate. He is situated between two ridges 200 yards apart. Between these he is able to stretch a steel wire, and with a string of insulators, is able then to secure a vertical aerial of 100ft. which drops directly to his set. He has been told that he is losing efficiency through having all his aerial vertical. This is not the case for the following reasons:—The aerial and the ground form a huge condenser, and above 30ft. the capacity of this condenser increases only slightly as greater height is obtained. Likewise when the length exceeds 100ft. little is to be gained in proportion to the length of wire to be used, but the capacity of a vertical aerial increases directly with its length, so that other things being equal, 100ft. of vertical aerial would be more efficient than a 100ft. horizontal aerial. Care must be taken, however, that it is kept free from all earthed objects, as this would decrease its effective height.

Various Points.

"C.L.F." (Dannevirke), asks the following questions:—

1. What are the latest signs for a transformer marked I.P., O.P., I.S., O.S.?

ANSWER:—I.S. is marked either F. (filament), "A"—"Q"—or "G.B."—(grid bias). O.S. is marked G. for grid, I.P. marked P. for plate, and O.P. for "B" positive H.T. (high tension).

2. Could you give me the address of the listener who received JOAK, etc., on a one-valve set? It was published in the "Record" about February 15.

ANSWER:—For reasons previously explained, it is quite frequently difficult to track the name and address of a listener who uses a nom de plume, but if this correspondent would write us, we should send the address to our present correspondent.

3. Are self-regenerative batteries an improvement on the ordinary type? Do they cause any noise?

ANSWER:—There is little difference between these and the ordinary type. They are equally as good and no better. Noises will only come from them when they are low in voltage. This can be slightly offset by connecting a fixed condenser of 1 mfd. across the battery terminals.

4. Why can I use only 4 volts on a 6-volt valve? I have taken turns off the tickler, but all I can get is continual oscillation when I increase the voltage greater than 4.

ANSWER:—The set is not neutralized. Information on this point has been given in the "Record," but the subject will be very fully dealt with in a special chapter in the "Radio Listeners' Guide."

5. What is the difference between P.M.5 and P.M.5B?

ANSWER:—P.M.5 has an anode impedance of 19,000 ohms, and is consequently suited to high frequency amplification detector or low frequency amplifier when followed by a transformer coupling. P.M.5B has an anode impedance of 74,000 ohms, and is more suitable for low frequency amplification or detector followed by resistance coupling. The amplification factor of the former is 17.5, compared with that of the latter 37. However, the true test of quality is the mutual conductance, that of the P.M.5 being .94 milliamperes per volt, while that of the latter is .5 mA/volt. For general use then, the P.M.5 is the more suitable.

6. Could a first stage low frequency amplifier valve for resistance coupling

(amplification factor 37) be used as a first stage low frequency amplifier with a transformer coupled amplifier?

ANSWER:—No, for the reason outlined in the previous answer.

7. When a valve has an amplification factor of 13, is it meant that the strength is raised 13 times?

ANSWER:—No. Theoretically the amplification of a valve is equal to the amplification factor multiplied by the external impedance, the product of these being divided by the plate resistance plus

Sulphation is the greatest enemy of the high-tension battery, and the best way of keeping it at bay is to have the battery regularly and fully charged.

the external impedance. It is difficult to arrive at the exact factor of amplification, but a good valve has always a high mutual conductance, that is approximately or greater than 1 millamp. per volt.

8. Would you advise the use of a valve with an amplification factor of 17 as a first stage audio? If not what would you advise, and why?

ANSWER:—The main point to watch in selecting valves for the low frequency side is that their impedance be kept low. This lowers the amplification factor. The low frequency amplifier, when transformer coupled to the next valve, should have an impedance of from 7,000 to about 20,000 ohms, depending upon the transformer and the load. As far as amplification factor is concerned, keep it as high as possible, but if it is too high, overloading of the next stage will result. In the "Listeners' Guide" we are publishing a table showing the optimum valve impedances and magnification factors for the different positions in the set. With regard to the specific question, one cannot say definitely. Probably it would be O.K., but the correspondent should pay attention to the impedance to keep it within the limits described. If this valve is followed by a transformer of a high ratio, saturation will occur and the higher frequencies will be lost, causing distortion. The moral is to use transformers of a good make, having a ratio of not more than about 4 to 1.

Amplification Factor.

WHAT is the amplification factor of a stage of radio frequency.—"Crysta" (Wellington.)

ANSWER:—The correspondent is referred to the answer to "C.L.F." above. In practice, it should work out at something less than the amplification factor of the radio frequency valve and the step up transformer used in the circuit.

Pentode's Home-made Tester.

A CORRESPONDENT from Taranaki, "E.A.M.", wishes to know if a voltmeter with two readings, from 0 to 6 and from 0 to 100, will serve the purpose instead of a milliammeter.

ANSWER:—The instrument described changed a milliammeter into a voltmeter. Sometimes a volt meter can be turned into a milliammeter by taking out the resistance, but the calibration has to be done over again. The correspondent

would be well advised, unless he has had a wide experience, to follow the directions given by "Pentode."

A Constructor in Trouble.

"A.R.P.", of Dannevirke, is contemplating building a 4-valve receiver, and wishes to depart somewhat from the usual tracks, and wishes to know:—

1. Please enlighten me on the various advantages of each of the systems, tuned anode and transformer coupling for the screen grid radio frequency of the Browning-Drake.

ANSWER: The tuned anode system is the most simple for the use with the screen grid, but the difficulty is flatness of tuning. The transformer coupling is claimed to sharpen tuning and to give improved results. At the present time, we cannot give details of the transformer coupling for the screen grid as they are only being experimented with. We hope to be able to publish them in our "Listeners' Guide."

2. Is it wise to use a .00025 variable condenser in the aerial coupling?

ANSWER: Yes. If 85 turns are used on the grid coil, but it would be impossible to tune across a wide range with a transformer of this capacity; .0005 would be more suitable.

3. I would like to know where to incorporate a rheostat as a volume control.

ANSWER: If a rheostat is to be used as a volume control, it should be inserted in the filament leads to the radio frequency valve, but this is by no means the best method of controlling volume. It has the disadvantage of causing distortion. The question of controlling volume was fully discussed in Vol. 1, No. 13 (October 12). The correct place to control volume is before the signal enters the receiver, and this is best brought about by a variable resistance between the antenna and the ground terminals. The resistance should be about 10,000 ohms.

4. I intend to wind solenoid coils on a former of 2½ inches diameter, with 24 s.w.g. enamelled wire. What is the correct number of turns for the following positions:—

(a) The ordinary Browning Drake aerial coil tapped at the 18th, and tuned with a .0005 condenser—put on 50 turns space wound.

(b) A transformer coupled antenna circuit—18 on the aerial and 50—60 on the grid coil.

5. Is that astatic coil worth while in a screen grid set?

ANSWER: This would need trying out, but there is no reason why it should not be O.K., if not an improvement on the plain solenoid. Put on 25 turns in each direction, that is, on each half of the former.

6. What is the advantage of a .0001 condenser in series with the aerial?

ANSWER: A condenser smaller than .0005 connected between the antenna lead in and the antenna terminal of the set has the effect of enabling the lower wavelengths to be tuned in. At the same time, it decreases damping when a long aerial is used.

7. Would it matter if the condenser between the shield grid of the s.g. valve and the shielding was 1 mfd. instead of .5 mfd?

ANSWER: Not at all.

Details of an "All-Electric" Gramophone.

I AM contemplating building an "all-electric" gramophone, and desire a complete wiring of same, writes "W.P.-J." (Christchurch). I contemplate making the dynamic cone speaker described in your issues, March 1 and March 8, and the eliminator described between October 14 and November 18, 1927. I wish to supply the filament

current for the valves from a transformer. Could you give me information on this point?

ANSWER: The question of power transformers and eliminators has been brought right up to date in our 1929-30 edition of the "Radio Listeners' Guide," and the correspondent will find in its pages the information for which he is asking.

"I believe in the electric gramophone there is used a scratch filter. Of what does this consist?"

ANSWER: Connect a fixed condenser across the secondary of the first audio transformer, or better still, connect in series from the plate of the second to last audio valve and ground or B—a .002 to .060 mfd. condenser, and a half-henry choke in series. The question of constructing iron cored choke coils was discussed by "Megohm" in our issue of November 23, 1928. A ½ henry choke can be made by winding 1600 turns on a 1 inch, a stallory core, gap 1-64 inch.

A Short Wave Adaptor

IS it possible to use a short wave adaptor with any circuit?—"N.M.S." (Christchurch). The short wave adaptor, in essence, is a device to replace the high frequency amplifier and the detector of the broadcast receiver with a special short wave adaptation. Any good audio amplifier will be sufficient to strengthen the output of this unit. So that it may be plugged into any set with a good audio amplification system.

Amplification at high frequency means that the currents magnified are those which are flowing in the aerial or the tuned circuits, before the detector.

Buzzing Sound From Set.

WHEN I switch on my set, there is a buzzing sound in my speaker, and when I turn the wavelength or reaction condenser it gradually goes into a high-pitched whistle, and I cannot perceive anything, but as soon as I put my hand on the primary and secondary of the coil it stops. I can take my hand away, and the stations will come in better than when I first made the set.—VALVE (Masterton).

ANSWER: It appears that there is a defective component. The most likely suspects are the low frequency transformer, the valves, or perhaps the coil. Test these by the 'phones and cell method. Connect a small battery to one tag of a pair of telephones, connect the free tag to a piece of flexible wire. The remaining terminal of the battery should likewise be connected to a separate piece of wire. If the two free ends are touched together a click will be heard in the 'phones and another click when they are taken apart. This indicates a "closed circuit." Remove the coil from its socket, and attach one of the leads to point No. 4. Place the other end on No. 2. A distinct click should be heard.

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Likewise, a click should be heard when the seeker is transferred to terminal number 1, but absolutely no sound should come from Nos. 5 and 6, but if one terminal is placed on each of Nos. 5 and 6, a good loud click should be heard. A failure in this direction would indicate that the coil is defective, and would account for the squealing and weak signals. If these tests fail to reveal the trouble, the set should be taken to a dealer who handles this type kit set.

Concerning a One-valve Set.

IN sending us a circuit for consideration "Valve" (Christchurch) asks the following questions:—

1. When using a grid bias battery, the positive side of which is connected to the negative side of the filament to where is the negative side of the "C" battery connected?

ANSWER: A "C" battery cannot be used with a single valve set, but used in conjunction with an amplifier, is connected to the secondary of the transformer (G.B.) preceding the amplifying valve.

2. When using a 30-ohm rheostat in a circuit employing a 4-volt valve, how many 1½ volt dry cells are required for the "A" battery?

ANSWER: Three.

3. Can B406 be recommended for dry cell work?

ANSWER: The filament consumption of B406 is .1 amperes, which is rather high use from dry cell. One of the "A" type valves should be used, say A415 or A409.

Magnetic Bar Amplifier.

IS there any type of amplifier that does not require valves?—"Crystal" (Wellington).

ANSWER: Yes, the magnetic bar type which were popular in the early days of radio, but with the increase in the variety and the perfection of valves, they have been displaced in popularity.

Could you, through the columns of your paper, give a description of the construction of a light-socket device, to be used for an aerial.

ANSWER: Yes. As soon as possible after the Listeners' Guide is published, we will work one out, and describe it.

The correspondent has endeavoured to use an aerial and a frame aerial in series, and wonders why his signals are not as strong as they should be. A frame aerial is used to replace the grid coil in the antenna circuit. One end of this loop must be connected directly to the grid and to the tuning condenser. The other end should be taken to the filament negative, and the other end of the tuning condenser, preferable to the rotor plates.

Home-made Condensers.

"W. J. J." (Kaikohe) writes complaining that he has not been able to get satisfactory reproduction from his Browning Drake set. He has made his own fixed condensers from tinfoil and mica. This is not at all wise, as it is very difficult to get the correct capacity. Making one's own condensers was quite in order when these components were dear, and hard to obtain, but when one can pay from 3s. to 4s. 6d. and obtain a first-class article, there is no need to go to the trouble of making one's own.

A Corner for Beginners

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

1. Addresses.—All technical correspondence, whether inviting reply or not, must be addressed: "The Technical Editor," "N.Z. Radio Record," Box 1032, Wellington.

2. Each letter to bear (inside) the department to which it refers:—Construction, Crystal Corner, Questions and Answers, or General.

3. Letters inviting reply must be accompanied by a stamped and addressed envelope, but the right to answer any letter through the columns is reserved. Correspondents should watch the columns carefully as one letter may be answered in more than one section.

4. Advice requiring discrimination between factory-made sets or between makes of components cannot be given.

5. All letters to be signed, but a nom-de-plume may be added.

6. Reports for the DX Club to be addressed: "DX," Box 1032, Wellington.

Accumulator Fumes.

A WRITER to a daily paper voices the following precaution, which is well worth quoting: Now that so many all-in cabinets (including portage sets) are being schemed, it will be as well to warn readers against the housing of the accumulator in the same receptacle as the set. No doubt many have at some time or other incorporated an accumulator in the cabinet of the set and noticed that after a few months have elapsed the metallic parts of the receiver assume a dull, dead appearance. This is due to the acid fumes given off by the accumulator during discharge, which being moist (spray from the electrolyte) are in a very active state to eat into a metal for which they have a weakness.

There appears to be no remedy for this when an ordinary lead-acid type of accumulator is used, but in the very near future it is highly probable that the metallic parts sold will be plated with a metal that will effectively prevent such corrosion.

This element is chromium, and research during the last few years has been very intensive and fruitful, so much so that the process has been improved and established in industry.

The value of the plating process from a wireless outlook is the complete ability of the metal to withstand corrosive vapours. Irrespective of the fact that an accumulator may or may not be incorporated in the cabinet of the set in close proximity to the delicate wireless parts, the atmosphere in all large towns and cities contains an appalling amount of acid. This is not poured out from chemical factories only, but from the domestic fire, and so it would seem that all wireless equipment is liable to corrosion unless efficiently designed to withstand it.

Tightening Up Wires.

WHEN you have finished soldering the wires to the terminals of your receiver you usually have to go round them all and tighten up the nuts. The heating of the terminals

has softened the ebonite, and nuts which you turned tight home are now quite loose. If you have had to keep the iron on one terminal for some time, there will be a sort of raised ring of ebonite on the face of the panel round the head. The ebonite has bulged with the heat.

You can avoid this disfigurement by turning the nuts home only just far enough to keep the terminals steady, till you have done the soldering. Then, when the terminals are cool, go round with a spanner and tighten them as much as you like.

Motor-Boating.

"MOTOR-BOATING" is the term applied to a continuous popping sound which sometimes occurs in sets in which reaction is employed, and indicates incorrect rectification or faults in the regenerative system.

It can be cured by making the following additions to the set: Between reaction coil and O.P. (or P. in the newer type) of the transformer connect a 25,000 ohms resistance. Between P. and A. negative connect a 1-microfarad fixed condenser. When plate of valve is connected to O.P. the system will still obtain, and will be found to impart very smooth working to the reactional element, will improve tone, and generally make operation easier.

The addition is beneficial in sets which just (but only just) receive distant stations difficult to hold. It will permit the operator to retain these signals.

Improving a Speaker.

IF you are in the possession of a fairly small cone speaker, and the reproduction of bass notes is not to your liking, the use of a baffle will greatly improve the quality of reproduction. A three-quarter inch thick board, two feet square, with the cone attached to the centre, will make a vast difference. The method of fixing will depend on the type of speaker. With some speakers the edge supporting the cone will offer a good support, so that the whole speaker may be fitted into a sufficiently large round hole in the centre of the baffle board. The board can be polished and decorated to taste.

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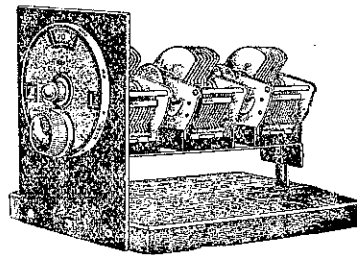
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Are They Real Sports?

IT is not all joy answering the telephone at 2YA. Heavy requirements are imposed upon the staff in the matter of tact in meeting the demands of exacting and diverse tastes. One of the most strenuous periods from a telephonic point of view is Saturday evening, immediately after the opening of the news session. The sporting fraternity (or at least some of them, not to libel those who are really sports), prove quite a little trying and exacting at that time. Many of those who possibly have risked a whole two-shilling piece upon some race or other are very keen to know the outcome of their speculation, and in the few minutes that elapse between the start of the news session at 7 o'clock and the reaching of the sporting announcements, the telephone is kept very busy with sarcastic requests to "cut out" the shipping and weather reports, official news, etc., and get down to the "real business" of the evening, the distribution of sports results.

For the benefit of these "sports" it may be stated quite definitely that the news session is cast in a definite procedure, which will not be varied. The practice is to open with the shipping news, because that is of importance and value to a definite section of the community, and requires to be given

at a set period each evening, so that those intimately concerned with the proper conduct of the country's transport business can receive the information with which they are concerned. The weather reports follow because they also are of value to shipping and transport interests and the farming community, without whose success, it may be mentioned in passing, city interests would sadly suffer. Transport and primary production contribute not a little to the financial and commercial success of the whole life of this Dominion; and shipping and weather reports are of definite commercial value to those interests.

Succeeding these three essential items, the sporting items are reached usually at from eight to twelve minutes after 7 o'clock. While the 2YA staff has made no complaint on this point, we think it fair to place the facts before readers and listeners, with the request that the position be appreciated.

In contrast with the town listeners, reference may be made to listeners in Chatham Islands, where it is a matter of pride that there are no wireless pirates. Cut off as that island is from the daily paper and with irregular mail communications, they rely markedly upon wireless for contact with the world. Practically every minute in which the four YA stations are operating sees every set set on the island surrounded by keen listeners—and they don't ring up 2YA!

Notes and Comments

By "Switch"

THE modulation of 2YA, Wellington, has been giving great pleasure to local listeners for some time past. A beginner, nevertheless, asked "Switch" to listen to his outfit, as he thought 2YA had a rasping tone. The invitation was accepted by "Switch," and sure enough, the tone was anything but agreeable. A little testing and a try-out with another loudspeaker showed that the trouble was in the beginner's speaker. Still, he had been going about telling folk that 2YA was "rotten."

SOME Wellington radio dealers report a marked slackness in trade. It is thought that there are too many in the business having regard to the normal demand at this time of the year. Things are expected to liven up, however, with the approach of winter. The greatest falling-off in business is in ready-built sets. The sale of accessories is steady.

A LISTENER up in Japan reports hearing 2YA, Wellington. Writing to the Melbourne "Listener-In," he says: I am Minoru Nakamura, of Yamate, Oslo, Yangawaken, Japan, and I well understand that there are many DX hunters who picked up some Japanese stations in Australia. I have logged 37 stations in the following countries (I have received some Chicago, U.S.A., and some European stations since October, 1928, besides those given hereunder):—Australia: 2FC, 2BL, 3LO, 3AR, 4QG, 5CL. China: COMK, Moukden, 410 metres, 2k.w.; COHB, Kharbin, 445 metres, 1k.w.; COTN, Tientsin, 475 metres, 500w.; COPK, Peiping, 320 metres, 100w.; GOW, HongKong, 300 metres; KRC, Shanghai, 338 metres, 150w.; NKS, Shanghai, 350 metres, 50w.; SSC, Shanghai, 370 metres, 50w.; CRC, Tientsin, 280 metres, 50w.; GEC, Tientsin, 300 metres, 50w. India: 7CA, 7BY. Japan: JOAK, JOBK, JOCK, JODK, JOFK, JOGK, JORK, JOIK, JPAK (333 metres, 1k.w.). Kwangtung: JQAK. New Zealand: 2YA. Philippine Islands: KZRM (KZRQ). Siberia: RL20. U.S.A.: KGO, KFI, KNX, KJR, KOMO. Germany: Lagenburgh. Burma: 2HZ (under investigation). My receiving set is a six-valve receiver, consisting of three stages of radio frequency amplifier, employing the new shield grid valve, followed by a regenerative detector and a two-stages audio amplifier.

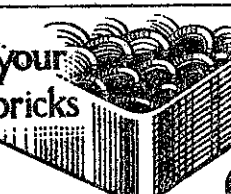
A NEW broadcast station has been erected at Johannesburg. It is situated on the highest point of a range which surrounds the city. The wavelength of the station is not announced. New Zealanders cannot hope to hear this station until the winter months, and then just before daybreak, as Johannesburg time is about 12 hours behind that of New Zealand.

THE other night 2FC, Sydney, put across a rather paltry competition, the first prize being a piffling 10s. A young female played seven items on the piano, and listeners were requested to send in a list identifying these items. The forwarder of the first envelope opened at the station containing the correct list was to receive 10s. "Switch" identified five out

of the seven items. They comprised: "When Other Lips," "Daisy," "Wait Till the Clouds Roll By," "The Man Who Broke the Bank of Monte Carlo," and "Two Little Girls in Blue." The other two numbers were excerpts from well-known musical comedies, familiar enough to the ear, but the writer could not identify them.

IN Australia, nearly every evening the broadcast stations send out a "missing friend" announcement by request of the police. This sort of thing is seldom requested in New Zealand. The Australian announcements generally refer to a son, brother, or father somewhere up country, who is requested to come home promptly owing to a death or serious sickness.

When your throat pricks



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(Write address clearly)

Annotations of Annabel

DEAREST:

Competition being rife in the drapery trade, right royal courtesy is extended to us when making our purchases even though they be insignificant enough to render one nervously aware of their negligibility as one surveys sizes and splendour of rival establishments. Time was when one or another assistant proved irritatingly patronising and scornful. Not now, however; competition being a useful social and business emollient, and conducive to that civility which is a good and pleasant thing, in and out of shops and on both sides of the counter. Liberty and equality are all very well in their way; but equally laudable is the cult of the virtue of which it was written long ago: "Know, dear brother, that Courtesy is an attribute of God Himself, who, of His courtesy, sendeth his rain alike upon the just and unjust."

THESE particular words of the wise and gentle Malory should be committed to memory by the youth of this country. At the Trooping of the Colours in the Basin Reserve, a row of urchins sat on a long rail and swung sunburnt legs, when an intent crowd stood to attention while the National Anthem was played. Possibly they meant no harm and knew no better, those rollicking youngsters of our land; but they should be taught to get down from their perch, however high they climb, and stand on strong brown legs when "Gentlemen, the King!" is the toast to be honoured.

THIS presentation of Colours to the Wellington Regiment made gallant spectacle on an afternoon that was very fresh and fair, with a coquettish breeze flirting and fluttering brave banners, the old and the new. To beat of drum and stirring band music, the battalion went through its mystic manoeuvres; and watching, dull pulses quickened and tired spirit revived, while memories flashed of other days when our men, very young and debonair, marched away to distant bourne, from which there was no return; proving their mettle to our eternal pride, and showing that "self-control in the hour of success, patience in the time of adversity," for which the Bishop prayed in the beautiful words of the consecration service.

FROM London comes news that "Journeys End" puts upon the stage, without hysteria or exaggeration, the plain story of life in the trenches during the war; the mud and monotony, and unquenchable wit and endurance of the rank and file, its incomparable courage and kindness. The realism and sober indictment of the wastage, banality and horror of a long campaign, render Mr. Sherriff's play a very moving force, which it is believed will carry more conviction to the mind of the masses than all the peace societies that were, and are, and are to come.

A PANG smote our hearts when news came that a gallant friend and servant of man had gone to his Valhalla. Chinook, the brave husky, need "fear no more the heat o' the sun, nor the furious winter rages"; no more make valiant endeavour to speed the way of adored master on those stretching frozen wastes where a thousand times he vindicated his intelligence and willingness to "carry his weight." One imagines last wistful look at beloved face, a lagging behind his bold band of pilgrims; then the quiet drifting away across the iceland. Loyalty and courage, obedience and devotion; these are great qualities and worthy of human emulation. Bones bleaching under an Arctic sky; and perchance, who knows, his spirit cavorting in the happy hunting-grounds.

AFTER reading Mary Webb's novels, now belatedly receiving that recognition from reading public and literary elect which was denied in her lifetime to this sensitive artist, it is interesting to come across a book of her verses, until recently unknown to most of us. These poems reveal a delicate loveliness of thought and phrase, being mostly concerned with beauty of this fair earth and the musings of a natural religieuse; but now and again there steals in the music of humanity, and we have a poignant note of regret.

*Not for the dear things said do I weep now;
Not for your deeds of quiet love and duty,
Does my heart freeze and starve since you endow
Cold death with beauty.
Just for the look of utter comprehension;
The dear gay laugh that only true hearts know;
For those I would from Life's severe detention
Arise and go.*

Your
ANNABEL LEE.

Children's Sessions

AT 1YA.

TUESDAY, MARCH 19.—Uncle George will entertain this evening with more of his bright stories. Cousin Shirley will sing quaint little songs and there will be plenty of fun from 6 to 7.

WEDNESDAY.—Uncle Tom will take charge of "Mike," Cousin Miriam will take charge of the piano, and there will be music, songs and stories to please all.

THURSDAY.—Uncle Pat with the radio family to-night, as Peter Pan is busy looking after his cubs. With Uncle Pat at the helm be prepared to hear how important it is to hear how important it is to look after your teeth.

FRIDAY.—More happy songs and duets from Aunt Jean and Aunt Pearl, and stories and conundrums from Nod. Birthday greetings and Postie going his rounds as usual.

SATURDAY.—Get your thinking caps on, little people, for Cinderella has some puzzles for you this evening. Yes, and you won't get the answers till next Saturday. Cousins have piano solos and duets so tune in at 6 o'clock sharp.

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

AT 2YA.

MONDAY, MARCH 18.—A treat to-night. Mrs. Mildred Kenny will entertain with her juvenile band. Cousin Douglas will play pianoforte solos and Uncle Jeff will be there with greetings, puzzles and a good-night song.

TUESDAY.—Uncle Jim this evening, assisted by Cousins Dorothy and Marjorie, singing some of their delightful duets. Little Cousin Aisla, whom you all enjoy, will sing to you, and last but not least will be Cousin Zac with his mouth organ.

THURSDAY.—Cousin Constance will be singing and Cousins Joyce and Maurice will play violin duets and solos. Uncle George will be sending greetings and wishing many happy returns of the day.

FRIDAY.—To-night we are to have "The Story Book Lady," also the "Mouth Organ Sympathy Orchestra," and something you all like—Brother Jack and Uncle Stewart will go for one of their train trips. Aunt Huia will go, too.

SATURDAY.—An excellent programme for this evening. The

pupils of Mrs. M. Thomas will entertain you with songs, recitations, pianoforte solos, etc. Uncle Toby will greet you and sing the Good-night Song.

SUNDAY.—The children's song service will be conducted by Uncle George, assisted by St. James Presbyterian Sunday School Choir under Mr. H. G. Brooker.

AT 3YA.

MONDAY, MARCH 18.—Ho, Ho, Scatterjoy, and whither away to-night? 'Over the land and sea so far, where the ribbons gay, and queer head-dresses are! So listen-in, and you'll all agree, that you can't help but be happy and bright with me.'

WEDNESDAY.—Mother Hubbard, and Big Brother true, where are we going to-night with you? 'Far away to the land where the songs are made, and where stories are growing in many a glade.'

THURSDAY.—And now, Uncle John, what have you for us? 'Stories and fun and music gay, which will make a fine close for the end of this day!'

FRIDAY.—Storyman's here, with his bag full of goods, with Brother Bill's friends in merriest of moods.

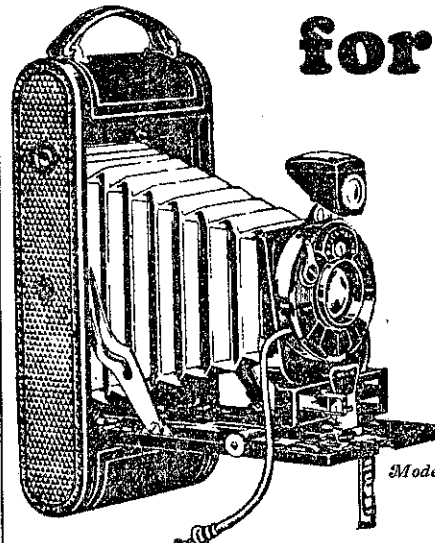
SATURDAY.—Here's Chuckle and his friends from the Elmwood school, so a bright merry night is Saturday's rule.

SUNDAY.—Children's Song Service bright, conducted by the Methodist Sunday School.

Embroidered Fur Scarf.

STRANDS of ermine with groups of tails at either end make a luxurious scarf for evening wear, and a new idea is the insertion of circles of broderie anglaise in heavy white silk at intervals along the scarf. Under the embroidery fur and lining are cut away, leaving transparent motifs.

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Just think of the numerous opportunities of picture making that Easter holds in store. The races—social gatherings—picnics—family re-unions and a hundred and one interesting and enjoyable events. It's fun to 'Kodak' and there's lasting pleasure in the pictures themselves.

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Next Week's Features

1YA Features

FOR the operatic portion of the programme on Tuesday evening, excerpts from a modern light opera, "Katja the Dancer," will be produced under the direction of Madame Ainsley. It is a play with a Spanish setting. Miss Violet Harrison, Miss Nance Macklow, Mr. Jack Maddox, and Mr. Len Keven will contribute to the supporting vocal programme. The songs by these artists will be "Serenata" (by Toselli), Rimsky-Korsakov's "Hindoo Song," "A Castilian Lament," and "The Two Grenadiers." There will be orchestral selections from the Majestic Theatre, a piano solo, "Marche Grotesque," by Mr. Eric Waters, selections by the Auckland Trio, and a talk on Maori dances by Mr. A. B. Chappell.

THE Studio Orchestra will present a fine programme on Wednesday evening, the items comprising the "Semiramis" overture, "Dance of the Hours," "Haydn Wood's Songs," and "Tiptoes." The vocal programme will also be of a very interesting nature, the singers being Miss Madge Clague, Mr. R. Richards, and Sergeant W. H. Hallihan. In addition, there will be a pianoforte solo by Mr. Cyril Towsey, an elocutionary item by Mr. Thomas Harris, humour from Happy Abe and Dismal Ike, and selections from Millers Banjo Orchestra. This should be one of the most enjoyable programmes of the week.

A mock trial, "Larkin v. Fitzhugh," will be staged at 1YA on Thursday evening by the Auckland Comedy Players, under the directions of Mr. J. F. Montague. The case concerns a motor-car collision and should provide a great entertainment. Dance music will continue till 11 p.m.

AN interesting feature of Friday's programme will be the second of the series of lecture recitals, "Half Hours with Great Composers," to be given by Mrs. Daisy Basham and Messrs. Wm. Gemmell and Alan McElwain. On this occasion they will take as their theme Anton Rubinstein (1829-1894), who, not content with the fame of being a great pianist, wrote music, not as a mere sideline of a great executant, but on a vast scale, with the loftiest of ideas and ideals. In this recital there will be contralto and baritone solos, and also a recitation, "When I Heard Rubinstein Play the Piano." There will be numerous old favourites on Friday evening by the New Zealand Four—"Larboard Watch," "For You Alone," etc. A humorous interlude will be provided by Mr. Alan McElwain.

The vaudeville on Saturday evening, which will comprise the programme till the dance music session commences at 9.30 p.m., will be provided by the Bohemian Duo, and the Studio Orchestra, the Nifty Three, and the Tui Orchestra.

Signor and Signora Marotta to give Concert at 2YA

FOR classical night at 2YA, next Monday, there has been a special engagement of Signor and Signora Marotta, late of the Melba-Williamson Opera Company.

Signor Marotta was one of the leading tenors of the company, while Signora was one of eight singers chosen by Dame Melba from hundreds of applicants for the chorus. Signora Marotta's soprano voice is not unknown to listeners, for, as Miss Eva Webb-Jones, for three years prior to joining the opera company she was a regular performer for 2FC, Sydney.

THE programme to be presented on Monday evening will provide a great treat for listeners. Both artists will sing ballads as well as operatic selections. The Signora's numbers will comprise solos from Puccini's opera "Turandot," also "Silent Moon" (Vaughan Williams), "Advice" (Molly Carew), "In the Silent Night" (Rachmaninov), "Oh, Could I But Express in Song" (Malachini), "Isles of Innesfree," and "God Touched the Rose."

Signor Marotta will sing "Danza" (Rossini), "From the Land of Sky Blue Water" (Cadman), "Core 'ngrato" (Cardello), "Marechiaro" (Tosti) "O Sole Mio," "Di Capua" and "Varlaam."

VARLAAM, in Moussorgsky's opera "Boris Godounov," is a wandering dissolute monk. In this song he tells of the glorious days "Long ago at Kazan, where I was fighting," when Tsar Ivan harried the Tartars in that city, drove mines beneath it, and blew up forty thousand of the hated enemy—so Varlaam says.

Signor and Signora Marotta will also sing, as the concluding item on the programme, the duet "Desio."

Apart from a specially selected programme by the Studio Orchestra, there will be a cello solo by Mr. Geo. Ellwood, and flute soli by Signor A. P. Truda, all played to orchestral accompaniment, and a flute and clarinet duet by Signor Truda and Mr. A. H. Wright.

Notes From 2YA

THE Roman Catholic service in St. Gerard's Redemptorist Church will be broadcast on Sunday evening.

Local artists contributing to the studio concert which will follow the church broadcast will be Miss Evelyn Robinson, Mr. E. W. Robbins, and Mr. W. H. Gregg. There will be an excellent supporting programme of selected records.

A BRIGHT programme of a light nature will be presented on Tuesday evening, the programme commencing with two old favourites, "The New Colonial March" and Waudtufel's "Estudiantina Waltz," played by the Studio Orchestra. Other orchestral items will be Boccherini's "Minuet," Bizet's "Serenade Espagnole," a medley, "Snacks in Bars," and a musical comedy selection, "The Beauty Prize," by Kern. Mrs. M. R. Lightbody, soubrette, will sing several light vocal numbers, and a new combination in the persons of Messrs. Billy Hart and Ed. Silver, will also entertain with popular jazz songs and latest hits. Mr. Billy Hart requires no introduction to radio audiences, but Mr. Silver has only recently "come on the air" at 2YA. Mr. Silver has had considerable experience in England in singing songs of the lighter type, having appeared with jazz bands on the "halls," both in London and in the provinces.

Another new combination appearing on Tuesday's programme will be the

Messrs. Jack McEwen and S. Rose, saxophone and banjo players respectively. Both artists are masters of their instruments and are well known locally in dance band circles. Mr. McEwen has appeared at 2YA previously as a soloist, and his work is noticeable on account of the smooth tone and good intonation.

THURSDAY night is "Band Night" at 2YA, and the band providing the programme on this occasion will be the 1st Battalion Wellington Regiment Band under the conductorship of Lieut. B. J. Shardlow. Their items will comprise the well-known descriptive piece "A Drum Head Church Service," a humorous "A Trip to Blackpool," a fox trot, and several waltzes and marches. A cornet solo will be played by Sergeant W. Bark. The Lyric Quartet will assist with the vocal side of the programme, and humour will be provided by Mrs. Ransom Myers, a newcomer to radio. The items to be presented by the Lyric Quartet will comprise the duet "The Crucifix," a bass solo, "The Friend For Me," a tenor solo, "Thou art risen my Beloved," by Coleridge Taylor, and a bracket of baritone solos by Mr. Will Goudie. Two sea shanties and two quartet numbers will also be sung.

ON Friday, an interesting semi-operatic programme will be presented at 2YA by the Ariel Singers. Italian, French, and English composers will be represented thereon, perhaps the most important being Handel, Verdi, and Gounod. For the first time by 2YA studio artists, the famous quartet

"Una di se ben rammentomi," from Verdi's "Rigoletto," will be performed. The orchestral items will be the "Gluck Overture," the suite "Pelleas et Melisande," a grand opera number, "Cavalliera Rusticana," and a dance suite by Bortkiewicz, "Russian Dances Numbers 2 and 4." Mr. and Mrs. Albert Russell, the popular entertainers, will provide the humour for the evening, radiating some more "joy germs."

ON Saturday evening a bright and interesting programme will be rendered, the "March of the Tin Soldiers," and the "Dance of the Elves," by Moszkowski, being the orchestra's opening numbers; further orchestral items will include a xylophone solo "William Tell" overture, soloist Mr. L. Probert, a waltz suite "Valse Piquantes" (by Peel), and a musical comedy selection. The vocal musical section of the programme will be given by the Melodie Four, and humour by Mr. Arthur Chalk. Novelty piano solos will also be played by Mr. James McKenzie. The Melodie Four will sing three concerted numbers, "Comrades in Arms," "Mosquitoes" (by request), and a four-part arrangement of "Jeannine I Dream of Lilac Time."

MR. R. S. Allwright (baritone) will be heard in the well-known song "Mandalay," and Mr. Sam Duncan will sing "Somewhere a Voice is Calling," a ballad suitable to Mr. Duncan's type of voice. The bass soloist, Mr. W. W. Marshall, has chosen for his item "Love Me and the World is Mine." Mr. Frank Bryant will sing "Blue Sky and White Road."

Notes From 3YA

THE religious service to be broadcast on Sunday evening will be that conducted in St. Mary's (Church of England), Merivale. The preacher will be the Ven. Archdeacon P. B. Haggitt. Following this broadcast there will be in a studio concert when a programme of a sacred type will be broadcast. The local vocalists will be Miss Renetta Kings, Miss Mary Taylor, Mr. W. Bradshaw, and Mr. F. A. Millar. Their items will include two fine duets. There will also be specially selected gramophone items.

MONDAY evening's programme at 3YA will feature Derry's Military Band, under Mr. J. Scott. A programme of the usual varied type will be presented. The vocal artists for the evening will be Miss Betty Hilliard, singing popular songs such as "Get Out and Get Under the Moon," "Fifty Million Frenchmen Can't be Wrong," "Dew, Dew, Dewy Day"; Mr. E. A. Dowell, also a singer of favourite airs; and Mr. Robt. Samson. Mr. Samson's fine baritone voice will be heard in "Nivana," "Tommy Lad," and "A Sergeant of the Line." Mr. L. T. J. Ryan, whose ability as a humorous entertainer is well known, will recite "My Wedding Anniversary" and the burlesque speech, "Bertram on Business."

FOR the operatic programme on Wednesday evening, "Maritana" has been chosen. All the principal solos, duets, and choruses of this very popular opera will be sung. "Maritana," apart from its merits, has a great interest to New Zealanders from the fact that part of it was composed in this country during a visit here by Vincent Wallace. He toured the greater part of the civilised world, giving concerts and meeting many interesting adventures. He was an accomplished organist, and a violinist of notable powers. "Maritana," first given in London in 1845, held the stage for many years by virtue of its simple and melodious character throughout. The case for the studio presentation will be:—

Maritana Miss Lilian Hanham
Lazarillo Miss Dulcie Mitchell
Don Caesar Mr. H. Blakeley
Don Jose Mr. J. Graham Young

SUPPORTING the vocalists in the presentation of "Maritana" will be a number of miscellaneous items, comprising instrumental numbers by the Bohemian Quintet, a violin duet by Misses Florence Miller and Irene Morris, a pianoforte solo by Mr. Frederick Page, and recitations by Miss Winifred Smith.

Talent of the highest order will be heard on Thursday evening—Miss Eileen Grennell, Miss Merle Miller, Mr. Harold Prestcott, Mr. Fred. Penfold, and Miss Madge Yates (elocutioniste), Miss Dorothy Davies (pianiste), Miss Irene Morris (violiniste), and the Studio Trio.

ON Friday evening all the best of the vocal score of "Katinka," Rudolf Friml's musical play, will be sung by the Radiolians. This operetta, first saw footlights in 1915, since when it has had a very successful career. The instrumental music for the evening will be provided by Mr. Harold Beck, the Studio Trio, and the Bailey-Marsden Dance Orchestra. The session will continue till 11 p.m.

ON Saturday evening, there will be another old-time concert, a two-hours' vaudeville comprising music hall songs, which were the rage with an older generation. There will be much humorous dialogue introduced. The performers will be the same "Revelers" who contributed a similar type of programme some weeks ago, which evoked great praise from listeners. It was an entertainment which appealed to all, both the older and the present generations.

Notes From 4YA

ON Sunday evening, March 17, the evening service to be conducted by the Rev. W. Walker from the Central Mission, will be in the nature of the Harvest Thanksgiving. This will be the last time Mr. Walker will be heard over the air at 4YA, as he is leaving for Auckland. After the service on Sunday evening there will be a relay of the concert given by the St. Kilda Band, New Zealand's champion band.

Monday is usually a silent day at 4YA, but as Dunedin's celebration of the festival of St. Patrick is being observed on March 18, the station will provide a special treat

Broadcast of Sacred Cantata by 1YA

MAUNDER'S beautiful sacred cantata, "Olivet to Calvary" will be broadcast on relay from Devonport Methodist Church by 1YA on Sunday evening, March 17.

The choirmaster will be Mr. F. W. Beck and assisting vocalists will be Miss Alma McGruer, Mr. Birrell O'Malley and Mr. H. Barry Coney. "Olivet to Calvary" recalls simply and reverently the scenes which mark the last few days of the Saviour's life on earth, and some of the reflections suggested thereby. The rejoicing of the multitude with hosannas and palms, the view of Jerusalem from the steep of Olivet, the lament over the beautiful city, the scene in the Temple, and the lonely walk back over the Mount at night, form the chief features of the first part.

Part II opens with the Supper of the Passover, at which Jesus washes His disciples' feet, and gives to His friends the new commandment of love for one another as the sign of true discipleship. From this the scene passes to the infinite pathos of the Garden of Gethsemane, the sudden appearance of the hostile crowd, Jesus forsaken by His disciples, His utter loneliness among ruthless foes, the tumult before Pilate in the Judgment Hall, the Passage of the Cross, the tragedy and triumph of Calvary.

with a completely Irish concert. The broadcast will commence at 7.30 p.m. with selections of melodies of the Emerald Isle. At 7.40 an address will be delivered by Mr. J. P. Ward, appropriate to the "Day we celebrate." Mr. Ward last year dealt very interestingly with the development of "Irish Music," and listeners are looking forward to his contribution this year.

ON Tuesday, March 19, Mr. Ad. R. Thompson (tenor), who has been often heard from 3YA, will make his first appearance at this station. Mr. Thompson has been singing for many years on stage and platform throughout Australia and New Zealand, and he will make a very acceptable addition to the artists at 4YA. He will sing two songs by Blumenthal, "My Queen" and "Evening Rose."

A SONG to be sung by Miss Stuart Mitchell on Tuesday evening will be Delilah's wonderful number from "Samson and Delilah," "Softly Awakes My Heart." At the command of the High Priest of Dagon, Delilah, of the Philistines, attempts with all her woman's wiles to obtain from Samson the secret of his strength. It is in this song that she pours out her heart to Samson, and he is unable to withstand her pleading, and is therefore led into the hands of the Philistines.

A SINGER new to 4YA is Miss Eva Scott, who for some time has been a leading soprano in Dunedin, and will be heard in the famous waltz song from "Romeo and Juliet." The character in the opera is a child of fourteen, who is at her first ball, and expresses her childish delight at all the glamour and gaiety of the carnival, but with this is mingled a fear of what is before her after the glamour has gone. Mr. Carl Moller, the clever elocutionist, will make a welcome reappearance before the microphone.

THE St. Kilda Municipal Band will give another of their delightful programmes on Tuesday evening.

"Flora's Holiday," a song cycle by H. Lane Wilson, will be given by "The Sorenaders" on Wednesday, March 20. This is an adaptation and arrangement of old English melodies, and contains many gems of melody and harmony.

The catch, "The Pedlar," is a particularly clever number. On this programme will be given sketches by Miss Anita Winkel and Major Lampen, and the programme will finish with a dance session till 11 p.m.

ALL the artists appearing on Friday evening, March 22, are well-known performers in Dunedin. Miss Irene Hornblow, L.R.A.M., will give three songs including "Whither," by Schubert, and "Think on Me," by Cyril Scott. Mr. R. A. Mitchell, tenor, and Mr. Arthur Lungley will render vocal numbers. The members of the 4YA Broadcasting Trio, Miss Eva Judd (violinist), Mrs. Ernest Drake (pianist), and Mr. P. J. Palmer (cellist), will again be heard in solos and concerted items.

MR. LESTER MOLLER, elocutionist, and Mr. Buster Brown, Scottish comedian, will supply the humour on Saturday, March 23, while Miss Betty Roberts will supply light vocal numbers and Mr. Neil Black will sing bass songs.

FOR Saturday night a delightful programme of popular hits will be interspersed with two clever comedy sketches by Miss Shella Neilson and Mr. J. B. McConnell. Miss Mona Melville will make a welcome reappearance, and included in her contributions will be the popular musical comedy hit, "The Girl Friend." Mr. E. G. Bond (bass) has elected, amongst other favourites, to sing about "Father O'Flynn" and his "way wid him." A special dance programme will complete the evening's entertainment.

A welcome innovation will commence at 4YA during the dance programme. At 10.30 p.m. an interval is scheduled for the announcement of the day's sporting results.

Books.

THE OTHER GATE. (Vere Hutchinson.)

IF, as one understands, this writer is sister of the A. S. M. Hutchinson who electrified a section of the novel-reading public with "If Winter Comes," then a curious anomaly is apparent. The latter highly emotional tale exhibits frequent passages of exaggerated excitement amounting to hysteria. In Miss Vere Hutchinson's tales, however, there is an entire absence of that element; each and every one of them showing stark simplicity of portrayal and elemental sincerity.

"Sea Wrack," a strong and sombre novel, lives in the recollection.

A supernatural element is introduced by reincarnation in a feathered fowl of the soul of the dead; and an authentic shudder created by bird of ill-omen in which recur repellent aura and venomous tongue of an old woman, married for money by her unhappy husband, who is screeched into frenzy by the odious white cockatoo that gives its name to the tale.

Futility, monotony, the sense of lost illusion are accentuated. Ranging many types and countries, perhaps the best portrait is of a little cockney clerk, into whose grey life comes sudden adventure. A hapless lovely lady is blackmailed, fate makes him unwilling spectator, chivalry is roused, and drab plodder transformed into Quixote. His laudable murder committed, bidding farewell to his rose of beauty, quietly he goes back to life as it is, and flabby, muddling wife Nellie, who goes on grumbling, not realising she greets a hero unaware.

"The Scarecrow" tells of Nemesis pursuing illicit love; and "The Other Gate" breathes all romance of the world. A strange, quiet woman grows weary of "doing out the duty" for clods who are husband and son, ties a handkerchief over tawny locks, takes her bundle, and walks off into the sunset to the lover of her youth. "He didn't treat me right sometimes," she said, "but always he'd come back to me, and be proud of me—the way I dressed, the way men looked, the way I'd be there to laugh with him. . . . I'm fit for nothing, neither children nor Loswithalle. . . . Maybe it wasn't for children I was born; it was for Harry, Harry." There speaks the passionate lover: the woman who for her man, her mate, counts the world well lost and everyone in it.—R.U.R.

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Full Programmes for Next

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Sunday, March 17

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

8 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 Devonport Methodist Church (Preacher, Rev. J. F. Martin; organist, Mr. Len Elliott; choirmaster, Mr. F. W. Beck). Maunder's sacred cantata, "Olivet to Calvary," will be sung by the church choir, assisted by the following artists:—Soprano, Miss Alma McGruer; tenor, Mr. Birrell O'Malley; baritone, Mr. H. Barry Coney.

8.45: Overture—Halle Orchestra, Rosamunde" (Schubert) (Columbia Record 04197).

8.53: Soprano solo—Mrs. R. Schade (selected).

8.57: Baritone solo—Mr. Clinton Williams, "Nearer, My God, to Thee" (Carey).

9.1: 'Cello solo—Table Cassals, "O Star of Eve" (Wagner).

9.5: Orchestral and chorus—Bayrourth Festival Orchestra, "Parsifal—Grail Scene" (Wagner) (Columbia Record L2008).

9.13: Soprano solos—Mrs. R. Schade (selected).

9.18: Grand organ and cornet—Arnold Grier, "The Lost Chord" (Sullivan) (Zonophone Record A309).

9.22: Baritone solos—Mr. C. Williams, (a) "Rock of Ages" (Remick), (b) "The Praise of God" (Beethoven).

9.30: Violin solo—Efrem Kombalist, "Ave Maria" (Schubert—Wilhelm) (Columbia Record 04200).

9.34: Tenor and choir—John McCormack, "Adeste Fideles" (H.M.V. Record DB984).

9.38: Close down.

2YA, WELLINGTON (420 METRES), SUNDAY, MARCH 17.

8 p.m.: Afternoon session, selected studio items.

4.30: Close down.

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

7.0: Relay of service from St. Gerard's Redemptorist Church, Hawker Street.

8.15 (approx.): Studio concert.

Orchestral—State Opera House Orchestra, Berlin, "Symphony in B Minor" (Schubert) (Parlophone records A4024/5/6).

Contralto solo—Miss Evelyn Robinson, "O Golden Dawn" (Atkinson). Harpischord solos—Ignaz Friedman, (a) "Rondo Alla Turca" (Mozart); (b) "Pastorale" (Scarlatti) (Columbia record 03612).

Tenor solo—Mr. E. W. Robbins, "The Kerry Dance" (Molloy).

'Cello solos—W. H. Squire, (a) "Album Leaf" (Russian Serenade) (Gliere); (b) "Scherzo" (Harty) (Columbia record 04214).

Baritone solos—Mr. W. H. Gregg, (a) "Akoako o Te Rangī" (Kai-kau); (b) "In Summer-time on Bredon" (Peel).

Overture—National Symphony Orchestra, "Martha" (Flotow) (Zonophone record BF19).

Contralto solos—Miss Evelyn Robinson, (a) "Thanks be to God" (Dickson); (b) "Good Morning, Brother Sunshine" (Lehmann).

Organ solos—Edwin H. Lemare, (a) "Andantino in A Flat" (Lemare); (b) "Traumerei" (Schumann) (H.M.V. records G1455).

Tenor solos—Mr. E. W. Robbins, (a) "Parted" (Tosti); (b) "Song of Sleep" (Somerset).

Orchestral—Columbia Symphony Orchestra, (a) "Badinage" (Herbert); (b) "Al Fresco" (Herbert) (Columbia record 01092).

Baritone solos—Mr. W. H. Gregg, (a) "A Song Remembered" (Coates); (b) "Song of the Wagoner" (Breville Smith).

String Octet—J. H. Squire's Celeste Octet, "Classica" (arr. Ewing) (Columbia record 02713).

Bass solo—Stuart Robertson, "Sea Fever" (Ireland) (H.M.V. record B2594).

Band—Royal Air Force Band, "Invercargill" March (Columbia record 01353).

Close down.

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

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

4.30: Close down.

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

6.15: Hymn tunes.

8.30: Relay of evening service from St. Mary's (Church of England) Merivale—Preacher: Ven. Archdeacon P. B. Haggitt. Organist and choirmaster: Mr. Arthur Worsley.

7.45 (approx.): Studio concert.

Vocal quartet—Valencia Quartet, "O, Come All Ye Faithful" (Hymn Tune).

Soprano solo—Miss Renetta Rings, "O Divine Redeemer" (Gounod).

7.52: Piano and strings—Alfred Cortot and International String Quartet—"Quintet in F Minor" (1st Movement—Molto moderato quasi lento) (H.M.V. Records DB1099 and DB1100) (Franck).

8.7: Bass solo—Mr. F. A. Miller, "Vale" (Russell).

8.11: Vocal duet—Valencia Duo, "Watchman, What of the Night?" (Sar-gent).

8.15: Grand organ solos—Reginald Goss-Custard, (a) "The Question"; (b) "The Answer" (Wolstenholme) (H.M.V. Record E415).

8.21: Contralto solo—Miss Mary Taylor, "How Lovely are Thy Dwellings" (Liddle).

8.25: Violin solos—Heifetz—(a) "Hebrew Melody" (Achron); (b) "Zapateado" (Spanish Dance) (Sarasate) (H.M.V. Record DB1048).

8.33: Tenor recitative—Mr. W. Bradshaw, "Sound an Alarm" (Handel).

8.37: Choral—Tudor Davies, Margaret Balfour and chorus, (a) "Take Me Away, and in the Lowest Deep There Let Me Be"; (b) "Judas! By That Shuddering Dread That Fell on Thee" ("Dream of Cerontius") (Elgar).

8.45: Orchestral—Berlin State Opera House Orchestra, "The Beautiful Galathea" (Suppe) (H.M.V. Record C1527).

8.53: Soprano solo—Miss Renetta Rings, "Pleading" (Elgar).

8.57: Vocal duet—Valencia Duo, "Hold Thou My Hand" (Briggs).

9.1: Choral—Chorus and London Symphony Orchestra, "Nunc Dimittis" (Brewer) (H.M.V. Record D1347).

9.5: Bass solo—Mr. F. A. Miller, "Arm, Arm, Ye Brave" (Handel).

9.9: Contralto solo—Miss Mary Taylor, "Return, O God of Hosts" (Samson) (Handel).

9.13: Suite—H.M. Goldstream Guards, "Suite Francaise" (Foulds), (H.M.V. Record B2751).

9.25: Tenor solo—Mr. W. Bradshaw, "If With all Your Hearts Ye Truly Seek Him" ("Elijah") (Mendelssohn).

9.29: Vocal quartet—Valencia Quartet, "Angels That Around Us Hover" (Vincent Wallace).

Close down.

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

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

6.30: Relay of Harvest Thanksgiving Service from Central Mission. Preacher, Rev. W. Walker; organist, Mr. C. A. Martin.

8.0 (approx.): Relay of St. Kilda Band concert from Band Rotunda, St. Kilda.

9.15: Close down.

Monday, March 18

1YA, AUCKLAND (333 METRES)—MONDAY, MARCH 18.

SILENT DAY.

2YA, WELLINGTON (420 METRES)—MONDAY, MARCH 18.

GRAND RECITAL CONCERT

By SIGNOR and SIGNORA MAROTTA.

The 2YA Orchestra.

1. The Orchestra — "William Tell" Overture (Rossini).

This brilliant overture to Rossini's grandiose opera is a popular piece of the concert room, although the opera itself is but rarely heard. Four sections comprise the overture—(1) "Andante Religioso," which may be taken to typify the piety and earnestness of the Swiss mountaineers in revolt against the Austrian tyranny. From this point the composer has drawn a picture of nature in the Swiss mountains. The succeeding "Allegro" (2) is said to represent a storm. Then follows an "Andante" (3) of pastoral character, in which we hear a fine duet for cor anglais and flute. The music suggests a peaceful scene in Alpine meadows. The spiritual final section (4), introduced by a trumpet call, is based upon a stirring martial theme with a wonderful rhythmic structure—this brings the overture to a grandiose conclusion.

2. Signora Yvonne Marotta: (a) "Liu—Eignore Ascolta" (from opera "Turandot") (Puccini); (b) "Silent Noon" (Vaughan Williams).

3. Signor Nino Marotta (a) "O Patria Mia" (from opera "Deanice") (Catalani); (b) "Passing By" (Purcell).

Week-all Stations-to Mar. 24

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4. Cello solo with orchestral accompaniment: "Star of Eve" (Waner, arrgd.) (Bellingham), (Soloist, Mr. Geo. Ellwood).
5. Signora Yvonne Marotta: (a) "Tu Che di Gelo" (from opera "Turandot") (Puccini); (b) "Advice" (Molly Carew).
6. Signor Nino Marotta: (a) "Danza" (Rossini); (b) "From the Land of the Sky Blue Water" (Cadman).
7. Orchestra, "Pellaas et Melisande" (Sibelius).

Suite 1.—

1. At the Castle Gate.
2. Melisande.
3. At the Sea Shore.
4. A Spring in the Park.
5. The Three Blind Sisters.
6. Pastordl.

Suite 2.—

1. Melisane at the Spinning Wheel.
2. Entr'acte.
3. Prelude.
4. Death of Melisande.

Weather report.

8. Signora Marotta: (a) "In the Silent Night" (Rachmaninov); (b) "Oh, Could I but express in Song" (Malachkin).
9. Signor Marotta: (a) "Core' ingrato" (Cardillo); (b) "Marechiare" (Tosti).
10. Flute soli with orchestral accompaniment: (a) "Fairy Tarapatapoun" (Foulds); (b) "Serenade" (Titl.) (Soloist, Signor A. P. Truda).
11. Signora Marotta: (a) "Isles of Innesfree" (Penniquick); (b) "God Touched the Rose" (M. H. Brown).
12. Flute and clarinet duet: "Lo, here the Gentle Lark" (Bishop) (Signor Truda and Mr. A. H. Wright).
13. Signor Marotta: (a) "O Sole Mio" (Di Capua); (b) "Varlaam" (Moussorgsky) (from opera "Boris Godunoff").

(From the French version by Risa Newmarch of the opera by M. Moussorgsky, revised and orchestrated by N. Rimsky-Korsakoff).

Act. 1. Scene 11. Varlaam's Song.

"Long ago at Kazan where I was fighting,
Tsar Ivan sat a feasting with his leaders.
There the Tartar horde he harried,
Spared not man nor maid unmarried,
Then Russia knew fine times!
Near and near drew Ivan.
About the walls of Kazan;
Close and closer pushed his mines
Beneath the gates of the town!
While the Tartars in the city
Watch'd our camp from afar,
How their eyes were ever fixed
Upon our ruthless Tsar,
Tartars sly and fierce!
Dark and brooding grew the Tsar Ivan,
On his right shoulder bent his head and gave his
men the word.

Ere he made an end the cannoneers
Held their fuses ready in their hands,
Steady, cannoneers.
Now the tapers of purest wax are burning bright,
Near the barrels the cannoneers take up their stand.
Soon the power barrels to the mines are rolling
quick,

Ho, lay the lines and lay them sure and thick,
Set the train alight!
Loudly then the savage Tartar hordes began to yell,
By my soul their shouts did rend the air.
Scatter'd far and wide the hated foeman lay,
Forty thousand Tartars blown to hell
On that famous day.
Long ago at Kazan where I was fighting! Ho!"

14. Orchestra: "Coppelia Ballet Suite" (Delibes).
 1. Slavonic Theme with Variations.
 2. Festival Dance and Waltz of the Hours.
 3. Nocturne.
 4. Automaton Music and Waltz.

15. Duet: "Desio" (Guercia).
SIGNOR and SIGNORA MAROTTA.
God Save the King.

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

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

4.25: Sports results.

4.30: Close down.

- 6.0: Children's session, conducted by "Scatterjoy."
- 7.15: News session.
- 7.30: Talk—Mr. E. J. Bell, Book Review.
- 8.0: Chimes.
Studio programme by Derry's Military Band, under the conductorship of Mr. J. Scott, and assisting artists.
- 8.1: March—Band, "Mt. St. Louis Cadets" (Laurendeau).
Morceau—Band, "Thisledown" (Hennessy).
- 8.11: Baritone solo—Mr. E. A. Dowell, "Gipsy Love Song" ("The Fortune Teller") (Smith).
- 8.15: Humour—Mr. L. T. J. Ryan, "My Wedding Anniversary" (MS).
- 8.21: Instrumental trio—Christchurch Broadcasting Trio, "Andante and Presto," from "Trio in E Major" (Reissiger).
- 8.43: Popular song—Miss Betty Hilliard, "Get Out and Get Under the Moon" (Shay).
- 8.38: Selection—Band, "Maid of the Mountains" (Frazer Simson).
- 8.50: Baritone solo—Mr. Robt. Samson, "Nirvana" (Adams).
- 8.54: Waltz—Band, "Destiny" (Baynes).
- 9.0: Weather report.
- 9.1: Chorus with orchestra—Light Opera Company, "Vagabond King" Vocal Gems (Friml). (H.M.V. Record G1346).
- 9.5: Baritone solos—Mr. E. A. Dowell, (a) "You'd Rather Forget Than Forgive Me" (Johnson Davis); (b) "I'm Looking for a Girl Named Mary" (Stept).
- 9.12: Popular songs—Miss Betty Hilliard, (a) "Fifty Million Frenchmen Can't Be Wrong" (Rose, Fisher); (b) "Dew, Dew, Dewy Day" (Sherman).
- 9.19: Descriptive selection—Band, "In a Chinese Temple Garden" (Ketelbey).
- 9.26: Burlesque speech—Mr. L. T. J. Ryan, "Bertram on Business" (Rutherford).
- 9.30: Instrumental trios—Christchurch Broadcasting Trio, (a) "Minuet" (Shields); (b) "Petite Trio" (Coene); (c) "Slavonic Dance" (Dvorak).
- 9.45: Baritone solos—Mr. Robt. Samson, (a) "Tommy Lad" (Margetson); (b) "A Sergeant of the Line" (Squire).
- 9.51: Song melody—Cornet solo and band, "All Souls Day" (Lassen).
Grand processional march—Band, "The King's Bodyguard" (Raymond).
- 10.0: Close down.

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

SILENT DAY.

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WELLINGTON.

Tuesday, March 19

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

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

4.0: Literary selection by the announcer.

4.8: Studio items.

4.25: Sports results to hand.

4.30: Close down.

6.0: Children's session conducted by Uncle George.

7.15: Talk—Mr. George Campbell, "Motoring."

7.30: News and market reports—Book review.

8.0: Chimes.

8.1: Relay Majestic Theatre Orchestra under Mr. Whiteford Waugh—Overture.

8.10: Soprano solo—Miss Violet Harrison, "Serenata" (Toselli).

8.14: Wurlitzer organ solo—Reginald Poort, "Casse Noisette—Valse Fleur" (Tchaikowsky) (H.M.V. Record C1886).

8.18: Baritone solo—Mr. Len Keven, "The Two Grenadiers" (Schumann).

8.22: Instrumental—The Auckland Trio, "L'Arlesienne" (Bizet).

8.32: Mezzo solo—Miss Nance Macklow, "Hindoo Song" (Rimsky Korsakov).

8.36: Relay Majestic Theatre Orchestra under Mr. Whiteford Waugh—Orchestral Entr'acte.

8.44: Talk—Mr. A. B. Chappell, "The Maori—His Dances."

9.0: Weather report.

9.2: Relay Majestic Theatre Orchestra—Vocal Interlude.

9.8: Pianoforte solo—Mr. Eric Waters, "Marche Grotesque" (Sinding).

9.13: Tenor solo—Mr. Jack Maddox, "A Castilian Lament" (Del Reigo).

9.17: Light opera selection—Auckland Trio, "Monsieur Beaucaire" (Ascher—Messengerberg).

9.26: Presentation of excerpts from "Katja the Dancer" (Gilbert), produced under the direction of Madame Irene Ainsley:

Solo—"When Love's in the Air."

Solo—"Dancing Together."

Solo—"Politics."

Orchestral—Herman Finck's Orchestra, "Schubertiana" (arr. Finck), (Columbia Record 02721).

Duet—"Just for a Night."

Solo—"I've Planned a Rendezvous."

Duet—"If You Cared."

Orchestral—Herman Finck's Orchestra, "Schubertiana" (arr. Finck) (Columbia Record 02722).

Duet—"Those Eyes So Tender."

Duet—"Love and Duty."

Duet—"Leander."

10.0: Close down.

2YA, WELLINGTON (420 METRES)—TUESDAY, MARCH 19.

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: Close down.

6.0: Children's session, conducted by Uncle Jim.

7.0: News session, market reports and sports results.

7.40: Lecturette by a representative of the Agricultural Department, "For the Man on the Land."

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

8.1: Overture—Orchestra, "New Colonial March" (Hall).

Waltz—Orchestra, "L'Estudiantina" (Waldteufel).

8.11: Soubrette—Mrs. M. Lightbody, "Come Out" (Turnbridge).

8.15: Minuet—Orchestra, "Celebrated Minuet" (Boccherini).

Serenade—Orchestra, "Serenade Espagnole" (Bizet).

8.23: Baritone solo—Lawrence Tibbett, "Believe Me If All Those Endearing Young Charms" (Moore) (H.M.V. record DA886).

Bass-baritone solo—Peter Dawson, "Now Your Days of Philandering Are Over" ("Marriage of Figaro") (Mozart) (H.M.V. record C1401).

8.31: Medley—Orchestra, "Snacks in Bars" (Egerer).

8.43: Popular songs—Messrs. Edward Silver and Billy Hart, (a) "Out of the Dawn" (Donaldson); (b) "Just Like a Melody Out of the Sky" (Donaldson).

8.50: Humour—Will Kings, "Bertram Addresses the Tenants" (Rutherford) (H.M.V. record C1340).

8.54: Instrumental—Orchestra, repeat number.

9.2: Weather report.

9.4: Chorus with orchestra—Light Opera Company, "Vagabond King" vocal gems (Friml) (H.M.V. record C1346).

9.8: Soubrette—Mrs. M. Lightbody, "Hullo Tu-Tu" (Scott-Gatty).

9.12: Musical comedy selection—Orchestra, "Beauty Prize" (Kern).

9.22: Popular songs—Messrs. Edward Silver and Billy Hart, (a) "Just Another Day Wasted Away" (Tobias and Turk); (b) "There's a Rainbow" (Jolson, Rose).

9.30: Dance programme:

Saxophone and banjo duo—Messrs. Jack McEwan and S. Rose, (a) "Saxanola" (Doerr); (b) "Lily of Laguna" (Stewart).

9.37: Foxtrot—Ted Weem's Orchestra, "Baby Doll" (Herschler) (H.M.V. record EA433).

Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "I'm Afraid of You" (Davis) (H.M.V. record EA373).

9.43: Entertainer—Will Gardner, "That's Another One Gone" (Darewski) (Zonophone record 5079).

Vocal duet—Jim Miller and Charlie Farrel, "The Grass Grows Greener" (Yellen) (Zonophone EE100).

Foxtrot—Ted Weem's Orchestra, "If You Want the Rainbow" (Rose) (H.M.V. record EA433).

Foxtrot with vocal chorus—Rhythmic Eight, "You Don't Like It, Not Much" (Miller) (Zonophone EE96).

Waltz—Pennsylvania Orchestra, "Was It a Dream" (Yellen) (H.M.V. record EA335).

10.0: Saxophone and banjo duo—Messrs. Jack McEwan and S. Rose, (a) "Saxema" (Wiedoeft); (b) "Magnolia Waltz" (Morley).

Foxtrot—Nat Shilkret's Orchestra, "Dainty Miss" (Barnes) (H.M.V. record EA276).

Hawaiian selection—Hilo Hawaiian Orchestra, "Hawaiian Dreams" (Marple) (Zonophone record EE56).

10.14: Male voices—The Revellers, "Was It a Dream?" (Coslow) (H.M.V. record EA402).

Bass-baritone solo—Peter Dawson, "The Admiral's Yarn" (Rubens) (H.M.V. record B2661).

Wurlitzer organ solo—Jesse Crawford, "Rosette" (Newman) (H.M.V. record EA405).

Foxtrot—Pennsylvania Orchestra, "The Grass Grows Greener" (Yellen) (H.M.V. record EA335).

Hawaiian orchestra—Hilo Hawaiian Orchestra, "Song of Hawaii" (Bories) (H.M.V. record EA276).

10.28: Male quarter—The Rounders, "Chlo-e" (Kahn) (H.M.V. record EA402).

Foxtrot—Victor Orchestra, "What Do We Do On a Dew-Dew-Dewy Day" (Johnson) (H.M.V. record EA244).

Foxtrot—Victor Orchestra, "The Doll Dance" (Brown) (H.M.V. record EA181).

Waltz—Bert Firman's Orchestra, "Sunset Down in Somerset" (Evans) (Zonophone record EE96).

10.41: Tenor solo—Joseph Hislop, "Mary" (Richardson) (H.M.V. record DA901).

Hawaiian—Hilo Hawaiian Orchestra, "Honolulu Moon" (Lawrence) (Zonophone record EE56).

Foxtrot—Victor Orchestra, "Flapperette" (Greer) (H.M.V. record EA181).

Foxtrot—Hamp's Kentucky Serenaders, "Is it Possible?" (Dixon) (H.M.V. record EA244).

10.54: Comedian—Clarkson Rose, "I Want to Me Alone With Mary Brown" (Gilbert) (Zonophone record 5145).

Wurlitzer organ solo—Jesse Crawford, "For Old Times' Sake" (De Sylva) (H.M.V. record EA405).

11.0: Close down.

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

SILENT DAY.

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

3 p.m.: Town Hall chimes.

8.1: Relay of afternoon-tea music from the Ritz.

4.25: Sports results to hand.

4.30: Close down.

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

7.15: News session.

7.30: Lecturette—Pastor W. D. Moore, "Angora Rabbits."

8.0: Town Hall chimes.

Concert by the St. Kilda Band, under the conductorship of Mr. James Dixon, and assisting artists.

8.1: March—Band, "Conqueror" (Moorhouse).

Waltz—Band, "Reflections" (Bordogni).

8.16: Mezzo-soprano solo—Miss Stuart Mitchell, "Softly Awakes My Heart" ("Samson and Delilah") (Saint-Saens).

8.20: Recital—Mr. Carl Moller, "Bertram's Address."

8.25: Fantasia—Band, "Military Church Parade" (Hume).

8.35: Soprano solos—Miss Eva Scott, (a) "From the Land of the Sky Blue Water" (Cadman); (b) "Achal by the Sea" (Lawrence).

8.42: Baritone solos—Lawrence Tibbett, (a) "Si Pao" (A word allow me); (b) "Un Nidi Di Memorie" (A Song of Tender Memories) ("I Pagliacci") (Leoncavallo) (H.M.V. Record DB975).

8.50: Intermezzo—Band, "Rendezvous" (Alitter).

8.58: Tenor solo—Mr. R. D. Thompson, "An Evening Song" (Blumenthal).

9.2: Weather report.

9.3: Selection—Band, "Sanderson's Songs" (Hume).

9.15: Mezzo-soprano solos—Miss Stuart Mitchell, (a) "A Farewell" (Liddle); (b) "A Border Home" (Ogilvie).

9.22: Violin solo—Erica Morini, "Introduction and Tarantelle" (Sarasate) (H.M.V. Record D1445).

9.26: Recitals—Mr. Carl Moller, (a) "The Storming Party" (Conan Doyle); (b) "Issactsteins Busy Day."

9.31: Tenor solo—Mr. R. D. Thompson, "My Queen" (Blumenthal).

9.35: Euphonium solo—Band, "For You Alone" (Gheel).

Hymns—Band, (a) "Fierce Raged the Tempest"; (b) "Sun of My Soul."

9.45: Soprano solo—Miss Eva Scott, "Waltz Song" ("Romeo and Juliet" (Gounod).

9.49: Duet and chorus—"Eastern and Western Love" (Harbach) (Columbia Record 01240).

Solo and chorus—"It" (Harbach) (Columbia Record 01240).

9.56: March—Band, "Moonlighter" (Bourne).

10.1: Close down.

Wednesday, March 20

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

- 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 Tom.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: Overture—Orchestra, "Semiramis" (Rossini).
 8.11: Baritone solos—Mr. R. Richards, (a) "Ginchy Road" (Edwards); (b) "Sea Fever" (Ireland).
 8.19: Soprano solo—Miss Evelyn Scotney, "Blue Danube Waltz" (Strauss), (H.M.V. Record D1403).
 8.23: Recital—Mr. Thomas Harris, "Porphyria's Lover" (Browning).
 8.28: Contralto solo—Miss Madge Clague, "My Ships" (Barrett).
 8.32: Banjo Orchestra—Miller's Banjo Orchestra, (a) "Maori Lullaby" (Guttridge); (b) "Let a Smile Be Your Umbrella" (Fain).
 8.39: Bass solo—Sergeant W. H. Halligan, (a) "Roving Life" (Hewitt); (b) "Sailor's Paradise" (Richards).
 8.47: Chorus with orchestra—Light Opera Company, "Gems from 'Countess Maritza'" (Kalman) (H.M.V. Record EB11).
 8.51: Orchestra—Suite, "Dance of the Hours" (Ponchielli).
 9.1: Weather report.
 9.3: Baritone solo—Mr. Richards, "Ave Maria" (Luzzi).
 9.7: Pianoforte solo—Mr. Cyril Towsey, "Ballade in A Flat" (Chopin).
 9.11: Contralto solos—Miss Madge Clague, (a) "Fairy Pipers" (Brewer); (b) "Down in the Forest" (Ronald).
 9.19: Banjo orchestra—Miller's Banjo Orchestra, (a) "Drifting and Dreaming" (Curtis); (b) "Home Town Band" (Weidt).
 9.26: Soprano solo—Toti Dal Monte, "Splendon Le Sacre Faci" (Mad Scene from "Lucia di Lammermoor") (Donizetti) (H.M.V. Record DB1015).
 9.30: Song suite—Orchestra and chorus, "Haydn Wood's Songs":—"Khaki and Gold"; 2. "Leafland Lullaby"; 3. "Fleurette, I Shall Never Forget"; 4. "Silver Clouds"; 5. "Wonderful World of Romance"; 6. "I Bring You Joy"; 7. "It Is Only a Tiny Garden"; 8. "Love's Garden of Roses"; 9. "When the Daisy Opens Her Eyes"; 10. "I Love Your Eyes of Grey"; 11. "Roses of Picardy"; 12. "There's a Song Down Every Roadway"; 13. "Jimmy Sale Rag".
 9.42: Humour—Happy Abe and Dismal Ike, "The Prize Fight".
 9.52: Bass solo—Sergeant W. H. Halligan, "The Floral Dance" (Moss).
 9.56: Musical comedy selection—Orchestra, "Tiptoes" (Gershwin).
 10.6: Close down.

2YA, WELLINGTO (N (420 METRES)—WEDNESDAY, MARCH 20.

SILENT DAY.

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

- 3.0 p.m.: Afternoon session—Selected gramophone items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by "Big Brother and Mother Hubbard".
 7.15: News session.
 7.30: Addington stock market reports.
 8.0: Chimes.
 Studio presentation of the opera "Maritana" (Wallace).
 Cast:
 Soprano, "Maritana," Miss Lillian Hanham.
 Contralto, "Lazarillo," Miss Dulcie Mitchell.
 Tenor, "Don Caesar de Bazan," Mr. H. Blakeley.
 Baritone, "Don Jose de Santaram, The King," Mr. J. Graham Young.
 8.1: Overture—Columbia Symphony Orchestra, "Maritana," (Columbia Record 02682).
 8.9: Soprano solo—Miss Lillian Hanham, (a) "'Twas a Knight" (Wallace), (b) Romance and Aria, "'Tis the Harp in the Air" (Wallace).
 Vocal Quartet—Salon Quartet, "Angelus" (Wallace).
 8.16: Pianoforte solo—Mr. Frederick Page "Viennese Waltz No. 1" (Arrgd. Friedmann).
 8.24: Soprano and baritone duet—Salon Duo, "Of Fairy Wand Had I the Power" (Wallace).
 8.28: Orchestra—Paul Whiteman's Orchestra, "Suite of Serenades" (Herbert): 1. Cuban; 2. Oriental (H.M.V. Record EB26).
 8.32: Instrumental Quintets—Bohemian Quintet, (a) "Reverie" (Macdowell), (b) "Andantino" (Lemare); (c) "To Uncle Remus" (Macdowell).
 8.41: Tenor solo—Mr. H. Blakeley, "All the World Over" (Wallace).
 Vocal quartet—Salon Quartet, "Farewell, My Gallant Captain" (Wallace).
 8.49: Recital—Miss Winifred Smith, (a) "He Fell Among Thieves" (Newbolt), (b) "The Fall of D'Assas" (M.S.).
 8.54: Contralto solo—Miss Dulcie Mitchell, "Alas, Those Chimes" (Wallace).
 Vocal duet—Salon Duo, Tenor and Contralto, "Hither As I Came" (Wallace).
 Vocal trio—Salon Trio, tenor, Contralto and bass, "Turn On Old Time" (Wallace).
 8.4: Weather report.

- 9.5: Orchestra—Herman Finck's Orchestra, "Schubertiana" (arr. Finck), (Columbia Record 02722).
 9.13: Tenor solo—Mr. H. Blakeley, "Yes, Let Me Like a Soldier Fall" (Wallace).
 Baritone solo—Mr. J. Graham Young, "In Happy Moments" (Wallace).
 9.17: Baritone solo—Mr. J. Graham Young, "Hear Me, Gentle Maritana" (Wallace).
 9.21: Violin duet—Misses Florence Miller and Irene Morris, "Suite For Two Violins" (Moskowski).
 9.28: Tenor solo—Mr. H. Blakeley, "There is a Flower That Bloometh" (Wallace).
 9.32: Saxophone solo—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft) (Columbia Record 01176).
 9.35: Instrumental Quintet—The Bohemian Quintet, "Three Dances Henry VIII." (German).
 9.44: Tenor and baritone duet—The Salvator Duo, "That Voice 'Tis Hers" (Wallace).
 Soprano recitative and aria—Miss Lillian Hanham, (a) "How Dreary to My Heart"; (b) "Scenes That Are Brightest" (Wallace).
 9.52: Recital—Miss Winifred Smith, "The Sea Fairies" (Tennyson).
 9.56: Soprano and tenor duet—The Salome Duo, "Oh, Maritana" (Wallace).
 Soprano and Contralto duet—The Salonelle Duo, "Sainted Mother" (Wallace).
 10.2: Waltz—Rio Marimba Orchestra, "Three O'Clock in the Morning" (Robledo) (Columbia Record 02685).
 10.6: Close down.

4YA, DUNEDIN (463 METRES)—WEDNESDAY, MARCH 20.

- 7.0: Town Hall chimes.
 7.1: Request gramophone recital.
 7.40: News session.
 8.0: Town Hall chimes.
 8.1: Orchestra—Bournemouth Municipal Orchestra, "Pique Dame" (Suppe) (Columbia Record 02730).
 8.9: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.
 8.19: Saxophone solo—Rudy Wiedoeft, "Minuet" (Beethoven) (Columbia Record 01176).
 8.22: Presentation of song cycle, "Flora's Holiday" (Lane Wilson), by the Serenaders.
 Soprano Miss Florence Sumner
 Contralto Miss Dorothy Allan
 Tenor Mr. W. Harrison
 Baritone Mr. R. B. Macdonald
 8.52: Orchestra—Paul Whiteman's Orchestra, "Suite of Serenades" (Herbert): 1. Spanish. 2. Chinese. 3. Cuban. 4. Oriental (H.M.V. Record EB26).
 9.0: Weather report.
 9.2: Vocal duet—Lombardi and Galeffi, "Il Trovatore" (Duet, Act 4) (Verdi) (Columbia Record 04224).
 9.10: Orchestra—San Francisco Symphony Orchestra, "Liebeslied" (Kreisler) (H.M.V. Record ED6).
 9.13: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.
 9.23: Chorus with orchestra—Light Opera Company, "Hit the Deck" Vocal Gems (Youmans) (H.M.V. Record C1433).



1929 !

THE LATEST

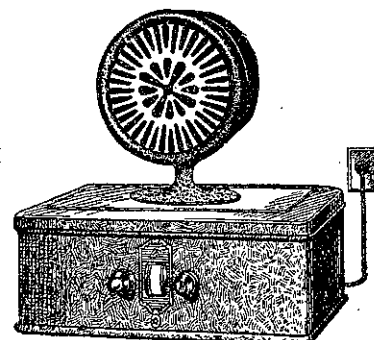
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N.Z. "APEX" AGENTS.

- 9.30: Columbia dance programme:
 Foxtrot with vocal chorus—Debroy Somers' Band, "The Toy-Town Artillery" (Frederick) (Columbia Record 01306).
 Waltz—Eddie Thomas' Collegians, "Till We Meet Again" (Whiting) (Columbia Record 02553).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Constantinople" (Carlton) (Columbia Record 07002).
- 9.42: Soprano and male quartet—Norah Blaney and The Ramblers, "Sweet Suzanne" (Leslie).
- 9.45: Selection—Debroy Somers' Band, "Good News" (De Sylva) (Columbia Record 02720).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Last Night I Dreamed You Kissed Me" (Kahn) (Columbia Record 07002).
- 9.56: Tenor with orchestra—Alfred O'Shea, "Just a Little Love, a Little Kiss" (Ross) (Columbia Record 03589).
- 9.59: Instrumental—Paul Whiteman's Orchestra, "Jeannine, I Dream of Lilac Time" (Gilbert) (Columbia Record 07505).
 Waltz—Rio Marimba Serenaders, "Dolores Waltz" (Waldteufel) (Regal Record G20344).
 Novelty foxtrot—Debroy Somers' Band, "Rag Doll" (Brown) (Columbia Record 01341).
- 10.10: Monologue—Milton Hayes, "Meanderings of Monty—Is Lipstick Nourishing?" (Hayes) (Columbia Record 01293).
- 10.14: Foxtrot (with incidental singing)—Stellar Dance Band, "Just Imagine!" (De Sylva) (Regal Record G20338).
 Foxtrot with vocal chorus—Danza Dance Band, "Varsity Drag" (De Sylva) (Columbia Record 01151).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Get Out and Get Under the Moon" (Shay) (Columbia Record 07001).
- 10.24: Tenor solo—Alfred O'Shea, "Then You'll Remember Me" ("The Bohemian Girl" (Balfe) (Columbia Record 03613).
- 10.28: Wurlitzer organ solo—Milton Charles, "Cheerie-Beerie-Be" (Wayne) (Columbia Record 0914).
 Waltz—Ben Selvin's Orchestra, "Ramona" (Wayne) (Columbia Record 01137).
 Foxtrot with vocal chorus—South Sea Islanders, "Hanalei Bay" (Alo-hikea) (Columbia Record 0737).
- 10.38: Spoken novelty—Flotsam and Jetsam, "The Business Man's Love Song" (Hilliam) (Columbia Record 0995).
- 10.42: Vocal duet with piano—Gus Van and Joe Schenck, "Skadatin-Dee" (Tobias) (Regal Record G20336).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Evening Star" (Turk) (Columbia Record 07001).
 Waltz—Eddie Thomas' Collegians, "The Missouri Waltz" (Logan) (Columbia Record 02553).
 Foxtrot—Ben Selvin's Orchestra, "In My Bouquet of Memories" (Akst) (Columbia Record 01137).
- 10.55: Whispering solo with violin—Jack Lumadaine, "Like a Bird That's On the Wing" (Tobias) (Columbia Record 01185).
- 10.58: Foxtrot with incidental singing—Stellar Dance Band, "Dream House" (Cowan) (Regal Record G20338).
- 11.2: Close down.

Thursday, March 21

1YA, AUCKLAND (333 METRES)—THURSDAY, MARCH 21, 1929.

- 8.0 p.m.: Afternoon session—selected studio items.
 3.30: Talk—Miss B. E. Hoyle, "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.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: Overture—Columbia Symphony Orchestra, "Poet and Peasant" (Suppe) (Columbia record 02618).
 8.5: Solo and chorus—Harold Williams, "Song of the Vagabonds" (Friml) (Columbia record 01271).
 8.9: Studio presentation of "A Mock Trial"—"Larkin v. Fitzhugh" (concerning a motor-car collision). Performed by "The Auckland Comedy Players," under the direction of Mr. J. F. Montague.
 9.52: Solo and chorus—Gene Garrard, "It" (Harbach) (Columbia record 01240).
 Duet and chorus—Dennis Hoey, Sidney Pointer and chorus, "Eastern and Western Love" (Harbach) (Columbia record 01240).
- 10.0: His Master's Voice Dance Programme:
 Light orchestral—Piccadilly Orchestra, "My Beloved Gondolier" (Tibor) (H.M.V. record B2575).
 Light Orchestral—De Groot and The Piccadilly Orchestra, "If Only I Had You" (Davies) (H.M.V. record B2713).
 Duet—Maurice and Sydney, "I'm Going Back to Old Nebraska" (Sissile) (Zonophone record EE117).
- 10.10: Chorus with orchestra—Every-Ready Hour Group, "Down South" (Myddleton) (Zonophone record EFS).
 Tenor with two pianos—Franklyn Baur, "I'm Away From the World When I'm Away From You" (Clare) (Zonophone record EE107),

- Wurlitzer Organ—Chas. W. Saxby, "Can't You Hear Me Say I Love You?" (Derickson Brown (Zonophone record 5094).
 10.20: Mixed voices with piano—The Revellers, "Gems from 'Tip-Toes'" (Gershwin) (H.M.V. record C1293).
 Foxtrot—Arcadian's Dance Orchestra, "Chilly-Pom-Pom-Pee," (Bryan) (Zonophone record 5169).
 Foxtrot with vocal refrain—Edwin J. McEnelly's Orchestra, "What Are We Waiting for Now?" (Kortlander) (H.M.V. Record EA322).
 10.29: Concerted with orchestra—Light Opera Company, "Gems from 'Sunny'" (Kern) (H.M.V. Record C1293).
 Duet with violin, clarinet and piano—Johnny Marvin and Ed. Smalle, "Mary Ann" (Davis-Silver) (H.M.V. record EA339).
 Baritone with piano—Jack Smith, "The Best Things in Life are Free" (De Sylva, Brown and Henderson) (H.M.V. record EA332).
 10.39: Bass with orchestra—Paul Robeson, "Down De Lovers' Lane" (Cook) (H.M.V. record B2777).
 Violin with piano—Greisler, "Indian Love Call" (from 'Rose Marie') (Friml) (H.M.V. record DA785).
 Wurlitzer organ solo—Jesse Crawford, "My Blue Heaven" (Donaldson) (H.M.V. record EA284).
 Hawaiian orchestra—Hilo Hawaiian Orchestra, "Aloma" (Bowers) (H.M.V. record EA310).
 10.52: Chorus and orchestra—Victor Arden Phil Ohman, chorus and orchestra, "Selections from 'Good News'" (De Sylva, Brown and Henderson) (H.M.V. record EB28).
 Foxtrot with refrain—Nat Shilkret's Orchestra, "Where's My Meyer?" (Wolfe Gilbert Profes) (H.M.V. record EA267).
 Orchestral—Victor Salon Orchestra, "The World is Waiting for The Sunrise." (Lockhart-Seitz) (H.M.V. record EA186).
 11.0: Close down.

2YA, WELLINGTON (420 METRES)—THURSDAY, MARCH 21.

- 3.0 p.m.: Chimes of the G.P.O. Clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sporting results to hand.
 5.0: Close down.
 6.0: Children's session conducted by Uncle George.
 7.0: News session, market reports and sports results.
 7.34: Lecturette—Mr. J. W. Fergie, Publicity Branch N.Z. Railways, "The People's Railways."
 7.40: Lecturette—Colonel Robert Sandall, Salvation Army Headquarter's Staff, "South African Natives."
 8.0: Chimes of the G.P.O. clock.
 Studio concert by the 1st. Battalion Wellington Regiment Band, under Conductor Lieut. B. J. Shardlow, and assisting artists.
 8.1: March—Band, "Honest Toil" (Rimmer).
 Selection—Band, "A Drum Head Church Service" (Hume).
 8.16: Duet—Messrs. Chas. Williams and Will Goudie, "The Crucifix" (Faure).
 8.20: Bass solo—Mr. W. Binet Brown, "The Friend For Me" (McCall).
 8.24: Cornet solo—Sergt. W. Dark, "Danny Boy" (Weatherley).
 Foxtrot—Band, "Under the Clover Moon" (Schwartz).
 8.33: Light vocal—Mrs. E. Ransom Myers, "Michael's Flute" (Rolfe).
 8.37: Vocal Quartet—The Lyric Quartet, "Molly Darling" (Hayes).
 8.41: Contralto with chorus—Maire Olezewska, "Ja, Die Liebe Hat Bunte Fligel" ("Carmen" (Bizet) (H.M.V. Record D1886).
 8.45: Tenor—Mr. Chas. Williams, "Thou Art Risen My Beloved" (Coleridge-Taylor).
 8.49: Waltz—Band, "Thoughts" (Alford).
 March—Band, "Yancowinna" (Berriman).
 9.0: Weather report.
 9.2: Vocal Quartet—The Lyric Quartet, (a) "Shenandoah" (arr. Sharp), (b) "Rio Grande" (arr. Sharp).
 9.8: Soprano solos—Miss Evelyn Scotney, (a) "Song of the Elf"; (b) "Song of the Nightingale" (H.M.V. Record E481).
 9.14: Humoresque—Band, "A Trip to Blackpool" (Raymond).
 9.24: Light vocal—Mrs. E. Ransom Myers, "Rory O'More" (traditional).
 9.28: Saxophone solo—Andy Sanella "Aileen" (Canella) (Columbia Record 01186).
 Comedienne—Wish Wynne, "A Bedtime Story" (Wynne) (H.M.V. Record B2780).
 9.40: Baritone solo—Mr. Will Goudie, (a) "Now Sleeps the Crimson Petal" (Quilter); (b) "Stonecracker John" (Squire).
 9.47: Vocal Quartet—The Lyric Quartet, "In The Gloaming" (Harrison).
 9.51: Waltz—Band, "Lovely Locan" (Mehegan).
 March—Band, "Joy of Life" (Moorhouse).
 10.1: Close down.

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

- 3.0 p.m.: Afternoon session—Selected gramophone items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by Uncle John.
 7.15: News session.
 7.30: Talk—Dr. D. B. McLeod, under auspices of Canterbury Progress League.
 8.0: Chimes.
 8.1: Rebroadcast of 2YA, Wellington.
 8.6: Soprano solo—Miss Eileen Grennell, "Louise" (Charpentier).
 8.10: Violin solos—Miss Irene Morris, "Larghetto" (Handel-Hubay).
 8.14: Tenor solo—Mr. Harold Prescott, "Rudolf's Song" (La Boheme) (Puccini).

- 8.18: Pianoforte solos—Miss Dorothy Davies, (a) "Nocturne in F Sharp Major" (Chopin); (b) "Capriccio in B Minor" (Brahms).
 8.24: Mezzo-soprano solo—Miss M. Miller, "Leise, Leise Softly Sighs" (Weber).
 8.28: Choral—Light Opera Company, "Gems from 'Cavalleria Rusticana'" (Mascagni), (H.M.V. Record EB27).
 8.32: Instrumental Trio—Christchurch Broadcasting Trio, "Allegro Moderato" (Arensky).
 8.44: Recital—Miss Madge Yates, "The Storming Party" (Masefield).
 8.49: Baritone solo—Mr. Fred Penfold, "Prologue" ("Il Pagliaccio") (Leoncavallo).
 8.53: Orchestral—Philadelphia Symphony Orchestra, "Hungarian Rhapsody No. 2" (Liszt) (H.M.V. Record D1296).
 9.1: Weather report.
 9.2: Orchestral—Victor Salon Orchestra, "Indian Love Call" ("Rose Marie") (Friml) (H.M.V. Record EA186).
 9.5: Soprano solos—Miss Eileen Grennell, (a) "Thou Art Like a Lovely Flower"; (b) "Villanelle" (Del-Acqua) (Schumann).
 9.10: Violin solo—Miss Irene Morris, "La Praelieuse" (Couperin Kreisler).
 9.14: Tenor solos—Mr. Harold Prescott, (a) "I Gave You a Gift" (Mae Burns Loughnan); (b) "Who Knows" (Ball).
 9.18: Pianoforte solo—Miss Dorothy Davies, "Prelude in D" (Swinstead).
 9.22: Mezzo soprano solo—Miss Merle Miller, "O Mio Fernando" (Favorita) (Donizetti).
 9.26: Bass-baritone with male chorus—Peter Dawson, "The Old Superb" (Stanford) (H.M.V. Record C1479).
 9.30: Instrumental trio—Christchurch Broadcasting Trio, (a) "Valse" (Helm-sberger); (b) "Melodie" (Moskowski); (c) "Scherzo" (Gade).
 9.40: Child impersonation—Miss Madge Yates, "Forgiven" (Milne).
 9.45: Baritone solo—Mr. Fred. Penfold, "The Lute Player" (Allitsen).
 9.49: Orchestral—International Concert Orchestra, "Blue Danube" (Strauss) (Zonophone Record EF21).
 9.53: Tenor and mezzo soprano duet—Miss Merle Miller and Mr. Harold Prescott, "A Night in Venice" (Lucantoni).
 9.57: Male Quartet—Seiberling Singers, "A Japanese Sunset" (Deppen) (Columbia Record 01296).
 10.0: Close down.

4YA. DUNEDIN (463 METRES)—THURSDAY, MARCH 21, 1929.

SILENT DAY.

Friday, March 22

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

- 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 Nod and Aunt Jean.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: Orchestral—Royal Philharmonic Orchestra, "Symphony No. 6 in C Major" (Atterberg) (3rd Movement—Finale—Vivace) (Columbia Record 04129) (Grand prize work in Schubert Centenary Columbia International Composers' Contest).
 8.9: Vocal quartet—The New Zealand Four, "Larboard Watch" (Parks).
 8.13: Instrumental Trio—Auckland Trio, "Trio in F, 1st and 2nd Movements" (Reinecke).
 8.23: Tenor solos—Mr. James Simpson, (a) "The Lark Now Leaves His Wat'ry Nest" (Hatton); (b) "Sweet Early Violets" (Skerrington).
 8.30: Orchestral—Regal Orchestra, "Casse Noisette" (Tschalkowsky): 1. Morch; 2. Valse des Fleurs (Regal Record 20369).
 8.38: Baritone solo—Mr. Eric Mannell, "A Brown Bird Singing" (Wood).
 8.42: Pianoforte solo—Miss Winifred Hawkins, "Invitation a La Valse" (Weber).
 8.47: Tenor solo—Mr. Roy Dormer, "For You Alone" (Geehl).
 8.51: Violin solos—Miss Ina Bosworth, (a) "Valse in A Major" (Brahms); (b) "Rondino" (Cramor).
 8.56: Vocal quartet—The New Zealand Four, "Doan Ye Cry Ma Honey" (Noll).
 9.0: Weather report.
 9.2: Orchestral—Jack Hylton's Orchestra, "The Selfish Giant" (Coates) (H.M.V. Record C1253).
 9.10: Lecture-Recital—Mrs. Daisy Basham and Messrs. William Gemmell and Alan McElwain, "Half-hours With the Great Composers" 2—Anton Rubenstein, including the following items:—
 Contralto—1. The Dewdrop; 2. The Tear.
 Baritone—1. The Page; 2. The Asra; 3. My Loss; 4. Good-night.
 Duets—1. The Angel; 2. Wanderer's Night Song.
 Prose Recitation—"When I Heard Rubenstein play the piano."
 9.40: Bass solo—Mr. Duncan Black, "There's a Land" (Allitsen).
 9.44: Pianoforte solo—Miss W. Hawkins, (a) "Polonaise in C Sharp Minor" (Chopin); (b) "Waltz in A Flat" (Brahms).
 9.51: Vocal duet—Messrs. Dormer and Mannell, "Land of the Long Ago" (Ray).
 9.54: Humour—Mr. Allan McElwain, "Some Humour."
 9.58: Instrumental—Auckland Trio, "Trio in F, 3rd Movement" (Reinecke).
 10.6: Bass solo—Mr. Duncan Black, "Kirconnell Lea" (Moffit).
 10.10: Vocal quartet—The New Zealand Four, "Soldier's Farewell" (Kinkal).
 10.14: Close down.

2YA, WELLINGTON (420 METRES)—FRIDAY, MARCH 22.

- 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: Close down.
 6.0: Children's session, conducted by Big Brother Jack and Uncle Stewart.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. E. C. Jack, "Esperanto—A Language for Radioland."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Gluck Overture" (Suppe).
 8.1: Soprano solo—Miss Jeanette Briggs, "Regnava el Silenzio" (Lucia di Lammermoor) (Donizetti).
 8.13: Violin solo—Fritz Kreisler, "Aloha Oe" (Farewell to Thee) (Liliuokalani) (H.M.V. Record DA745).
 8.16: Vocal duet—Messrs. Roy Hill and J. M. Caldwell, "Palanquin Bearers" ("The Golden Threshold") (Lehmann).
 8.20: Ballet suite—Orchestra, "Ascanio Ballet Music" Part 2 (Saint-Saens):
 1. Love appears to Psyche.
 2. Ensemble of Phoebus, Erigone, Nicoea and Bacchus, with Muses, Nymphs and Bacchantes.
 3. Variation—Love Theme (soloist, Signor Truda).
 4. Entrance of the Dragon of Hesperides carrying the Golden Apple.
 5. Goddesses, Bacchantes, Nyaiads and Dryads.
 (Saint-Saens makes great use of the woodwind in this ballet of the gods, and the third number is particularly notable for the brilliant flute solo).
 8.32: Humour—Mr. and Mrs. Albert Russell, (a) "Love, Wonderful Love" (Weston and Lee); (b) "There's a Girl in Havana" (Stone).
 8.39: Mezzo-contralto solo—Miss Ngaire Coster, "Il Segreto" ("Lucrezia Borgia") (Donizetti).
 8.43: Bass solo—Mr. J. M. Caldwell, "Si Tra I Sappi" ("Berenice" (Handel).
 8.46: Orchestral—Repeat number.
 8.54: Vocal quartet—Ariel Singers, "Una Di, Se Ben Rammentomi" ("Rigol-etto") (Verdi).
 8.58: 'Cello solo—Guilhermina Suggia, "Kol Nidrei" (Bruch) (H.M.V. Record DB1085).
 9.6: Weather report.
 9.8: Mezzo-contralto solo—Miss Ngaire Coster, selected.
 9.12: Grand opera selection—Orchestra, "Cavalleria Rusticana" (Mascagni).
 9.22: Soprano solo—Miss Jeanette Briggs, "Waltz Song" ("Romeo and Juliet" (Gounod).
 9.26: Wurlitzer organ solo—Reginald Foort, "A Brown Bird Singing" (Haydn Wood) (H.M.V. Record B2664).
 9.30: Humour—Mr. and Mrs. Albert Russell, musical sketch, "Tricks of the Trade" (Mondyne).
 9.37: Musical comedy selection—Orchestra, "Sunshine Girl" (Rubens).
 9.45: Tenor solo—Mr. Roy Hill, "Ah! Moon of My Delight" ("In a Persian Garden") (Lehmann).
 9.49: Chorus with orchestra—Light Opera Company, gems from "Sunny" (Kern) (H.M.V. Record C1293).
 9.53: Dance suite—Orchestra, "Russian Dances Nos. 2 and 4" (Bortkiewicz).
 10.1: Close down.

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

- 3.0 p.m.: Afternoon session—Selected gramophone items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session, conducted by "Mr. Storeyman."
 7.15: News session.
 8.0: Chimes.
 Presentation of excerpts from the musical comedy "Katinka" (Friml) presented by the Radiolian Quartet.
 8.1: Overture—Rebroadcast of 2YA, Wellington.
 8.9: Chorus—Radiolian Quartet, "Give Them Your Tokens" (Friml).
 Tenor solo and chorus—Mr. Greg. Russell and chorus, "Vienna Girls" (Friml).
 8.17: 'Cello solo—Mr. Harold Beck, "Melody in F" (Rubenstein).
 8.21: Quartet—Radiolians, "The Bride" (Friml).
 Bass solo and chorus—Mr. W. J. Richards and chorus, "In a Hurry" (Friml).
 8.28: Comedienne—Wish Wynne, "A Bed-time Story" (Wynne) (H.M.V. Record B2780).
 8.35: Instrumental Trio—Christchurch Broadcasting Trio, "Allegro" (Raff).
 8.45: Chorus—Radiolians, "Katinka" (Friml).
 Soprano solo and chorus—Mrs. Claris Shaw and chorus, "Charms Are Fairest" (Friml).
 8.51: Contralto solo—Miss M. Russell, "Allah's Holiday" (Friml).
 Tenor solo—Mr. Greg. Russell, "My Paradise" (Friml).
 8.59: Contralto and Bass Duet—The Radiola Duo, "I Want the World" (Friml).
 9.3: Weather report.
 9.5: Orchestral—Bournemouth Municipal Orchestra, "Pique Dame" (Suppe) (Columbia Record 02730).
 9.13: Chorus—Radiolians, "On High" (Friml).
 Soprano solo—Mrs. Claris Shaw, "Rackety Coo" (Friml).
 9.22: 'Cello solo—Mr. Harold Beck, "Minuet" (Mozart).
 9.26: Soprano and Tenor Duet—Radiolian Duo, "Tis the End" (Friml).
 9.30: Humour—Will Kings, "Bertram Addresses the Tenants" (Rutherford), (H.M.V. Record C1340).
 9.34: Instrumental Trio—Christchurch Broadcasting Trio, (a) "Once Upon a Time" (Lind); (b) "Farewell My Love" (Lehar); (c) "Graesk Festdans" (Hartmann).

- 9.42: Chorus—Radiolians, "In Vienna" (Friml).
 9.44: Dance music—Bayley-Marston Dance Orchestra, (a) "Colombo" (Nicholls); (b) "Caper Sauce" (Loosey).
 9.52: Dance music—Bayley-Marston Dance Orchestra, (a) "My Inspiration to You" (Nicholls); (b) "You're in My Heart" (Nicholls).
 10.0: Dance music—Bayley-Marston Dance Orchestra, (a) "Hello, Montreal" (Rose); (b) "Dance of the Blue Danube" (Fisher).
 10.8: Dance music—Bayley-Marston Dance Orchestra, (a) "Bouquet of Memories" (Akst); (b) "Chloe" (Francis).
 10.16: Dance Music—Bayley-Marston Dance Orchestra, (a) "Beautiful" (Friend); (b) "Hindoo Moon Star" (Carlton).
 10.24: Dance music until 11 p.m.
 11.0: Close down.

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

- 3.0 p.m.: Town Hall chimes.
 3.1: Gramophone numbers.
 3.15: Lecturette by Miss Buccleuch of the F.S.A. Ltd.—"Fashions."
 4.30: Close down.
 6.0: Children's session conducted by Aunt Sheila and Big Brother Bill.
 7.15: News session.
 8.0: Town Hall chimes.
 8.1: Orchestral—Regal Orchestra, "Casse oisette—Marche" (Tchaikowsky) (Regal Record G20369).
 Chorus with orchestra—La Scala chorus—"Otello—La Tempesta" (Verdi) (Columbia Record 02723).
 8.9: Tenor solo—Mr. R. A. Mitchell, "Mignon" (D'Hardelot).
 8.13: Instrumental trio—4YA Broadcasting Trio, "Country Dance" (Gade).
 8.19: Recital—Miss Tui Northey, "Song of the Market Place" (Hanley).
 8.24: Orchestral—Regal Orchestra, "Casse oisette—Valse Des Fleurs" (Tchaikowsky) (Regal Record G20369).
 8.28: Mezzo-contralto solo—Miss Irene Horniblow, L.R.A.M., "Deep in the Heart of a Rose" (Landon Ronald).
 8.32: Pianoforte solo—Mrs. Ernest Drake, "octurne in G Major" (Chopin).
 8.37: Soprano solo—Evelyn Scotney, (a) "Song of the Elf" (Wolf); (b) "Song of the Nightingale" (H.M.V. Record E481).
 8.43: Violin solo—Miss Eva Judd, "Indian Love Call" (Friml).
 8.47: Baritone solos—Mr. Arthur Lungley, (a) "Myself When Young" (Lehmann); (b) "Strange, Is it Not?"
 Orchestral—(a) Chicago Symphony Orchestra, "Valse Triste" (Sibelius); (b) "Funeral March of a Marionette" (Gounod) (H.M.V. Record ED5).
 9.2: Weather report.
 9.4: Orchestral—Philadelphia Symphony Orchestra, "Scheherazade" (The Sea and the Vessel of Sinbad), (Rimsky-Korsakov) (H.M.V. Record D1436).
 9.12: Tenor solos—Mr. R. A. Mitchell, (a) "Ichabod" (Tchaikowsky); (b) "Who Is Sylvia?" (Schubert).
 9.19: Cello solo—Mr. P. J. Palmer, "Alla Mazurka" (Goltermann).
 9.24: Recitals—Miss Tui Northey, (a) "The Little Serving Maid" (Belloc); (b) "The New Bonnet" (Anon).
 9.29: Violin solos—Miss Eva Judd, (a) "Andantino" (Lemare); (b) "Lied Ohne Worte" (song without words) (Mendelssohn).
 9.37: Baritone solo—Mr. Arthur Lungley, "Passing By" (Purcell).
 9.41: Orchestral—Philadelphia Symphony Orchestra, "Scheherazade" (The Tale of Prince Kalender) (H.M.V. Records D1437-8).
 9.53: Mezzo-contralto solos—Miss Irene Horniblow, (a) "Think On Me" (Scott); (b) "Whither?" (Schubert).
 10.0: Instrumental trios—4YA Broadcasting Trio, (a) "Abenlied" (Schumann); (b) "Rosaline" (Rubner).
 10.9: Chorus—Zonophone Light Opera Company, gems from "The Pirates of Penzance" (Sullivan) (Zonophone Record A332).
 10.17: Close down.

Saturday, March 23

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

- 3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the announcer.
 4.8: Further studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Cinderella.
 7.15: News and market reports.
 8.0: Chimes.
 8.1: Overture—Orchestra, "A Children's Overture" (Quilter).
 8.11: Vocal novelty—The Bohemian Duo, (a) "Sonny Boy" (Henderson), (b) "Since I Found You" (Woods).
 8.19: Hawaiian Orchestra—The Tui Orchestra, (a) "Broken-hearted" (Henderson), (b) "Without You, Sweetheart" (Henderson).
 8.26: Vocal trio—The Nifty Three, (a) "Get Out and Get Under the Moon" (shay), (b) "My Blue Ridge Mountain Home" (Robinson).
 8.33: Ballet suite—Orchestra, "Ascanio Ballet Music" (Saint-Saens): (1) Entry of the Master of the Games; (2) Venus, Juno, and Pallas; (3) Diana, Woodnymphs and Water nymphs; (4) Bacchus and Bacchantes; (5) A Vision of Phœbus, Apollo, and the Nine Muses; (6) Phœbus and the Harp and Cupid.
 8.46: Vocal novelty—The Bohemian Duo, (a) "To-night You Belong to me" (David), (b) "A Little Music in the Moonlight" (Fell).

- 8.54: Duet and chorus—Doris Vane, Harold Williams, and Chorus, "Only a Rose" (Friml) (Columbia Record 01271).
 8.58: Weather report.
 9.0: Selections—Orchestra, (a) "In a Chinese Temple Garden" (Ketelbey), (b) "Danse des Persanes" (Moussorgsky).
 9.10: Hawaiian orchestra—The Tui Orchestra, (a) "Together" (Henderson), (b) "My Persian Rosebud" (Nicholls), (c) "Back in Your Own Back-yard" (Dreyer).
 9.18: Vocal trio—The Nifty Three, (a) "She No Wanna" (Warren), (b) "Sometimes I'm Happy" (Youmans).
 9.25: Selection—Orchestra, "The Gondoliers" (Sullivan).
 9.35: His Master's Voice Dance Programme:
 Waltz—International Concert Orchestra, "Blue Danube" (Strauss) (Zonophone Record EF21).
 Comedian with chorus—Clarkson Rose, "Hippopotamus" (Carlton) (Zonophone Record 5145).
 Foxtrot with vocal chorus—Shilkret's Orchestra, "Flower of Love" (Dreyer) (H.M.V. Record EA481).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "Dancing Shadows" (Golden) (H.M.V. Record EA367).
 Waltz—Paul Whiteman's Orchestra, "Cheerie Beerie Bee" (Wayne) (H.M.V. Record EA396).
 9.51: Tenor solo—Franklyn Baur, "Just Across the Street from Heaven" (Newman) (Zonophone Record EE107).
 Saxophone solo—Rudy Wiedoeft, "Rubenola" (Wiedoeft) (Zonophone Record EE119).
 Tango Argentino—International Novelty Orchestra, "Y Como Le Va?" (Valverde) (H.M.V. Record EA364).
 Wurlitzer organ solo—Jesse Crawford, "The Dance of the Blue Danube" (Fisher) (H.M.V. Record EA404).
 10.3: Duet—Maurice and Sidney, "Toy-Town Artillery" (Lynton) (Zonophone Record 5161).
 Dance Orchestra—Shilkret's Rhythm Melodists, "Dolly Dimples" (Alter) (H.M.V. Record EA336).
 10.9: Baritone solo—John Brownlee, "Sirs! Your Toast" (Bizet) (H.M.V. Record D13963).
 Wurlitzer organ solo—Jesse Crawford, "I Can't Do Without You" (Berlin) (H.M.V. Record EA404).
 Waltz—Wurlitzer organ solo—Chas. W. Saxby, "Janette" (Nicholls) (Zonophone Record 5094).
 Yale Blues—Rio Grand Tango Band, "A Blue Serenade" (Lytell) (H.M.V. Record B5355).
 10.23: Tenor with cinema organ—Gerald Griffin, "My Irish Song of Songs" (Sullivan) (Zonophone Record 2989).
 Wurlitzer organ solo—Jesse Crawford, "King For a Day" (Lewis) (H.M.V. Record EA425).
 Foxtrot with vocal refrain—Nat Shilkret and Victor Orchestra, "Hallelujah" (Robin) (H.M.V. Record EA253).
 Foxtrot with vocal refrain—Waring's Pennsylvanians, "What Do You Say?" (Yellen) (H.M.V. Record EA340).
 10.36: Male Quartet—De Reszke Singers, "My Lady Chloe" (Leighton) (H.M.V. Record E432).
 Foxtrot—Nat Shilkret's Orchestra, "Rio Rita" (McCarthy) (H.M.V. Record EA315).
 Foxtrot—Zez Confrey, "Polly" (Zamecnik) (H.M.V. Record EA267).
 Foxtrot—Nat Shilkret's Orchestra, "The Kinkajou" (McCarthy) (H.M.V. Record EA315).
 10.49: Male Quartet—De Reszke Singers, "Absent" (Metcalfe) (H.M.V. Record E432).
 Duet with violin and guitar—Dalhart and Robison, "Oh, Suzanna" (Foster) (H.M.V. Record EA309).
 Hawaiian—Ferreira and Paaluh, "Hawaiian Waltz Medley" (Trdtl.) (H.M.V. Record B2369).
 Barn Dance—Bert Firman's Dance Orchestra, "My Lady Dainty" (Hesse) (Zonophone Record 5118).
 Waltz—The Troubadours, "La Golondrina" (The Swallow) (H.M.V. Record EA349).
 11.0 Close down.

2YA, WELLINGTON (420 METRES)—SATURDAY, MARCH 23.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.55: Sports results to hand.
 5.0: Close down.
 6.0: Children's session conducted by Uncle Toby.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. Norman R. Jacobsen, "Athletics."
 8.0: Chimes of the G.P.O. clock.
 8.1: March—Orchestra, "March of the Tin Soldiers" (Kockert).
 Dance—Orchestra, "Dance of the Elves" (Moszkowski).
 8.9: Vocal quartet—Melodie Four, "Comrades in Arms" (Adam).
 8.13: Pianoforte novelty—Mr. James McKenzie (selected).
 8.19: Baritone solo—Mr. R. S. Allwright, "Mandalay" (Cobb).
 8.23: Xylophone solo with orchestral accompaniment—Mr. L. W. Probert and Orchestra, "William Tell" Overture (Rossini).
 8.33: Humour—Mr. Arthur Chalk, "The Sizzle of a Sausage" (Weston and Lee).
 8.40: Accordion solo—Johnnie Sylvester, "Ciribiribin" (Pestalozza) (Regal Record G20351).
 8.43: Tenor solo—Mr. Sam Duncan, "Somewhere a Voice is Calling" (Tate).
 8.47: Marimba Orchestra—Rio Marimba Orchestra, "Three o'Clock in the Morning" (Robledo) (Columbia Record 02685).

- 8.51: Vocal quartet—Melodie Four, "Mosquitoes" (Bliss) (by request).
 8.55: Suite—Orchestra, "Valses Piquantes" (Peel):
 1. Allegretto 3. Andante languide
 2. Presto 4. Allegro con spirito
 9.2: Weather report.
 9.4: Tenor solo—Mr. Frank Bryant, "Blue Sky and White Road" (Coates).
 9.8: Instrumental—Orchestra, repeat number.
 9.16: Humour—Mr. Arthur Chalk, "They All Fell Out" (Long).
 9.22: Pianoforte novelty—Mr. James McKenzie (selected).
 9.28: Bass solo—Mr. W. W. Marshall, "Love Me and the World is Mine" (Ball).
 9.32: Musical comedy selection—Orchestra, "Madame Pompadour" (Fall).
 9.42: Chorus with orchestra—D'Oyly Carte Opera Company, "List and Learn" ("The Gondoliers") (Sullivan) (H.M.V. Record D1334).
 9.46: Vocal quartet—Melodie Four, "Jeannine, I Dream of Lilac-Time" (Donaldson).
 9.50: Instrumental—Orchestra, Dance Novelties.
 10.0: "His Master's Voice" Dance Programme:
 Band—American Legion Band, "March Salutation" (Seitz) (Zonophone Record EE74).
 Foxtrot with vocal chorus—Nat Shilkret's Orchestra, "Lonesome in the Moonlight" (Russell) (H.M.V. Record EA431).
 Foxtrot—Nat Shilkret's Orchestra, "Fascinating Vamp" (Nussbaum) (H.M.V. Record EA367).
 Foxtrot—Nat Shilkret's Orchestra, "What's the Reason?" (Atteridge) (H.M.V. Record EA378).
 10.18: Vocal duet with violin, banjo, and guitar—Dalhart and Robison, "The Little Green Valley" (Robison) (H.M.V. Record EA382).
 Foxtrot—Coon Sander's Orchestra, "Ready for the River" (Kahn) (H.M.V. Record EA378).
 Foxtrot—Paul Whiteman's Orchestra, "It Was the Dawn of Love" (Davis) (H.M.V. Record EA381).
 Waltz—Rhythmic Eight, "Neapolitan Nights" (Zamecnik) (Zonophone Record EE106).
 Waltz with vocal refrain—Goodrich Silvertown Cord Orchestra, "The Church Bells are Ringing for Mary" (Colby) (H.M.V. Record EA381).
 10.27: Tenor solo—Franklyn Baur, "I Wonder" (Silver) (H.M.V. Record EA392).
 Cinema organ solo—Chas. W. Saxby, "For My Baby" (Kahal) (Zonophone Record 5143).
 Foxtrot—Arcadians' Dance Orchestra, "Singapore Sorrows" (Le Soir) (Zonophone Record EE106).
 Waltz—Victor Arden and Phil Ohman's Orchestra, "Chiquita" (Wayne) (H.M.V. Record EA396).
 10.40: Tenor solo—Maurice Gunsky, "Why Do I Always Remember?" (Gunsky) (Zonophone Record EE17).
 Foxtrot—Paul Whiteman's Orchestra, "Louisiana" (Razaf) (H.M.V. Record EA386).
 Male trio with piano—California Humming Birds, "I Just Roll Along" (Trent) (H.M.V. Record EA356).
 Foxtrot—Paul Whiteman's Orchestra, "Dixie Dawn" (Trent) (H.M.V. Record EA386).
 Waltz—Rhythmic Eight, "Momsy" (Yellen) (Zonophone Record EE104).
 11.0: Close down.

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

- 3 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session conducted by Chuckie and Aunt Pat.
 7.15: News session.
 8.0: Chimes.

VAUDEVILLE PROGRAMME.

"THE REVELLERS" CONCERT PARTY

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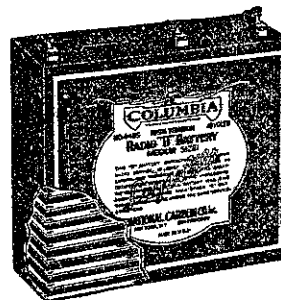
- 10.0: "His Master's Voice" Dance Programme:
 Foxtrot—Jack Hylton's Orchestra, "Swords and Sabres" (Bennett) (H.M.V. Record B5160).
 Foxtrot with vocal chorus—Rhythmic Eight, "Possibly" (Gibbons) (Zonophone Record EE97).
 Wurlitzer organ solo—Jesse Crawford, "Jeannine, I Dream of Lilac-Time" (Gilbert) (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 AE426).
 Foxtrot—Jack Hylton's Orchestra, "Palace of Dreams" (Waller) (H.M.V. Record EA426).
 Foxtrot—Jack Hylton's Orchestra, "Babying You" (Ruby) (H.M.V. Record B5160).
 Waltz with male quartet—The Troubadours, "Beggars of Life" (Brennan) (H.M.V. Record EA441).
 10.24: Tenor solo—John McCormack, "Mother Machree" (Ball) (H.M.V. Record DA958).
 Tango Argentino—International Novelty Orchestra, "El Choclo" (Villoldo) (H.M.V. Record EA364).
 Waltz—The Troubadours, "Cielito Lindo" (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).
 10.40: 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 Rackety Shack" (Tobias) (Zonophone Record EE97).
 Hawaiian—Fera and Paaluh, "Kilima Waltz" (traditional) (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.

4YA, DUNEDIN (463 METRES)—SATURDAY, MARCH 23.

- 7.15: News session.
 8.0: Town Hall chimes.
 8.1: Relay of Orchestral Music from the Octagon Theatre, under the direction of Mons. Henri de Rose, Mus. Bac.

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The famous Columbia *'Layerbilt'* Batteries are now available in two sizes; both 45 volts. One or the other of these two sizes will answer the requirements of every radio set made, except small portable sets.

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- 8.11: Bass solo—Mr. Neil Black, "The Picador" (St. Quentin).
 8.15: Recital—Mr. Lester Moller, "Colonel Crewitt's Reminiscences."
 8.21: Accordion solo—Johnnie Sylvester, "Ciribiribin" (Destalozza) (Regal Record G20851).
 8.24: Light songs—Miss Betty Roberts, (a) "Sunshine" (Berlin), (b) "Deep in My Heart" (Romberg).
 8.30: Scotch humour—Mr. Buster Brown, "The Safest o' the Family" (Lauder).
 8.35: Relay of Orchestral Music from Octagon Theatre.
 8.45: Bass solos—Mr. Neil Black, "In Sheltered Vale" (Dalguen), (b) "The Skipper's Home" (Conyers).
 8.52: Comedienne—Wish Wynne, "A Bedtime Story" (Wynne) (H.M.V. Record B2780).
 8.59: Weather report.
 9.1: Light song—Miss Betty Roberts, "One Alone" (Romberg).
 9.4: Recitals—Mr. Lester Moller, (a) "Admiral's Orders", (b) "The Liars" (Roberts).
 9.12: Soprano and male quartet—Norah Blaney and Ramblers, "Just Like Darby and Joan" (Leslie) (Columbia Record 01170).
 9.15: Scotch humour—Mr. Buster Brown, (a) "She is My Rosie" (Lauder), (b) "Just a Wee Deoch and Doris" (Lauder).
 9.23: Chorus and orchestra—Harold Williams, (a) "Only a Rose, (b) "Song of the Vagabonds" ("The Vagabond King" (Harbach).
 9.30: "H.M.V." Dance Programme:
 Military Band—H.M. Coldstream Guards, "Poet and Peasant" Overture (Suppe) (H.M.V. Record C1315).
 9.38: Foxtrot with vocal chorus—Henry Busse's Orchestra, "One Step to Heaven" (Klages) (H.M.V. Record EA437).
 Foxtrot—Arcadians Dance Orchestra, "There's Something About a Rose" (Fain) (Zonophone Record 5169).
 Waltz—The Troubadours, "Diane" (Rapee) (H.M.V. Record EA269).
 9.49: Duet with violin, banjo, guitar, and harmonics—Dalhart and Robinson, "My Blue Mountain Home" (Robison) (H.M.V. Record EA295).
 Jazz piano solo—Pauline Alpert, "The Dancing Tambourine" (Ponce) (Zonophone Record EE98).
 Foxtrot—Arcadians Dance Orchestra, "Chilly-Pom-Pom-Pee" (Bryan) (Zonophone Record 5169).
 Foxtrot—Henry Busse's Orchestra, "How About It?" (Klages) (H.M.V. Record EA437).
 10.2: Humour—Norman Long, "Under the Bazunka Tree" (Lee) (H.M.V. Record B2454).
 Wurlitzer organ solo—Jesse Crawford, "High Hat" (Alter) (H.M.V. Record EA426).
 Foxtrot with vocal refrain—George Olsen and his music, "Old Man Sunshine" (Dixon) (H.M.V. Record EA422).
 Foxtrot with vocal chorus—George Olsen and his music, "Doin' the Racoon" (Klages) (H.M.V. Record EA446).
 Foxtrot—"Louisiana Sugar Babies," "Persian Rag" (Kahn) (H.M.V. Record EA397).
 10.14: Tenor with orchestra—John McCormack, "Somewhere a Voice is Calling" (Tate) (H.M.V. Record DA914).
 Waltz—Hilo Hawaiian Orchestra, "Kawaihau Waltz" (Kealakai) (H.M.V. Record EA397).
 Foxtrot with vocal chorus—Shilkret's Orchestra, "Baby's Blue" (Hupfeld) (H.M.V. Record EA422).
 Foxtrot with vocal refrain—Statler Pennsylvanians, "It Goes Like This" (Caesar) (H.M.V. Record EA446).
 10.25: Bass-baritone solo—Peter Dawson, "Now Your Days of Philandering are Over" (Mozart) (H.M.V. Record C1401).
 10.29: Violin with cinema organ—Elsie Southgate, "Rose in the Bud" (Forester) (Zonophone 5109).
 Foxtrot—Nat Shilkret's Orchestra, "Nagasaki" (Dixon) (H.M.V. Record EA412).
 Guitar and piano—Roy Smeck and Art Kahn, "Itchin' Fingers" (Robison) (Zonophone Record EE119).
 Waltz—Nat Shilkret's Orchestra, "Till We Meet Again" (Egan) (H.M.V. Record EA412).
 10.42: Whispering voices—Devonshire Restaurant Dance Band, "At the End of an Irish Moonbeam" (Golden) (Zonophone Record EE84).
 10.46: Community Lancers—Bert Firman's Dance Orchestra, Figures 1, 2, 3, and 4 (Zonophone Record 5117).
 Community Lancers—Figure 5 (Zonophone Record 5118).
 11.0: Close down.

Sunday, March 24

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

- 8 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: Beresford Street Congregational Church—Divine service. Preacher, Rev. Lionel Fletcher. Organist, Mr. Alf. Eady. Mus. Director, Mr. William Gemmell.
 (During the evening Stainer's "Crucifixion" will be rendered by the Beresford Street Congregational Church Choir and Messrs. W. Gemmell and W. Littler, soloists.)

- The following items will be performed:—
 Tenor recitative—"And They Came to a Place Named Gethsemane."
 Chorus—"Jesu, Lord Jesu."
 Tenor recitative—"And They Led Him Away."
 Bass recitative—"Art Thou the Christ."
 Chorus—"Fling Wide the Gates."
 Tenor solo—"How Sweet is the Grace."
 Chorus—"Then On to the End."
 Bass recitative—"And When They Had Come."
 Hymn—"Cross of Sorrow."
 Bass solo—"He Made Himself Of No Reputation."
 Tenor solo—"King Ever Glorious."
 Bass—"And as Moses Lifted Up."
 Chorus—"God So Loved the World."
 Duet—"So Thou Lifest Thy Divine Petition."
 Chorus—"Appeal of the Crucified."
 9.40: Close down.

2YA, WELLINGTON (420 METRES)—SUNDAY, MARCH 24.

- 3.0 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 6.0: Children's Song Service, conducted by Uncle George.
 7.0: Relay of service from St. John's Presbyterian Church—
 Preacher: Rev. J. R. Blanchard, B.A.
 Organist and choirmaster: Mr. C. W. Kerry.
 8.15 (approx.): Studio Concert.
 Piano and orchestra—Alfred Cortot and Royal Albert Hall Orchestra, "1st Movement from Concerto in A Minor" (Schumann) (H.M.V. Records DB722-3).
 Trio—Wellington Ladies' Trio, "Night Hymn at Sea" (Thomson).
 String quartet—Lener String Quartet, "Menuetto—Quartet in D Major" (Haydn) (Columbia Record 04213).
 Soprano solo—Miss Nora Gray, "My Heart Ever Faithful" (Bach).
 Organ solo—Edouard Commettee, "Toccata" (Boellmann) (Columbia Record 0232).
 Contralto solo—Mrs. J. F. Pythian, "O Divine Redeemer" (Gounod).
 Violin solos—Efrem Zimbalist, (a) "Ave Maria" (Schubert); (b) "Impromptu" (Aulin) (Columbia Record 04220).
 Vocal duet—Miss Nora Gray and Mrs. J. F. Pythian, "The Angel" (Rubinstein).
 Orchestral—Bournemouth Municipal Orchestra, "Pique Dame" (Suppe) (Columbia 02730).
 Tenor solos—Lewis James, (a) "A Dream" (Bartlett); (b) "Dreams" (Strzelzki) (Columbia Record 01251).
 Cello solos—W. H. Squire (a) "Lament" (D'Herveloise-Squire); (b) "Rigaudon" (Trowell) (Columbia Record 04223).
 Vocal duet—Miss Nora Gray and Mrs. J. F. Pythian, "Beyond the Meadow Gate" (Phillips).
 Band selection—H.M. Grenadier Guards, "Nell Gwynn Dances": 1. Country Dance; 2. Pastoral Dance; 3. Merry-makers' Dance. (Columbia Records 01329-30).
 Baritone solo—Alexander Kisselburgh, "Danny Deever" (Darmrosch) (Columbia Record 02706).
 Vocal trio—Wellington Ladies' Trio, "A Spring Song" (Pinsuti).
 Band—Band of the Royal Air Force, "Our Director," march (Bigelow) (Columbia Record 01354).
 Close down.

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

- 8.0 p.m.: Afternoon session—Selected gramophone items.
 4.30: Close down.
 5.30: Children's Song Service.
 6.15: Hymn chimes.
 6.30: Relay of evening service from East Belt Methodist School, (Sunday School Anniversary).
 Preacher: Rev. Wm. Greenslade.
 Organist: Mr. L. Rickard.
 Choirmaster: Mr. W. Sherris.
 8.0 (approx.): Orchestral—Royal Philharmonic Orchestra, "Symphony No. 6 in C Major" 1st Movement (Allegro) (Kurt Atterberg) (Columbia Record 04216-7) (Grand prize work in Schubert Centenary Columbia International Composers' Contest).
 8.12: Mezzo-soprano solo—Miss Myra Edmonds, "Praise Ye The Lord" (Bantock).
 8.18: Violin solo—Isolde Menges, "Ave Maria" (Schubert) (H.M.V. Record D1313).
 8.20: Tenor recitative and aria—Mr. George Fawcett, (a) "Deeper and Deeper Still"; (b) "Waft Her Angels" (Jeptah's Daughter) (Handel).
 8.24: Piano and orchestra—Ignaz Friedman, "Concerto in A Minor" (Grieg) (1st Movement) (Columbia Record 02702-3).
 8.40: Contralto solo—Mrs. D. W. Stallard, "Come Unto Me" (Lindsay).
 8.44: Solo, chorus and orchestra—Tudor Davies, "O Jesu Help! Pray For Me, Mary" ("Deam of Cerontius") (Elgar) (H.M.V. Record D1350).
 8.48: Mezzo-soprano solos—Miss Myra Edmonds, (a) "Gloria" (Buzzi-Peccia); (b) "Thanks Be To God" (Dickson).
 8.55: Solo, chorus and orchestra—Tudor Davies, "So Pray For Me My Friends" (Elgar) (H.M.V. Record D1350).
 Orchestral—New Light Symphony Orchestra, "Intermezzo" ("Cavalleria Rusticana" (Mascagni) (H.M.G. Record B2377).
 9.3: Tenor solo—Mr. George Fawcett, "Thou Shalt Break Them" ("Messiah") (Handel).

- 9.8: Organ solo—Herbert Dawson, "Meditation" (D'Evrey) (H.M.V. Record 1321).
 9.12: Contralto solos—Mrs. D. W. Stallard, (a) "Resignation" (Lindsay), (b) "Too Late, Too Late" (Lindsay).
 9.19: Orchestral—National Symphony Orchestra, "Stradella" (Flotow) (Zonophone EE116).
 9.30: Close down.

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

- 5.30 p.m.: Children's Sunday service, conducted by Big Brother Bill.
 6.30: Relay of service from Moray Place Congregational Church.
 Preacher: Rev. Albert Mead.
 8.5: Relay from St. Kilda Band Rotunda of concert by the St. Kilda Band under the conductorship of Mr. James Dixon.
 9.15: Close down.

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.

A Little Appreciation.

IN renewing his subscription a correspondent writes:—Needless to say, we look forward to our copy. Without the "Record" one feels absolutely lost as regards what is on the air. We are away from the hurley-burley of city life, and daily newspapers are out of the question. I am one of the official listeners, and I find it very interesting work, especially as I am a keen experimenter. I built a "Record" shortwave set, and results have been very satisfactory. I have also made broadcast coils for this set, and to-night 2YA is roaring in at full volume—in fact, I have had to change over to large loudspeaker, and almost shut off A battery current to valves. (This is unwise. Try a variable resistance 0-10,000 ohms across aerial and earth. Technical Ed.) Considering that we are 450 miles airline from 2YA this speaks well for "Record" set. Of course, we are right on the coast, and waves have mostly the Tasman Sea to cross with the exception of alongside Egmont and over the Wellington hills. All subscribers should now be more than satisfied with the "Record"—everyone is catered for under separate headings.—H.W.Y., North Auckland.

Letter Received by Maori Lecturer.

THE following is a letter received by Hare Hongi, Esq., from Edmund Bostock, of s.s. Northumberland, Port Lyttelton, and should be of interest to all readers:—

"It was with great pleasure and profit that I listened on the wireless to your lecturettes upon the Maori, his origin and language. I was reminded of like imagery and profound insight in the Welsh tongue.

"I am glad increasing public attention is being drawn to this wonderful race. May I suggest that stress be applied to the musical genius of the race, and an attempt be seriously made to preserve and revive the old folk-songs, with (if I may judge from the few examples I have heard) their wonderful rhythmic movement and melody. Much could be done in our schools, and from our broadcasting stations, reserving a place for them in every programme. The negro plantation song and dance has captured America; it has invaded Australia, and is not unknown in New Zealand. Is it impossible to achieve like results for the Maori in his native land? He deserves it; it is worth at-

tempting. New Zealand would be richer for it.

"Wishing you great success in your public addresses, that they may be fruitful, especially among the students of the Dominion."

Altering of Programmes.

I AM a subscriber to the "Radio Record," and understand that the programmes published therein are the official ones for the four stations. A considerable number of the items are gramophone records which I appreciate very much. They are in many cases an improvement upon the talent that is available in New Zealand. The most annoying part is that when tuning in to a station to hear a record that is on the programme it has been changed to something else. This I contend is not fair to the listener. To-night, the 6th instant, 4YA has put on so far two records which are not on the official programme. Undoubtedly it is very hard to please all listeners, but I contend that if an item on a programme is not to that listener's liking he is perfectly justified in tuning in to another station and getting what he expects to find on the programme at the time published.

I have in mind that recently 1YA put over during an evening's performance not one of the records as advertised in the "Radio Record." Personally I cannot see any excuse for the chopping and changing of records.

The compiling of programmes must entail a considerable amount of time and expense which comes out of listeners' fees and if the stations cannot put on the records as advertised, the compiling of programmes could be dispensed with and run the programmes a la Rafferty's Rules. This is a matter I feel sure the company can without any trouble put right, it would I am sure be appreciated by listeners, and would also show that the company is making an honest endeavour to please those interested in gramophone record radio. Trusting my constructive criticism and "tactful persistence" will be appreciated and wishing the company every success.—H.F.B. (Auckland).

IF a loudspeaker is connected to the input terminals of an amplifier, speech from this can be reproduced by the main loudspeaker.

Hawke's Bay Notes

MAY we all be preserved from having to listen to any more nights like those which ruled up this way on Thursday and Friday of last week. Friday especially was "dynamite," the worst for static experienced for months, and the only consolation is the fact that such nights are few and far between.

On Thursday night, when 2YA put over their relay of the Hawera schools' orchestral concert, conditions were absolutely "putrid," and no one up this way could get any enjoyment out of it. One doesn't know if it was the atmospheric conditions to blame, but the transmission, or shall we say reception, from 2YA on that occasion was right over the edge.

QUITE a converse story was held on the previous Tuesday night, when 2YA put over one of its best concerts for months. Everybody is still talking of it, and more of those nights, especially with the dance music to finish up with, would be highly appreciated in these quarters, Mr. Organiser.

THE "Aussies" are "on top of the world" just now. Up here, practically all of them are received good and strong with 2BL at the head. Even 3LO has been performing well, but it didn't live up to expectations in the minds of enthusiasts who were anxious to listen to the Grime-La Barba boxing contest. It is hoped that the Sydney stations and boxing authorities, too, will remember New Zealand when Johnnie Leckie gets into the ring, and allow his "scraps" to be broadcast.

A GOOD many American "scalps" have been notched up here recently. These DX stations, also the Japs., are coming through with almost winter volume. KNX, KHJ, KFON, WENR,

and one or two others are now nightly occurrences, so it looks good for the coming winter.

GOOD news this week! The Napier Radio Society, which has been in a Rip Van Winkle state for a long time, is sitting up and taking nourishment. A preliminary meeting was held this week, and the annual meeting is to be held on April 10. No, it's up to listeners to support the Radio Club. Radio clubs are not formed for fun, but there are many listeners who are prepared to leave the hard work to the MUGS, keep their sub. in their pocket, but reap any benefits forthcoming. The Napier Club has fallen into line with the Hawke's Bay Society and reduced subs. to 2s. 6d. (1s. for juniors), but unless all listeners join up at that price, the road of financial progress is not strewn with roses. With all joining up the coast is clear, so it's up to listeners, both in Hastings and Napier, to support their societies. These two clubs should be able to join up, too, or at any rate work together with interchanges of visitors, etc., and generally give more than reasonable value for a paltry "half a dollar." Good luck, Napier!

NAPIER'S 50-watt "B" station is not on the air yet, but hopes are that it will be heard in a couple of weeks.

To radio listeners in Napier and Hastings: Don't forget the Hawke's Bay Society's flannel ball in the Hastings Assembly Hall on show night. Funds are wanted for several interesting projects, and it is hoped to get a little for "down south" from the ball.

LATEST information from Java advises that a big station is under construction in Holland for the purposes of relaying big European stations overseas. It will have a power of between 60 and 70 k.w., and when in good working order will be increased to 100 k.w.

Have Safe Easter Trips by Rail

SAVE 6/- IN THE £

Working carefully, day and night, on the principle of "Safety First," your Railways have carried more than 70 million passengers without one fatality during the past three years.

Have a safe, comfortable Easter holiday with the help of the liberal concession fares of your own Railways.

These special concession trips will begin from 26th March to 1st April, but tickets will be obtainable at all railway booking offices 14 days before the date of travel and will be available for return until 4th May.

Write to the Officer-in-Charge, Publicity Branch, N.Z. Railways, Wellington, for literature regarding the principal tourist resorts.

With Listener and Company

A Nightly Dance Programme for Strong Valves.

A PALMERSTON NORTH correspondent writes: "I write to congratulate you on the excellence of the programme broadcast from your station on the evening of Tuesday, the 26th instant, more particularly that portion broadcast between 10 and 11 p.m. In the past I have had occasion to comment unfavourably on the general type of programmes and the reception of same in Palmerston North, therefore I feel that it is due to you to express my appreciation on this occasion. I am of the opinion that such a programme of good syncopated numbers, rendered, say, once a week, would do much to popularise radio with the younger generation who are at present your most severe critics. After all, look at it as you will, this is a jazz age. For your information I might say that we are at the present camping some 60 miles north of Palmerston North in a river valley. Our tents are actually pitched in a depression surrounded on all sides by papa cliffs approximately 200ft. high. The aerial is crude, being only 25ft. high at the top end and sloping directly in to the set. The aerial is approximately at right angles to your station. The set is a four-valve Brown-ing Drake. Reception was perfect. We

have also picked you up in the after-noon. The rustics of the district are thrilled to the boots, and we ourselves feel that such a programme could be the forerunner of many others similar, thus giving us some return for capital invested and our annual license."

In the course of his reply, the general manager said: "This dance programme marks the introduction of a plan whereby it will be possible for a listener with a sufficiently powerful set to receive a dance programme from one or other of our stations on each night in the week, Tuesday being the night which is set aside for 2YA."

Pleasing Someone Some of the Time.

A CRITIC, resentful of too much "highbrow" music wrote thusly: "Undoubtedly the programme submitted to-day was highbrow in the extreme. Opera with a vengeance puts it mildly. An operatic record now and again is not too bad, but when one gets every half an hour of a crowd of Germans yelling it reminds one of the night raids we used to have during a little scrap a while ago. Granted the transmission was perfect in every respect, yet I think it only fair that something of a lighter type and sung in English would be more acceptable to the majority of listeners. The chosen few get more than their share of opera during the week-day sessions. I notice, too, that 1YA has a penchant for putting over the worst possible type of record—massed voices and choirs. There is a terrific amount of mush with this class of record. Could not the literary selection be cut out on Sunday? I quite understand that it is impossible to please everybody, but I certainly think that 1YA has well earned its name of being run in conjunction with the wowser fraternity."

The general manager in replying put the position in this fashion: "As you are aware, in arranging our programmes we have to cater for the varied requirements of a great number of listeners, and it is not practicable for us to please everyone at all times. We endeavour as far as possible, however, to provide items which will please the majority, and will therefore be pleased to give your request for lighter numbers on Sunday afternoon every consideration. In regard to the literary talks, the reports which reach this office indicate that they are much appreciated, although we would be pleased to consider eliminating them on Sunday afternoon for the time being in accordance with your request."

Distortion?

THIS extract from a report by an official listener is of interest:—"Distortion was noticed several times when the crystal was controlling, but the second half of the programme under M.O. control was terribly distorted for periods of half to one minute during the remaining part of the programme, at intervals of about five minutes between each attack. Still I am quite sure this would have been the same if crystal control had been maintained throughout the evening. During the present month 2YA's distortion has been very, very bad after about 9 p.m. every night, I am sure that I am right in stating it has been the worst

since 2YA came on the air; personally, I think the only remedy to cure this distortion is a change of wavelength, and then I am positive that in doing this you will only alter the locality of the distortion."

Advice to Listeners.

TO another suggestion that the Broadcasting Company should employ mechanics who would advise and help listeners in the adjustment of their sets so as to secure the best results, the general manager wrote:

"The personal investigation of trouble in receiving sets is a matter which is normally beyond the province of the company's scope of activity. The successful development of a broadcasting service is dependent upon at least two factors, namely, efficient transmission and efficient reception, and whilst in a broader sense, co-operation between the broadcasting and the listener is essential, individual effort is equally necessary."

The company contributes towards the success of the service by making provision for technically efficient transmissions, and towards this end, as you are aware, we have provided modern broadcasting apparatus and have placed it under the control of expert engineers. We are in a position to state, therefore, that as a general rule our transmissions are as technically perfect as it is possible for us to make them, and although irregularities will occur even under ideal conditions, they are infrequent and can be regarded as abnormal."

Inefficient Earth.

A PROPOS to the above, as showing the simple things which may happen to militate considerably against good reception, a correspondent writes:

"A gentleman friend said his wireless had been good, but it was no good now, and he was giving it up. He asked me to look at it, but I told him I did not know the first thing about wireless, and my advice could not be of any help. I did look at it, but saw nothing wrong. I found the earth wire was fixed to the tap over the sink. The wire had been bound round the back of the tap, there being perhaps six turns. It was just before 5 p.m., and we could hear only by straining. I suggested that the hot steam from the sink might have carried some grease with it, and that gradually the grease had got between the wire and the tap. I undid the wire, cleaned it and the tap, and refixed it. At 8.30 my friend called and said he could hear perfect-

ly, and that he was having the wire soldered to the tap."

Before or After is Which?

A LISTENER writes regarding the practice followed by 2YA of the name of an item after the piece has been broadcast. "As a regular listener to your station, I take this opportunity of thanking and congratulating you on the excellence of your Sunday afternoon and evening programmes. And now, may I indulge in a little criticism? Why are we not told until after we have heard an item, what it is we have been listening to? I maintain that nobody but the most supreme musician could possibly appreciate a piece of music unless he had some idea of what it is intended to mean. Then again, we all love to hear Grand Opera sung by its best exponents of the day, but we could surely understand and appreciate much more if we had some idea of what we were listening to."

"Now, Sir, the only explanation I can think of for this strange and unorthodox method of announcing, is that some people (musical hypocrites or pretenders, presumably) like to try and say, from hearing a piece of music, what it is without being previously told. But how many can do this? No, its an average listener, who loves good music, such as is broadcast per medium of the gramophone. I say, emphatically, that the whole effect is lost, through not knowing, or only having a faint memory of having heard, the title, and though striving vainly to bring up to mind what is meant. Meanwhile the music goes on, unheeded, or only those parts which seem slightly familiar, heeded, in an attempt to think of its name. Let us get back to the good old way of first announcing what we are to have, and then the music itself being broadcast, in order to give us a chance to get worked up to the necessary pitch to be able to properly and truly enraptured and enthralled by the works of the great masters."

THE General Manager replied: "It has the advantage that special attention can be given to the title of a selection which may be of special interest. In the case where the announcement is made beforehand, the title of a selection unknown to the listener is not of special interest unless the selection itself is, and the latter point can only be determined after the item is broadcast. The scheme appears to be giving every satisfaction, although we will be very glad to bear your comments in mind."

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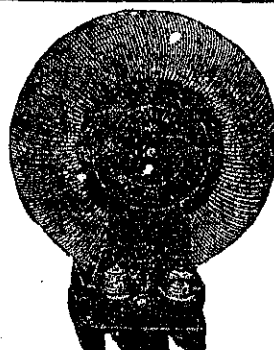
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404 WORCESTER ST., CHRISTCHURCH

Our Crystal Corner

By "Galena"

Crystal and Catwhisker.

WHAT is the best crystal and whisker combination to use in a set? asks "Crystal" (Wellington):

A fine grained galena crystal with any coiled catwhisker wire. The advantage of one type of wire from another, within certain limits, is negligible. Thus a gold wire is little to be preferred to a copper one, but there are certain observations as in the following:—

A catwhisker of almost any metal pressing upon a crystal will produce results of a sort, but it is useless to expect the best unless a really good and suitable one is employed. It will be found that much better and more permanent results are obtainable if gold, silver or one of the special alloys is used for making contact with the crystal. Copper and brass will give good results so long as they are clean and perfectly free from tarnish, but they are really more trouble than they are worth, since the point must be perpetually brightened. The other metals mentioned are more or less non-tarnishing.

Catwhiskers should also be light and springy, hence only a very slender wire should be used, and it should not be scratched across the surface of the crystal, since in this way the sensitive points are destroyed. The object should be to lower the point straight down upon the surface and if this point is not suitable, lift it and lower it on to a fresh point.

The Crystal Valve.

"A.G.B." (Brooklyn), who is using the "A.Crystal and Valve," wishes to know if the crystal is dismantled from the set, should signals be heard.

ANSWER: Unless they are loud, they will not detract from the efficiency of the set. Where this set is being used close to a powerful transmitter, a certain amount of rectification will take place with the most carefully constructed amplifiers of this type. Suggestions to offset this were published previously.

I am using a 4-vaned variable condenser. Is this large enough, or should I place a fixed condenser in parallel with this?

ANSWER: The capacity is not sufficient, and a fixed condenser of at least .0004 would have to be placed in series with it. This, however, would very much limit the tuning range.

I cannot cut out 2YA. Is this to be expected?

ANSWER: Yes. 2YA is rather too powerful to limit to a short range of the tuning condenser of the 1-valve set.

Would the double grid valve be suitable for this set?

ANSWER: Yes. Either A141 or A441. The pentode would not be suitable, and the running cost would be too high.

Should there be any hand capacity when tuning?

ANSWER: No. If there is, reverse the connections to the condenser.

The Full Wave Variometer Set.

"X.Y.Z." (Wellington) writes: "You state in reference to the 15 turns on the stator, 'Connect one end to the aerial and the other to the primary winding of the other variometer.' Is it meant that there are an extra 15 turns on both stators?"

ANSWER: Yes. By primary is meant the extra 15 turns on each stator.

I have tried many times to get full wave results, but have always been unsuccessful. I have not tried the two carbondums. Are they likely to be matched, for I have read in an American magazine that full wave rectification with a crystal is impossible, because of the difficulty of getting two matched crystals.

ANSWER: If the correspondent has not tried carbondum crystals, there is no wonder that he has not been successful, for it is absolutely essential that permanent crystals be used, for if the catwhisker or other contact is not at the most sensitive position full wave rectification cannot take place. The following letter from an English magazine seems rather to be of a different tone to the American.

Full Wave Rectification.

IT has been stated by one correspondent that full-wave rectification is impossible because of the impracticability of perfectly matching two crystals, but the following letter from "Popular Wireless" is a contradiction of this statement: "Dear Sir,—It is an amusing fact that, almost invariably, when a reader writes to 'P.W.' on the above subject, he preambles with information to the effect that though the owner of a multi-valve set, he occasionally 'plays about,' or 'messes with' a crystal, to entertain the kids, or kittens, or because his grandmother is afraid of an explosion in a high tension battery. May I, therefore, on behalf of less ashamed, or apologetic crystal users, herald the fact that I abandoned the valve for the 'humble crystal' six years ago, and that 'since then' I have never regretted it? I must add that this amazing act is greatly due to 'P.W.' which, at the time, published a method of using two crystals as rectifiers. Unfortunately, this method was technically damned in the following issue by a destructive critic. Six years' test has, however, more than vindicated the 'P.W.' invention. The circuit in which the twin crystals are employed has never been published, and never will—because it is too good to appear true.—Grand Knight of the Whisker."

Poetry Competition

STATION 2YA has received a total of 50 entries in connection with the Poetry Competition. The judges' report and the names of the winners will appear in next week's issue.

D.X. News

New Stations.

MR. DUDLEY HUSTON, Timaru, writes:—

I was fortunate enough to log two apparently "new" Americans last evening, Sunday March 3, which both came through at loudspeaker strength.

KMA, Shenandoah, Iowa, was the first to be received, and he came in just a fraction above KWFB, in fact the two stations were heterodyning to a certain extent. Just a degree above him I logged KFBI, Denver, Ohio, who was also "colliding" with KOIN, Portland, Oregon.

It was certainly a "night out" for the Americans, and even RFI, Los Angeles, on about 450 metres, was coming in at fair volume.

New American Logged.

FEBRUARY has been a wonderful month for DX hounds, and I am sure there will be some record receptions coming to light, if the same conditions continue. This applies particularly to the Americans, some of them have come through with astounding volume. KFI, on late frolic, on the 3rd, audible 50 yards from loudspeaker. The "Aussies," too, are being received at good strength from 8 o'clock most evenings. 7ZL and 5CL have attained loudspeaker strength. The Japs. have been rather patchy, with JOAK and JOHK at loudspeaker strength occasionally soon after 9 o'clock.

The station "Kauspanka" queries is most likely KGJK, on about 260 metres. This station was fair strength on Saturday evening. The following are new loggings during the month:—

KMIC (267), KSL (265), KJR (309), KTM (380), KFVB (316), KFOX (240), KMOX (277), WBBM (385), KFRC (492), KFWM (325), KFSD? (500), 3DB (253), 4ZO (277) and what sounded like KFNF, "Shenandoah, Iowa," on 329 metres. "H.P.G." and others will find that the Americans will fall off considerably in volume as we get into the winter months; that at least is my experience.—W. E. DAVIES (Picton).

Experience With the S.G. Browning-Drake

A CORRESPONDENT, "Screen Grid," has been experimenting with the types of Browning Drake, and his results are as follows: With a high impedance valve (199 type) as R.F., his results were weak. Using a lower power impedance valve (201 type), and a phasatrol stabiliser, the result was much better. He found the 3-coil shielded model very good, but it gave rather much trouble, but the screen grid was excellent. Using a push pull amplifier with two power valves, he states that nothing could be better for clarity and volume. With this model he worked Australian stations full loudspeaker strength during all February.

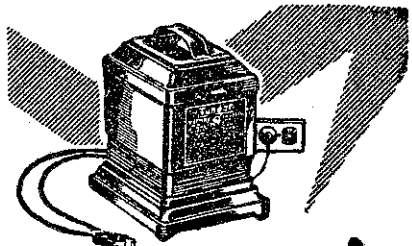
VIOLENT and uncontrollable oscillation on a short-wave set is very often due to the fact that the high-frequency choke and the reaction condenser are setting up an unwanted tuning effect (the easiest cure is another H.F. choke).

Australian License Figures

THE position as regarding licenses in Australia is a very interesting one. At the present time, there are 289,000 odd licenses issued, representing a percentage of 4.6 for the Commonwealth. This is an increase of 277 during the month of January. The highest ratio is in Victoria, where 8 per cent. of the total population listen in. However, during the month of January, the number of licenses in this State dropped 597, making the now existing total just over 141,000. South Australia is next with a percentage of 3.88.

As in New Zealand, the licenses are now falling due, and warnings are being issued to listeners to renew their licenses immediately, and not allow through neglect, Court proceedings.

FOR a sensitive long-distance set it is often an advantage to use a variable condenser as a grid condenser, provided that this does not necessitate long wiring.



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The "Shielded Five" Neutrodyne

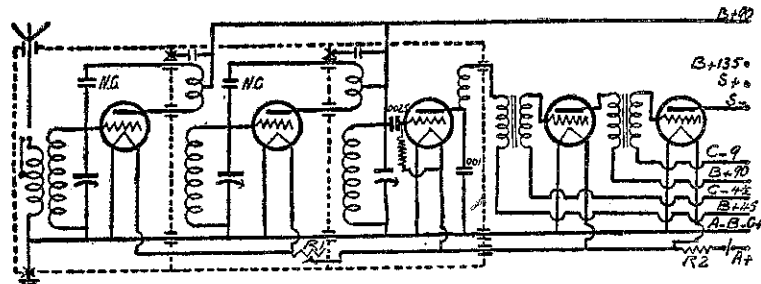
A Trouble-free Receiver with Great Capabilities



THE writer has often been asked which circuit and arrangement in his opinion is the most efficient using standard valves, coils, etc. It is a difficult question to answer, because of the multitude of "stunt" circuits available. Details are seldom given with the question as to the number of valves proposed to be used or to the depth into his pocket the prospective builder is prepared to go. There are many who just require diagrams of two or three valve sets and this class can be soon satisfied by

when the set is finished the chances of trouble are very remote. As it will be seen, each stage is completely shielded with by-pass condensers to confine each set of oscillations to their own compartment. The wiring is extremely simple as each screening box is wired up practically the same. If the shields are securely fastened together by brass bolts and the A—lead of each filament secured to the shields then these will act as the filament return and render

"By PENTODE"



running through the numerous small circuits that have been proved to be suitable for this country.

When, however, it comes to a multi-valve receiver of five or six valves the matter has to be given more careful consideration. Not a few of the published circuits of these larger sets are quite suitable for an experienced builder to tackle, but the man who anticipates building his first receiver has to tread warily, choosing a circuit having a good latitude of safety for any mistakes in lay-out, etc., due to inexperience. How many otherwise enthusiastic radio builders have been turned right off wireless through a failure when building their first set. More experienced workers have also often been frankly puzzled over the indifferent results from a multivalve receiver.

The writer has been in close touch with many set builders and 99 per cent. of the poor results obtained from a home-built set has been beyond doubt due to the general arrangement and not the circuit.

The poor theoretical diagram gets blamed every time and the common cry is that "this and that circuit is no good, I've tried it."

What is a Good Receiver?

RETURNING once more to the question of the most efficient receiver. "Pentode" considers that the straight five-valve shielded receiver, to be now described, to be one of the most efficient. Of course, this is just using standard three electrode valves, standard coils, condensers, etc. Speaking of general efficiency, it is meant to include ease of control, reliability and certainty of results. When correctly neutralised it will not oscillate.

The actual circuit is by no means recent and there is little difference between this and published details of most five-valve receivers. It is the general lay-out that differs, and precautions have been taken so that

very often makes the receiver far more stable in operation. Especially is this necessary if long speaker leads are used.

A rheostat is used to control the volume by regulating the filaments of the first two valves. In the positive lead controlling the detector and audio filaments is inserted a fixed resistance of

small value (an amperite may be used and the value of this can be easily calculated when the type of valves to be used is known. It is a great mistake to try to control volume by dimming the audio-frequency valves. Whatever the volume these should be kept operating at their correct temperature and all the control be done from the radio-frequency end. The main switch is arranged to work in conjunction with the speaker, plug and jack. To withdraw the plug cuts off all batteries.

A list of components is given, as this often proves helpful when buying.

Making the Shield.

THE screening box will first be described for those who desire to make their own. It will perhaps be easier if it is stated that it is merely a metal box, 6in. high, 15in. long, and 9in. from back to front, with a movable lid, and divided into three compartments each five inches wide. Lay the sheet of aluminium, copper would do just as well, on a flat surface, and mark out before cutting. Although a sheet only 15in. wide is necessary, the sheets are usually of a standard width, 24in., and a strip will be left over. This is unavoidable if the whole is to be made from one piece.

The sizes and shape are given, and a 1/2in. overlap should be left as in previously-described screens. The front is cut in one piece so that it will have no rivets or bolts to prevent it from lying flush with the front panel. The partition separators are best bolted into place from the back and screwed to the baseboard through the bottom of the main metal can. There is no necessity to fasten the front edge unless the whole is made of copper, when

hold firmly while holes are drilled through the joints to take small nuts and bolts or rivets. These joints along the bottom can be fixed by screwing directly into the baseboard.

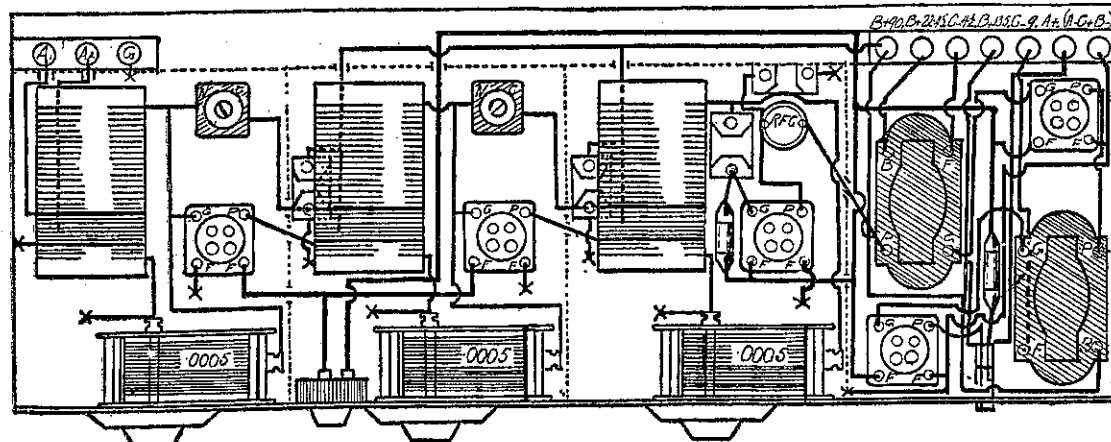
Before finally fixing the partitions into place, drill holes where indicated through which the insulated leads go from one compartment to the next. These should be about 3-16in. diameter, and about 2in. from the bottom. The first partition will need three holes and the next two holes. The holes round the outside can be drilled afterwards. The lid comes next, and should be made quite flat, so that it will rest down evenly, making a more or less radio tight joint.

Mounting the Components.

BEFORE fixing to the baseboard and panel, mount the three variable condensers, or one in each compartment. If of the single hole mounting type one hole is sufficient, making sure it is in such a place that the moving vanes cannot foul the metal screen.

In the middle compartment, between the left-hand and centre condensers, is mounted the rheostat. There will be room for this at the bottom left-hand corner of the centre division. If not, then a portion of the metal screen will have to be cut away. Be careful note if either of the terminals or the centre spindle of the rheostat is liable to touch the metal screen. It must be carefully insulated therefrom, even if a large hole has to be cut in the screen. Dismantle these components, and after screwing the panel to the baseboard lay the screening box in position. This has to be towards the left-hand side, and close to the panel, with a sharp scribe mark through the holes in the aluminium front to the ebonite panel, showing where holes have to be drilled to mount the condensers and rheostat.

Before attempting to drill for the speaker jack, arrange the components on the audio side and let the jack lie



it can be soldered, including all the seams.

To bend the aluminium clamp firmly between two straight pieces of wood, with the line along which the bend is to be made just showing. Now bend sharply and lay a flat piece of wood along the bend which can be tapped gently. When the box is bent to shape,

between the second transformer and the last valve. The various 3-16in. holes can be drilled around the outside, half an inch from the bottom, in the positions shown in the layout diagram.

Making the Coils.

BEFORE anything further can be done to the set, the coils have to

be made. These are solenoid coils with a primary wound over one end separating the two windings by two or three layers of empire cloth or similar insulating material.

Commencing $\frac{1}{2}$ in. from the end, wind on 85 turns of the 24 DCC wire on each of the three formers. Fasten the ends of the wire by a soldering lug and small nut and bolt. A strip of empire cloth one inch wide is now wound around one end of each coil, directly above the last turn, on which the primary winding has to be wound. Wind on two or three layers of the

Commercial coils of the type used for standard neutrodyne circuits may be used profitably.

The Assembly.

Now, drilling through the metal bottom of the screening boxes, mount the various components by screwing through into the baseboard. Immediately behind the variable condensers arrange the valve sockets as close to the right hand partition. This leaves more room for the coil, which should not be too close to either of the

The strip holding three terminals has to be fixed directly behind the first screening compartment, and the other strip runs along the back behind the audio end. Reference to the diagram will indicate the positions for the two audio transformers and valve sockets. In the diagram will be seen a small resistance marked R2, and the value of this depends upon the valves to be used. Anyone can work this out by the following formulae and an example is given:—

$$\frac{V1 \cdot V2}{C} = \text{Resistance in ohms.}$$

Where V1 equals voltage of battery.

V2 equals voltage required for the valves.

C equals total current taken by all the valves shown as amperes.

Example:—

V1 = 6 volt car battery.

V2 = 5.5 volt valves.

C = 5 x .25 amperes. (Five is number of valves.)

$$\frac{6 \cdot 5.5}{5 \times .25} = \frac{33}{1.25} = 26.4 \text{ ohms.}$$

Therefore the value of resistance R1 will have to be 4 ohms in this particular case and will have to be capable of carrying $1\frac{1}{2}$ amperes. In the case of amperites these have been worked out as per table.

The easiest way to do this is to obtain a 6-ohm resistance of fairly heavy construction, and use 4-6 or 2-3 of the total resistance. Dismantle the rheostat and unwind the wire that is not required, fixing a soldering lug at each end of the length of material on which the resistance is wound. Being light in weight, it is self-supporting, and will "stay put" when wired into the receiver.

Wiring the Receiver.

EVERYTHING is now ready to be wired up. Sundry crosses will be seen in the diagram. This indicates where a lead is fastened direct to the metal shield. Perhaps the easiest way to do this to aluminium is to fasten a soldering lug underneath a screw-head, and solder direct to this. Some builders may use variable condensers with metal end-plates, but even if this is the case, a wire must be connected between the condenser and coil, and run to the screen, and not depend upon the end-plate connection of the moving plates.

The radio frequency choke has not been mentioned previously, and if this component is to be made, details will be found in vol II, 23, or 250 turns of 30DCC wire on a 1-inch former, wound in sections, will prove quite suitable. However, numerous good commercially-made chokes are available.

INSULATED sleeving is preferable for wiring up this set, as thinner insulation is liable to break down when in constant contact with the metal work. As will be seen, the earth terminal is fastened direct to a bolt in the screen, and the two aerial terminals to the small primary coil wound with the 24-gauge D.C.C. wire. One to the centre tap, and the other to the end nearest the grid end of the secondary coil. In the case of the other two coils, the centre tap of the primary runs to B+90, and one terminal of the .5-mfd condenser in each compartment. The remaining wiring is easily followed from the diagram.

Testing and Adjustment.

NOW comes the testing and adjustments after it has been wired up. Insert the five valves in their correct sockets. Valves having an impedance of between 6000 and 13,000 will be found best for the first four positions, and a power or semi-power valve for the final stage. Connect up the A battery, and make sure that all the valves light up when the speaker plug is inserted. Connect up the C battery, and try 22½ volts B on all the B+ terminals. It will be evident at a glance if anything is wrong.

Now, put on the full voltage, and try out the aerial. The chances are that loud howls will greet the builder. With a wooden or ebonite rod shaped as a screwdriver, adjust the two neutralising condensers. Make these adjustments with the receiver tuned to the station of the lowest wavelength it is desired to receive. Adjust until the receiver will not oscillate, wherever the dials are set. If difficulty is experienced to neutralise with the lid off, drill two holes in the lid directly over the tops of the neutralising condensers, and insert the insulated rod.

The writer has never had the slightest trouble to balance this set, and he has built quite a few of them exactly as described in this article. When once built and adjusted, it is a trouble-free set. Tonal qualities are excellent, with a marked absence of background noises due to slightly oscillating R.F. stages.

Components Necessary for Shielded Five.

Three Screening boxes, 9 x 5 x 6 (approx.).

3 Ebonite formers, 3½ in. x 2 in. dia.

½ lb. 24 S.W.G. copper wire, D.C.C.

½ lb. 30 S.W.B. copper wire, D.C.C.

3 Variable condensers, .0005 m.f.d.

1 x .0025 fixed condenser.

1 x .001 fixed condenser.

2 x .5 m.f.d. fixed condenser.

5 Valve sockets.

1 Rheostat 6-15 ohms.

2 Neutralising condensers.

1 R.F. choke.

2 Audio transformers.

12 Terminals.

Panel, 2½ in. x 7 in. x 3-16 in.

1 Single circuit filament jack.

Connecting wire and sleeving, etc.

Baseboard, 22 in. x 10 in. x ½ in.

empire cloth and fasten with a little secotone or celluloid cement. For the aerial coil wind on 30 turns tapped half-way of the 24 DCC wire. The two remaining coils wind on 30 turns centre-tapped of the 30 DCC wire. The centre tapping in each case can be a twist in the wire and after cleaning off the insulation a length of wire soldered on. The two ends of all the coils can be easily fixed with a length of cotton. Give the whole a thin coating of celluloid solution and allow to dry. Small brass brackets bent twice and fixed to the coil former by small nuts and bolts hold the whole coil quite rigid. Arrange these supports so that the coil stands about 1 in. from the bottom. All coils should be wound in the same direction.

metal sides or bottom. A point to watch before fixing the valve sockets is to see that the contacts are not pushed down by the valve pins and touch the metal underneath. If this is likely to happen a small square of celluloid or thin ebonite will have to be fastened between the valve socket and the metal work. Many commercial varieties of neutralising condensers will be found to have a small fixing screw underneath which will need to be sunk in further to prevent a short to the metal screen.

The variable condensers will fasten the screen to the ebonite panel. Out of two small strips of ebonite make two terminal strips, one to hold three terminals and the other seven binding posts. Soldering lugs clamped under the small nuts is preferable to other methods of connecting to the various leads.

The Shielded Five Neutrodyne

Screening Boxes—Sheet metal supplied or boxes made up to specifications.

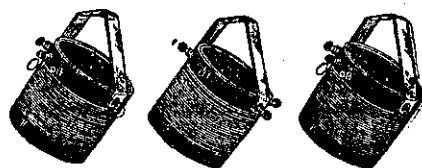
	s. d.		s. d.
3 Ebonite Formers, 3½ in. x 2 in. with strip 1 in. x 12 in. Empire Cloth	3 6	1 Magnus Rheostat, 6, 10 or 20 ohms, each	3 0
½ lb. 24G. D.C.C. Wire	2 6	2 Airzone Neutralising Condensers, each	5 0
½ lb. 30G. D.C.C. Wire	2 3	1 Airzone R.F. Choke	5 0
3 Cardwell .0005 Condensers, each	12 6	2 Emmco Midget Transformers, each	13 9
Or Ormond .0005 Condensers, each	12 0	Or 2 Thordarson Transformers, each	25 0
1 Fixed Condenser .0025, each	2 0	12 Terminals N.P., 3d. each, engraved, each	0 6
1 Fixed Condenser, .001, each 1/-, 2/-	2 0	1 Panel 2½ x 7, Ebonite, 10/9; Formica	18 8
2 Fixed Condensers, .5 mfd., each	3 3	1 Jack S.C. F.C.	3 6
5 Parkin U X Sockets	2 3	½ lb. connecting wire, 3-length sleeving	3 2

THOS. BALLINGER & CO., LTD.

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WELLINGTON.

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AIRZONE Neutrodyne Coils

Built in Australia for Australian conditions. Undoubtedly the most popular Coils in New Zealand. Specially recommended for the "Shielded Five" Neutrodyne. De Luxe type—space wound on genuine Bakelite Tubing. £2 per Set with Blue Print.

Standard type—space wound on Celluloid-lo-loss, 22/6 per Set.

We can supply all parts for the "Shielded Five." Send for 44-page Price List. Mention this paper.

L. B. SCOTT Ltd.,

Everything for Radio.

Box 395, CHRISTCHURCH.

Transformer Troubles

Locating Annoying Howls

QUITE a number of sets employing two transformer audio stages give trouble to the constructor when he comes to test them. Generally the difficulty consists of either a high or low-pitched howl, which persists in spite of the positions of the tuning controls. Sometimes it takes the form of acute distortion.

Low-frequency Oscillation.

IN both cases the cause is nearly always the same, namely, low-frequency oscillation, which is produced by audio currents being fed back to one of the audio valves. Sometimes the oscillation takes place at audible frequencies, and sometimes at inaudible, and this explains the difference between the two symptoms mentioned above.

It is not possible to give a definite cure for the troubles mentioned, and one which will always succeed, but a number of things may be tried, and generally one or more of them will

solve the trouble. The suggestions given in the following paragraphs should therefore be tried by those who either have trouble with a Det. followed by two transformers, or who are not satisfied with the quality from such a receiver.

The first point to receive attention should be the transformer connections.

Start by changing over the leads to the primary of the first L.F. transformer, and then try the receiver. If results are worse, change the connections back to their original positions. If, however, a slight improvement is noticed, or matters seem the same as before, leave them in the new position.

Should results be quite all right after changing the primary leads, there is no need to proceed further; on the other hand, if they are not, the next step is to try reversing the leads to the secondary of the first L.F. transformer. Again test the receiver, and adhere to the same instructions as given for when the primary leads have been changed.

Generally, the above suggestions will effect a cure, but if they do not there are still ideas to be carried out. The instability may be caused by radio frequency currents getting through to the audio stages of the set. To prevent this, either an H.F. choke or a resistance of about 250,000 ohms should be inserted in the grid leak

of the first L.F. valve. That is between the grid and the first L.F. transformer.

The next thing to suspect is the B battery. If this is run down or of a high resistance it can easily cause instability. It should, therefore, be tested with a voltmeter while on load, that is to say, while the set is working. If its voltage is as it should be, try shunting a 2-mfd. fixed condenser across the B positive tap and B negative.

By-Pass Condenser

THERE is one more useful thing to try, and that is to earth the cores of the L.F. transformer. If these are of the shrouded type, the core can be earthed as well as the shroud, by taking a wire to one of the clamping bolts which pass through the transformer. Sometimes a terminal is specially provided for earthing.

Where ordinary moving coil reaction is employed, it is imperative that a by-pass condenser be connected either across the primary of the first L.F. transformer, or from the side of the reaction which is not joined to the plate of the detector valve, to A negative.

In particularly troublesome cases, a useful line along which to experiment is the insertion of anti-motor-boating devices. Whilst the idea is really borrowed from elimination practice, it is sometimes very effective.

RADIO DIRECTORY

What to Buy and Where

CITIES

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

COUNTRY TOWNS

- ANCHORADIO, BREMER-TULLY, RADIOLA, BROWN-ING-DRAKE, AND ATWATER-KENT RADIO**
- CROSLEY RADIO** ... J. C. Davidson,
Main Street, Pahiatua.
- CROSLEY SETS** ... F. H. Jellyman, Ltd.,
Devon Street, New Plymouth.
- CROSLEY RADIO** ... D. A. Morrison & Co.,
Victoria Avenue, Wanganui.
- PHILIPS VALVES AND APPARATUS** All Good Radio Dealers.
- SIEMENS BATTERIES, RADIOLA DEALER AND SERVICE** G. C. Carrad.
140 The Avenue, Wanganui.

The Screen-grid Valve

IN next week's issue "Pentode" will deal with—

THE APPLICATION OF THE SCREEN-GRID VALVE TO CIRCUITS NOW USING THREE ELECTRODE VALVES."

The Constitution of a "Good Set"

A RECEIVER of merit should possess sensitivity, selectivity and a really good tone, by which is meant clarity as well as rotundity. Volume is really a fourth consideration, because once a set has been turned up to give tone power, in one of the many possible ways, can be increased. Sensitivity is a factor that counts, for this means range. It can be secured by seeing that rectification is as near perfect as possible, by using judicious reaction, and, sometimes, by increasing the plate potential of the detector and H.F. valves.

Selectivity is a matter that concerns the aerial system and the tuning gear, and often exerts an influence on tone because an ultra-selective circuit is always working on a tuning "peak," to over-run which, or to almost but not quite reach which, will utterly ruin signal quality.

Rotundity is a matter determined by judicious low-frequency amplification and the use of suitable reservoir condensers across the output.

The happy operator is he who takes such pains in his experimenting as to strike a convenient medium in all things, and this can only be done by devoting time and patience in tuning up the whole circuit so that it ultimately provides the result desired.

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Amplifies Gramophone Records and Radio Reception. Total A.C. operation.

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L. H. WRIGHT

Radio Specialists

The Shielding of Receivers

Why This Should be Necessary

a conductor is placed in an electromagnetic field, the lines will set up little eddy currents in the conductor, and so dissipate their force. Were an insulator to be placed in the position of the conductor, the lines of force would pass straight through it. Conductors used to confine these fields are called shields, and their proper application in radio receivers is called shielding.

Were it possible to separate these components carrying high frequency current by a great distance, the fields of force would be dissipated before they could influence other components of the set. The field of a good active coil will spread to a distance of a foot or two from the coil before losing the strength required to generate undesirable currents in other coils or conductors. The field around the wire carrying a heavy plate current will be full of activity at a distance of several inches. When a receiver having a total length of 30 inches contains two or more radio frequency coils and condensers, a collection of iron core transformers, and miscellaneous valves and wires, the inter-action is indeed great, and some steps must be taken to prevent it.

The Effect of Shielding.

PROPERLY applied shielding accomplishes two objects. It prevents harmful feed-back of energy from the parts in one amplifying stage to parts in the preceding amplifying stages. This reduces the receiver's tendency towards oscillation, and makes it more stable. For this reason the plate wires of a receiver are kept short and clear of other wires, especially of the grid wires. In the second case, the shielding prevents the pick-up of energy radiated from parts of the amplifying stages or radiated from the antenna system. In this way, stray electric currents caused by power interferences, static, etc., are kept to a minimum, and the selectivity is increased. This latter is made possible by the isolation of the coils and the impossibility of their picking up strong signals as from a local transmitter. The action of any kind of shield is to catch the wandering lines of force, turn their energy into eddy current in the shield, and thus prevent the lines of force passing to other components.

Unquestionably, there are many advantages to be gained by shielding, but the gains cannot be had without some penalties in the form of lost energy. For shielding to be effective, the energy of the lines of force which are to be confined must be changed into eddy current losses, and thus much energy wasted.

The shielding metal must be a good conductor, so that these eddy currents may be easily formed. If high resistance conductors are used the shield would be a partial insulator, and the lines of force would tend to pass through instead of being wasted.

Copper, aluminium, and brass are the metals most suited as shields, their relative values being in the order named; iron or steel must never be used for shielding high frequency currents or circuits as these have a relatively high resistance as compared with those metals already specified.

Aluminium has a resistance in ohms per mil. foot of 17.02; copper, 10.37; and brass, 42.11. Cast steel has a resistance of 114.5; tin, 69.17; and cast iron, 435. Silver is the best conductor, having a resistance in ohms of 9.56 per mil. foot, thus silver would be the ideal shielding material, but for obvious reasons a compromise has to be made, and aluminium, combining cheapness with efficiency is the metal usually chosen, although copper screens are by no means common.

Construction of Shields.

IT is impossible to build a perfect shield because all metals used for this work have some resistance, and therefore cannot absorb all the radiated lines of force. The fewer the openings, the less the amount of the electromagnetic or electrostatic fields will pass through and influence the components outside the shield. The corners of the shield must be tightly clamped or soldered together, and openings made to pass wires through should be no larger than that actually required. Wherever a wire passes through a shield, it should be very heavily insulated.

Most constructors will find difficulty in making the shields, for it is fairly difficult to bend them accurately, while soldering with aluminium shields is out of the question, so that the home constructor will have to confine his attention to the dearer copper shield. The gauge of metal generally recommended is about 20, though the heavier would be a slight improvement, but would be difficult to work with.

Realising the difficulty of the constructor, arrangements have been made that the size of the shield used in receivers to be described in the "Radio Record" shall be standardised, and the size most suitable is 9in. x 5in. x 6in. This does not mean that a shield can be only this size, but in order that the constructor may procure his shields ready made, thus saving a great deal of labour, this size has been standardised for all receivers.

Shields of a standard size can be obtained from most dealers. Two samples have been submitted to us for consideration, and both should be propositions that appeal to the amateur constructor who does not wish to go to the trouble of constructing his own. Messrs. Johns, Limited, Auckland, have produced two very fine examples of their work. Both are made up in standard size, and are able to be collapsed. The sides are secured by a grooved rod running along the corners. Thus the sides, the top, and the bottom, can be securely fastened together, and there is no possibility of stray lines of force passing out into the adjacent section of the set. Both shields are made in aluminium, the difference being that one is made of a heavier gauge aluminium than the other. This work is executed at John's, Limited, factory in Auckland.

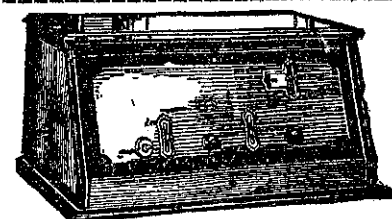
Samples of a somewhat similar type of shield have reached us from Abel Smeeton, Ltd., Auckland. These are the Radiokes products, and are beautifully finished in block crystalline lacquer and mounted with highly polished

nickel-plated corner posts and clamping nuts.

Needless to say, both these types of box shields are admirably suited to the shielded 5 neutrodyne, but the constructor wishing to make his own may obtain sheet copper or aluminium from any reliable radio dealer.

Revolutionary Developments

INQUIRIES are often made regarding the likelihood of sudden revolutionary developments in radio receivers. In this connection those who pin their faith upon their present sets will find consolation in the announcement of a recognised authority. He writes: "Radio has become standardised to such an extent and the conditions under which radio must operate have become so firmly fixed that the chance of outstanding change in receiver design are exceedingly remote. There are always those who wait for the ultimate receiver; who expect revolutionary changes are just around the corner. There are some, no doubt, who expect this in radio. However, if one looks back over the developments of the last four years, he finds scarcely any outstanding change in circuit design, the only great improvement being made in the matter of power supply."



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6-60

PROVES BY COMPARISON TO BE RADIO'S GREATEST VALUE.

Crosley Radio Sets have always been good sets—the 6-60 is easily the leader in its class. Reception on the 6-60 gives you an entirely new conception of radio—reception which outshines that of any other similar set. Price: Set complete with full equipment (excluding masts)

£24/10/-

Terms: Deposit, 70/- and 10/- per week. Offered by us only in the North Island.

Mail Coupon NOW for further details of this popular 6-valve Set.

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Wholesale and Retail Merchants, 27-29 Customs St. East, Auckland. Sirs,—Please send me particulars of the 6-valve Crosley 6-60 Model, and other Special Values you are offering in Sets and Accessories.

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The new Crosley A.C. Electric Sets are here. If you're interested send to us for full particulars.

ALUMINIUM SHIELDS

Size 9 x 6 x 5 Inches.

The above size has been adopted as standard by N.Z. Radio Record.

We can supply in two types

"WELL-MAYDE" SHIELD

Made from 14 g. (nearly to inch) Aluminium, with special Corner Rods. Assembled in a few minutes into a heavy shield of superb finish.

Price **16/6**

"ACE" SHIELD

Made from lighter gauge Aluminium, and finished ready for immediate assembly.

Price **9/-**

JOHN'S LTD.
BOX 471, AUCKLAND.

Short-wave Jottings

MR. F. W. SELLENS writes: I notice in last week's "Record" the question asked as to the identity of W2XO.

This is an experimental short wave station of the General Electric Company, Schenectady, N.Y.

I have heard this station several times on Tuesday and Friday mornings, carrying out duplex telephony tests with 5SW between 5 a.m. and 6 a.m. At times 2XAD and 2XO work alternately, and then simultaneously, 5SW comparing reception from each station.

THE following is an extract from a letter received from N. V. Philips's Radio, Eindhoven, Holland, last week:—"we wish to point out that we are broadcasting in six languages, of which English forms a very vital part. You will realise, of course, that for the South American countries we must announce in Spanish and Portuguese in the hours especially dedicated to them. But when it comes to our Australian programme, which lasts for two hours, which is more than any other country gets, we would remark that during this period English is spoken exclusively." This was in reply to a report from me, in which I stated that the foreign announcements appeared rather lengthy in comparison with English.

THE short wave transmitter BH9XD, operated by the Zurich Radio Club, relays regularly on every first and third Saturday of the month, between 7 and 9 p.m., Sundays 7 till 9 a.m. N.Z. summer time), the programmes transmitted by the Zurich station. Although the power is but 50 watts, the transmission, on a wavelength of 31.5 metres, are picked up at a considerable distance. On several mornings during the past week, a stranger on about 31 metres has been heard re-broadcasting the London programme. On Tuesday, March 5, at 5.30 a.m., it was first heard at R4, which is the strongest I have heard it. Static was very bad then, too much so to understand what was said, but clear enough to know it was English spoken without an American accent (thought it was 2XAF at first). Since then, I have checked it with 5SW, and found the items the same. It must be a short wave station reasonably close to London, as the transmissions are picked up from their broadcast wavelength as they are "on the air" before 5SW commences. Big Ben at 7 a.m. has been heard through this stranger, and the talks that follow.

CJRX, Winnipeg, Manitoba, was heard from 5.35 till 6 p.m. on Wednesday.

MR. G. R. MCCARTHY
"Mack", late of Mack's Radio Co., Ltd.

76-77 Kent Terrace,
Wellington

Wishes to inform his many Friends and Customers that he is continuing in business at the above address. His objects in future will be devoted to Radio Service, Repairs, Construction and Accessories for the home builder who will receive every assistance and co-operation, and to aid him in this he is re-organising and re-building his Lab. which will be able to undertake every possible test in Radio Parts, Sets and Accessories.

March 6, transmitting an organ recital from the Garrick Theatre, Winnipeg. Strength was R8, with slight fading, spoilt by a beam station very near the same wavelength. He closed at "2 minutes to 12 by my watch." "Good night," and "Don't forget to write," were his closing remarks.

KGO was heard on Wednesday morning, advising their listeners how to choose furniture.

5SW and PCJ are gaining in volume during their early morning transmission.

New Zealand Wavelengths

Question of Alteration

AT fairly frequent intervals correspondents write making the suggestion that the wavelength of one or other of the New Zealand stations should be altered by the Broadcasting Company, as on the evidence available to them they consider that reception in their particular locality would be improved by change to some other wavelength. The opinion seems to be fairly general that the decision as to the wavelength on which any particular New Zealand station shall operate is in the hands of the Broadcasting Company, and some feeling sometimes seems to be developed at non-acceptance of the suggestions advanced. It is perhaps just as well, therefore, to put on record the exact position regarding wavelengths.

A typical letter on this point comes from a Hamilton correspondent, a very keen and enthusiastic radio dealer wholly concerned with the betterment of the service in his locality. His letter is as follows:—

"I have been listening carefully to YA stations and have arrived at the following conclusion: The reason the Christchurch station is received here much better than Wellington is owing to it being on a lower wavelength; often Christchurch rebroadcasts the Wellington programme, and in the majority of instances it is 50 per cent. louder and much more clear than Wellington direct, although Christchurch is handicapped by being farther away and only about a tenth of the power of 2YA. My object in writing is to suggest that the Broadcasting Company alter the wavelength of Wellington and Dunedin stations. The latter is rarely heard up here since it was put up on 463 metres, whereas before it was altered we could receive same here at good strength. If the Broadcasting Company want to give the greatest good to the greatest number this is one suggestion that will do it without extra cost. In fact, if Wellington were put down to, say, 275 metres, it could be reduced to half the present power and still come through much better than at present. Surely by now the powers that be must know the effect of using high wavelengths? Is there any reason for not using the lower wavelength when the advantages appear so obvious?"

THE answer to this correspondent's suggestion is that it is not in the power of the Broadcasting Company to vary wavelengths. The wavelengths are fixed by the wireless authority in New Zealand, the Post and Telegraph Department, after full consultation with the corresponding authorities in Australia and America. The wavelengths of all stations are adjusted within limits fixed by the Washington Convention. The factors considered in determining wavelengths are the range of the station in relation to its power and the possibility of interference with other stations. As a typical instance of the difficulty of keeping New Zealand stations clear of interference of overseas stations, there is the experience of 1YA, which has of late been suffering a heterodyning effect from an American station. The wavelengths of the New Zealand stations, as now determined, have been fixed by the authorities after consideration of a large number of factors. It is also to be remembered that a wavelength that may, for argument's sake, give one area varying reception, gives a large number of other areas good reception, and a balance has to be struck by the authority between all factors. This explanation is given to satisfy correspondents that the suggestions advanced from time to time are not ignored, but so far as the Broadcasting Company is concerned are not open to application by them.

Radio Frequency Amplification

Its Use on Shortwave

THE vast majority of short-wave receiving sets now in use consist simply of a rectifier followed by one or two note-magnifying stages. A question that one is often asked is: Cannot high frequency amplification be used in the short-wave set?

The answer is that it can, though nothing like the same degree of magnification is obtainable below 100 metres as upon the medium and long wave-bands. By the use of a specially-designed transformer it is possible to obtain a certain amount of magnification at high-frequency from a triode valve with a high amplification factor. The overall magnification, however, is generally so small that it is hardly worth while in view of the extra tuning control that must be introduced. The presence of this naturally complicates searching considerably.

A much more promising valve for the purpose is the screen-grid variety of the tetrode. Though it must not be expected that anything like the magnification possible on the longer waves will be obtained in the "wavelets," it will give real and very welcome amplification at high-frequency.

Experiments show that the valve and its accompanying circuits must be very thoroughly shielded by means of a metal screening-box. It may be

New Beacon Station

A WIRELESS beacon at Start Point has been completed, and it is the seventh of its kind now established round the British coasts. This type of station transmits a special signal on an exclusive wavelength of 1000 metres, for the benefit of ships equipped with wireless direction-finders.

The completion of this station means that very effective cross-bearings can now be taken by ships using three Channel stations as their fixed points. They can thus obtain a sequence of bearings whenever required by the navigators, and can be sure of their position right up the Channel. Since the wireless direction-finder has become firmly established and more generally employed on the merchant vessels of the world, the demand has arisen for the erection of permanent installations situated at places of advantage from a shipping point of view, round the British coast, and whose function it is to send out a recognised signal at convenient intervals, purely for the purpose of enabling ships to take their bearings and thereby find their exact position.

One of the great advantages of the system of position finding, in which a wireless beacon station at a known position is used, with a direction-finder on board ship, is that the signals are broadcast in all directions and a direct bearing can be taken on the transmitter from any direction at every signal sent out by it. This method is particularly suitable for lightship installation, as the swinging of the ship's head does not affect the accuracy of the bearing obtained, and navigators can lay off their wireless bearings on familiar points on the chart.

The beacon transmitter of the type fitted in the British Isles is automatically controlled by a master clock for transmitting groups of interrupted continuous wave signals at pre-arranged intervals.

coupled to the detector valve by either the plain tuned anode or the parallel feed method.

Further, though an extra tuning condenser is needed, searching is not really made more difficult, since the tuning of the high-frequency valve when the screen-grid is used is not very sharp. What one does find is that a transmission "white" without the H.F. amplifier will be somewhat distorted (owing to the necessity for keeping the set close to the oscillation point) often comes through quite clearly with it, since much less use of reaction is required. In other words, though signal strength may not be much greater, and not the spurious kind due to genuine H.F. amplification is occurring action.

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