

THE RADIO RECORD

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MR. EDISON'S MESSAGE TO DOMINION

2YA

Honours Edison



On Saturday evening last 2YA gave listeners a special "Edison night" on the occasion of the 81st birthday of Thomas Alva Edison. For the occasion a special personal message was received from the aged inventor to the people of New Zealand. This was spoken by him on to a gramophone record, this then being mailed to New Zealand and broadcast by 2YA to the New Zealand listeners. The evening's programme was made memorable by supporting speeches from Sir Frederick Chapman, ex-judge of the Supreme Court and president of the English Speaking Union, and Mr. W. L. Lowrie, American Consul-General, by his deputy for the occasion, Mr. F. W. Tufts. The items throughout were of American origin, and as a finale community singing was "put over" by a group of American residents who specially attended for the occasion. This original feature was very successful, the "amateurs" performing in quite good style. The evening as a whole was memorable and distinctive, and rebroadcasts by other stations were very satisfactory.

A GENEROUS TRIBUTE.

SIR Frederick Chapman, president of the English Speaking Union, in his tribute said:—It is my privilege to address to you a tribute to Thomas Alva Edison. Not in all the world can you find another who so personifies persistent, unflagging effort and triumphant achievement as the great American inventor whose eighty-first birthday is this evening being commemorated in New Zealand by the broadcasting of a programme specially arranged for the occasion. In this way does station 2YA, Wellington, New Zealand, do honour to one of the world's most brilliant and most useful citizens, at the same time rejoicing in the brotherhood of the English-speaking peoples which gives to the humblest New Zealander kinship with so great a genius. Not to inborn genius, but to hard work and hard thinking does the man himself attribute the wonderful discoveries with which he has blessed humanity; but, surely, behind his indomitable perseverance, his unquenchable thirst for knowledge, his unbending determination to secure the things he sought, his unparalleled record of successful achievement, there must have been the inspiration of genius coupled with an almost uncanny intuition. Think of it? Here is a man, rich beyond measure in the sum total of his amazing accomplishments, who, in his childhood days, is said to have been so unpromising as to be likely to prove a life-long care to his parents, yet who to-day stands out as the supreme embodiment of mental power and human utility. Happily he was blessed with a mother, loving, observing, wise—who knew and understood the son who was not as other boys, who sensed the dormant attributes of a strong personality, and who with loving care and able tuition guided him safely to the starting point of the distinguished career he was destined to carve out for himself. For him there has been no looking back. With tireless energy and dauntless courage he has marked the passing years with wondrous monuments of imperishable achievements, continually enlarging the world's indebtedness to his creative genius, and finding the joy of life not in the mere acquisition of that wealth which is the due reward of his successful labours, but in the facing and overcoming of seemingly insuperable difficulties. He has lived to conquer, and every one of his innumerable conquests has been a victory gained for the benefit of his fellow men. Could Roman Caesar or French Napoleon lay claim to so glorious a record?

WHAT WE OWE TO HIM.

For what are we indebted to Thomas Alva Edison? Not in the compass of a brief address is it possible to enumerate in detail the almost countless items of our debt. Had he but given us the automatic telegraph system, the gramophone, and the incandescent lamp, 'twould indeed have been a surpassingly rich endowment, yet to these must be added the tens and the hundreds of mechanical, electrical and chemical inventions which are the creatures of his brain. Edison is eighty-one years of age, and still, with zeal and energy unimpaired, his daily work and pleasure lies in the ceaseless quest and practical development of new ideas. Time, as measured by the clock, is with him a matter of no moment. For him the hours of labour are limited neither by statute nor inclination. To him day and night are as one. His average of daily toil, even from early boyhood, is credited as sixteen hours, so that, as men measure the hours of work in these days it may be said of Edison that he has crowded the work of two long lives into one. May he be spared for yet more years to further enrich humanity and enjoy the well-earned fruits of his splendid labours.

A COMMON KINSHIP.

May I, as president of the English Speaking Union, of Wellington, New Zealand, say something on my own part concerning that kinship to which brief reference has already been made. The institution which I represent this evening may be making but slow progress, but it is always making some. Statesmen may do much to unite in great common aims the nations and dominions which use our own language, but the real impulse towards united action must come from people like those here assembled and the institution in which they are interested. Community of language is a great bond even between peoples severed by political conditions. It is the platform on which we must lay out our plans for closer sympathetic union. Here we are gathered to do honour to the great name of a living American, but we unite in honouring his name irrespective of his particular allegiance because we recognise that his allegiance to humanity stands apart, though not above his citizenship.

AMERICAN APPRECIATION.

IN the unavoidable absence of the American Consul-General, Mr. W. L. Lowrie, this tribute to Thomas A. Edison was read by Mr. F. W. Tufts, of

It is a far cry from my laboratory here in this Northern land, in its garb of ice and snow, to you in your land of sunshine and flowers under the Southern Cross, but science with its magic makes it possible for me to greet you with the spoken word, though thousands of miles apart. Surveying the progress of New Zealand in world affairs, it is difficult for me to realise that its establishment as a colony of the Mother country was practically coincident with the year of my birth. During my lifetime I have witnessed many changes, but nothing quite impresses me so much as the remarkable growth of New Zealand. From a handful of sturdy British emigrants who established the Colony in 1840, the population of the Dominion now totals nearly one and a half million. The scattered parts of the Colony have expanded into many thousands of acres teeming with agricultural activity—a remarkable monument to the grit and enterprise of those who have so rapidly developed the land. Your harbours filled with shipping carrying products to all parts of the world is another demonstration of growth. Not so long ago I saw some statistics issued by the United States Government at Washington revealing the amazing fact that New Zealand occupies the conspicuous position of enjoying the highest export trade per capita of any country in the entire world—a marvellous showing. This present day aspect of the country added to its agricultural and industrial life is a tribute to the dominant spirit of the people of the Dominion—all this practically in the span of a single lifetime. We here in the United States find much to admire in the growth of the simple school of the early pioneer days in Wellington, to the present splendid educational institutions with their realistic application of the democratic principle of unlimited opportunity for the youth of the land. Looking ahead into the future one feels secure in predicting a country alive with agricultural and industrial growth, its rivers giving an abundance of power development aiding its progress, and a people steadily and courageously fighting forward to make their land one of happiness and contentment. I am glad of this opportunity to greet you and to extend my cordial good wishes for the continued prosperity of your land and people.

Detroit, Mich., now resident in New Zealand:—

"The name of Thomas A. Edison is one which is spoken by every American citizen with a deep feeling of pride, honour, admiration and affectionate esteem. We are proud of his wonderful achievements, we honour him for the comfort, pleasure and happiness he has placed within reach of millions of people throughout the universe, we admire the wonderful spirit and ceaseless effort which has disclosed so many marvels of nature, and we hold him in affectionate esteem for his splendid character and for his fine patriotism as an American citizen.

"Genius has been described as 'an infinite capacity for taking pains,' but Mr. Edison's own definition is 'Two per cent. inspiration, and ninety-eight per cent. perspiration.' The story of his long life which we all trust may be continued for many years, is one of ceaseless hard work, extending often through sleepless nights until the result he sought has been accomplished. It is said that he never carries a watch, and that no clock is found in his laboratories. Hours mean nothing to this wonderful worker, and meals are frequently forgotten while he is following strange paths. His name is a household word throughout the universe, and he has become indeed an international character. A great many years ago, at a private exhibition of the phonograph in London, Mr. Gladstone, Prime Minister of England, spoke into the receiver these words addressed to Mr. Edison:

"I am profoundly indebted to you for not the entertainment only, but the instruction and marvels of one of the most remarkable evenings which I have been my privilege to enjoy. Your great country is leading the way in the important work of invention. Heartily do we wish it well, and to you, as one of its greatest celebrities, allow me to offer my hearty good wishes and earnest prayers that you may long live to witness its triumphs of all that appertains to the well-being of mankind."

"This greeting was given by Mr. Gladstone in the presence of a distinguished gathering, including some of the men who have achieved great things for the glory of the British Empire. Americans who are now enjoying the hospitality of your beautiful and prosperous country are most glad of this opportunity to join with the citizens of the Dominion in this tribute to Thomas A. Edison, whose life and works could be studied to advantage by everyone interested in worth-while achievements."

With Dealer and Customer

Getting Together To Solve Radio Problems

THE time has arrived in the New Zealand cities for prompt radio service, or, in other words a "radio doctor" who can be summoned by telephone as though he were a medical practitioner. There are now hundreds of new listeners in New Zealand who know nothing about the little points of radio theory, and who are quite helpless when some little hitch occurs in their outfit which, however, is sufficient to put a stop to broadcast reception. They may have a party of friends assembled to enjoy a concert when, behold, their set refuses to operate. At present there are no "radio doctors," within our knowledge, who can be summoned by telephone any evening at a moment's notice, to render first aid to a disabled set. In the New Zealand cities there seems to be an opening for such a man, just as there are now some "bowser" petrol stations opened all night for business. There are published in the American city newspapers many advertisements of "radio doctors" similar to the following extracted from the "New York Times" (daily):—

NEXT TIME THE RADIO SET GOES WRONG—CALL THIS NUMBER
WISCONSIN
9780

ORV RADIO SERVICE, INC.
1400 BROADWAY, NEW YORK.

While there is not room for several "radio doctors" in each New Zealand city as in America, there should be a good living for one or two in each centre. The idea of being able to summon prompt help by telephone should make a big appeal to many listeners who are able to pay for ready service.

BETTER LOUDSPEAKERS.

RADIO salesmen, when possible, should permit their clients to hear the better class loudspeakers they have in stock. Many a listener is content to potter along with his old fourth-rate low-priced

loudspeaker and through long-familiarity with it believes that it is quite satisfactory. He is apt to revise his opinion when he hears the improved tone to be obtained from a high-class loudspeaker, and music becomes real music under its superior design and workmanship. Many a sale can be effected by demonstrating one's goods, and greater pleasure thus sent into the homes of the purchasers. This radio game is altogether a question of pleasure, and the better the goods the greater the pleasure.

"PERMANENT" CRYSTALS.

"PERMANENT" crystals, those devices which serve the purpose of a crystal, but which do not operate with a catwhisker, have been back on the market for a few weeks, and are selling rapidly. The English manufacturers have excelled in this line, but there "permanent" crystals vary in efficiency according to brand. Radio dealers will find it advantageous to test out the various brands of these devices, personally, and to stock only the most efficient. Some of these "permanent" crystals are more sensitive than the ordinary catwhisker and crystal, while others are far less sensitive. One abiding advantage they possess is that the sensitivity of their operation is not affected by the vibration which causes so much bother by "losing the sensitive point" in the case of the catwhisker and crystal. This is a sound argument in furthering the sales of the "permanent crystal," but the cheapness of the ordinary catwhisker crystal will continue to recommend it to many buyers, and many of these crystals are remarkably sensitive. Plainly there is a market for both types. Salesmen should draw customers attention to the fact when the little bracket mountings are not included with the "permanent crystal."

USE OF COLLOID RECTIFIER.

TRADERS when selling a customer a set of wet "B" batteries

should always give advice on the subject of the correct use of the colloid rectifier if that type of battery charger is to be employed. It is not correct practice to connect the colloid to the batteries if the electric lamp, which is placed in series with the batteries, lights up brightly. This circumstance indicates that the colloid is not rectifying, and is permitting alternating current to pass through the batteries, which has a harmful effect on the batteries. If the electric lamp burns brightly when placed in series with the batteries it should be immediately disconnected. The colloid should have the top removed, and the aluminium rod should be rubbed bright with sand-paper, then wiped with a clean cloth. The top of the colloid may then be replaced, and the electric current should be permitted to flow through the colloid and lamp without their being connected up to the batteries. The lamp may still burn brightly for a few minutes, but when it has been reduced to a dull red glow it can be safely connected up to the batteries and the charging of the latter can now proceed. The liquid in the colloid

rectifier should be kept filled up to within about half an inch from the top of the glass container, by adding only distilled water which is procurable from any battery service station. Not more than about a 48 volts "B" battery should be charged at one time by the colloid. These points should be stressed by radio salesmen, as some folk read printed instructions without being able to grasp the salient features, especially if they are complete novices. It is more satisfactory to the radio trader to know that the batteries he has sold are going to receive fair treatment than to learn afterwards that through incorrect methods his customer has unknowingly damaged the batteries, and is telling his acquaintances that the batteries are no good. The same advice applies to the sale of all accessories, and salesmen should endeavour to give helpful advice when they sense that the customer needs it. While the parcel is being wrapped up for the customer the salesman can diplomatically sound the customer for the purpose of ascertaining whether he is conversant with the correct use of the article being sold.

RADIO FOR BOWSER STATIONS.

THE selling of radio sets to petrol supply stations should not be a difficult matter, especially to those stations which do business night and day. The owner of a bowser station would soon discover that a good loudspeaker receiving set is a first-rate advertisement for his business. An American writer says:—"A radio set attracts customers to gas-stations and garages. Autoists like to listen to a programme while they are getting gas and oil or vehicle repairs are being made on their cars. Talk it over with your neighbouring gas station or garage owners."

USE BATTERY CABLE.

BY use of a single, neat and attractive cable both A and B radio batteries may be placed on the floor, or in the basement. Each individual wire of cable is marked by means of a colour code so that it cannot possibly become confused with any other. By use of this the service man may quickly replace worn out batteries without any fear of getting connections mixed up and burning out the valves. These cables are usually furnished in 6ft. lengths with ends prepared to connect to the set, and are turned out in America also in continuous lengths of from 100 to 250ft. Thus the radio dealer can always supply the exact length required for any installation.

"FEATURE" THE PROGRAMMES.

WHENEVER a special "feature" programme is to be broadcast radio dealers will find it a good proposition to display the programme in their window, thus drawing the attention of the uninitiated to the pleasure to be obtained from radio. An American dealer goes one further. This is what he says:—"We suggest to the people of our town, by means of placards in our show windows, that they listen to certain specially fine radio programmes from time to time. And we always try to feature pictures of the artists in connection with these suggestions. The use of the pictures helps to make the suggestions more interesting and helps to mark our stores as even more of a live wire proposition. All of which is a splendid thing for our business."

PROMPT REPAIR WORK.

IF you are a radio repairer man, do not keep your clients waiting a week for a small job to be done. If you have too much work on hand, put in a bit of overtime in your workshop. Do not drop a small job to commence on an extensive one just because the latter means more money to you. There is already plenty of opposition building up in the cities, and customers are apt to remember that you have kept them unreasonably long waiting for their job to be completed. They will not come back to you if that is the treatment they receive.

TO GIVE SATISFACTION.

NO dealer should let a radio set go out of his shop until it has been thoroughly tested. If a condenser dial,

or a rheostat knob is loose it should be made tight. All moving parts should be examined closely. Good materials and good workmanship are of prime importance in keeping radio in use. If the owner of a set has to bring it down town with him every three or four weeks to have some repairs made, he is going to get tired of this before long, and will eventually put the set up in the attic and will tell his friends that radio is a washout. Good sets should not require repairs with any appreciable frequency, and good repair work should place the set in shape so it should operate indefinitely without further attention.

DISPLAY YOUR GOODS.

THERE is a good business to be had in spare parts and accessories. A proper display of these articles will always increase interest which will result in the sale of more merchandise. Although a man may have his aerial strung and properly insulated, if you have some wire and insulators out on the counter where he can see them, pick them up, and look over, he will probably buy some before many visits.

Merchandise which is kept in boxes will never sell. It has to be placed out where the public can see it. They like to be reminded that they have overlooked something. They like to see a large assortment of articles that they can pick up and examine. And it is just this that leads them into buying before they get away; for once the person has the article in his hand, the desire for possession has a powerful influence in promoting the sale.

SHORT-WAVE RESISTANCES.

NOW that variable resistance devices of high resistance are being employed in some types of short-wave circuits with most successful results, traders in a fair way of business should stock these variable resistances. For short-wave circuits a resistance of 200,000 or 500,000 ohms is used. Traders would find it advantageous to stock only the very best in this line, as good material, workmanship and design are highly desirable for short-wave work.

INSCRIBING PANELS.

RADIOTRICIANS who build sets for order for customers should pay particular attention to the neatness of the inscription they place on the front panel. Nowadays, when controls are fewer than ever, there is less necessity to inscribe marks on the front panel. A white, inconspicuous mark, vertically over the centre of a rheostat, and a slight mark over each condenser dial, if they are not of the "drum" type, will suffice. Some builders use plaster of paris for filling in the marks, but it is apt to come out in little granules after a while. The best medium for filling in the panel marks is white oil-point. The tip of a steel file, with the point ground sharp, makes a capital implement for marking a front panel.

Wireless Results, 1927.

Highest percentage of passes, largest number of appointments. The only school in New Zealand where the Instructor has had commercial Wireless experience. 10 years' coaching experience—Why be experimented upon?

MARINE WIRELESS SCHOOL,

248 THE TERRACE,
WELLINGTON.

SAVE MONEY ON YOUR RADIO

Hear the CROSLEY 2-VALVE SET complete with Valves, Batteries, Phones and Loudspeaker. **£9/10/-**
With cheaper equipment. **£7/10/-**

G. G. MACQUARRIE Ltd.

CROSLEY SALES AND SERVICE.
WELLINGTON.



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Aerials erected. Short Wave Sets built to order.

BRITISH RADIO GOODS

A bit better quality;
A bit cheaper;
In short "a job"!

You get them from:

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CUSTOMS ST., AUCKLAND.

WHAT'S RIGHT IN RADIO?

Consult

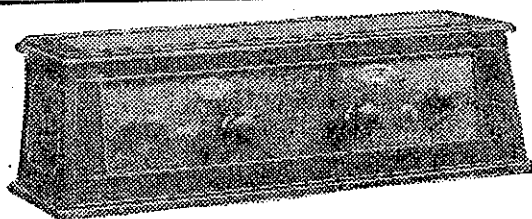
L. H. WRIGHT CO.

The right shop for Accessories and Expert Radio Service.
One and Two-stage Amplifiers (guaranteed), English Loudspeakers, at £2.

153 Willis Street, Wellington.

'Phone 23-147.

(Opp. Y.M.C.A.)



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Valleytone
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MODEL 52.
noted for
ITS EXCEPTIONAL TONAL QUALITIES.

Write for full details to Dept. "R."
Teagle, Smith and Sons, Ltd., 276-278 Wakefield Street,
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Sole Wholesale Distributors in New Zealand.



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Are the Backbone of a
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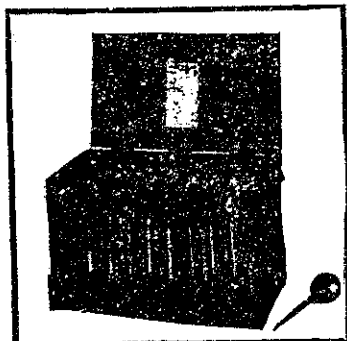
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Here's two that will save you endless
trouble and expense.

Type Tw 13-plate, 85 amps. capacity, fully
charged. Complete with removable carry-
ing handle.

PRICE £6



Type H.T. 5, 90 volt, 2500 milliamperes.
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two months. Fully charged.

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Send for our twelve page Catalogue coming out before Xmas.

Gruar's Battery House

THE BATTERY PEOPLE.

9 MAJORIBANKS STREET,

WELLINGTON.

Telephone 20-937.

Should Listeners' Money Pay For Relays?

AN IMPORTANT REVIEW OF THE ISSUES INVOLVED

THE statement published by us last week from the General Manager of the Radio Broadcasting Company in connection with the refusal by the authorities of the Band Contest being held in Christchurch this month to permit broadcasting will have been read with a great deal of interest by listeners and readers.

The statement was important because Mr. Harris wisely took the opportunity of briefly dilating upon the reason given by the Band Contest authorities for their refusal. This reason was apparently that the Band Authorities refused to permit broadcasting of their concert because it objected to giving the Broadcasting Company "something for nothing." On this point Mr. Harris rather neatly turned the tables by pointing out that, contrary to the conception apparently held, it was not the Broadcasting Company which was getting "something for nothing," but the attraction that was broadcast on relay.

It costs the Broadcasting Company, he explained, considerable money to maintain broadcasting, whereas the persons whose performances may be broadcast are involved in no additional expenditure. Neither has the broadcast of popular performances any adverse effect on the attendance. As a matter of fact, it has been proved, here and elsewhere, that considerable benefit accrues to the attraction broadcast on account of the publicity thereby given.

FROM this point Mr. Harris went on to make an important explanation concerning the attitude adopted by the Company to clubs and organisations whose meetings or performances are suitable subjects for broadcast on relay. This statement is sufficiently important to be reproduced here in its entirety.

"The Radio Broadcasting Company's position is not that of a private company formed to exploit the public, but that of a public company formed under Government regulation to administer a public utility in the interest of the community.

"The company appreciates that it costs racing and trotting clubs, band associations, musical societies, and such like public institutions a considerable amount of money to provide their form of entertainment, and it is their business to decide whether they shall or shall not permit broadcasting. The company also appreciates that these institutions are giving, in their own way, and at considerable personal effort and expense, service of the greatest public interest. However, as the Broadcasting Company's service is also given in the public interest, it cannot for this reason make direct payment for relays, although it is prepared to co-operate with such institutions to the extent of providing the broadcasting service without any cost to them."

THAT statement puts the position very fairly, and shows that the Broadcasting Company is in no way concerned

to make any complaint when its applications for permission to broadcast are met with refusal. But several recent occurrences combine to indicate that an effort is being made to spread the idea abroad that the Broadcasting Company is a very wealthy body, and that it is being guilty of something approaching meanness or lack of consideration for its listeners in refusing to pay for the privilege of broadcasting race meetings, musical fetes, sporting contests, etc. This is a position which, in the interests of listeners, needs to be examined, in order that a correct appreciation of the facts may be secured.

IN the first place, it is to be noted that the Radio Broadcasting Company is a public company, working closely under Government regulation in the administration of a public utility in the interests of the community. It is not a private company engaged in money making by the exploitation of the public. In effect, the Broadcasting Company is a trustee for the wise and efficient administration of the funds made available to it from listeners' licenses. Its own earning capacity, as such administrative trustee, is limited by its Government contract. It is therefore very much to the interest of listeners that the Company shall expend the sums entrusted to it judiciously in maintaining its service and affording suitable entertainment and news services to listeners.

Only by the strictest of economy and the most capable of management will the company be able to give the quality of service desired, and continue the policy of expansion laid down.

HOW far would the company's funds go if the demands for relay charges were acceded to? A moment's thought shows that no fund, however extensive, would meet the obligation, for payment to one would involve payment to all; and the company, in reaching the determination to reserve listeners' funds for the operating expenses of the stations, and the employment of professional artists, is following the only possible course.

BUT the question may well be asked: Why should the question of payment by the Broadcasting Company for relays of public interest ever be raised? This is not the practice in any other country in the world where broadcasting has reached a very much higher standard of development than is the case here. Publicity over the air in the United States is very highly valued, and theatres, motor-car manufacturers, and other large organisations pay large sums to broadcasting stations for the privilege of being put "on the air" even indirectly. A prominent motor-car manufacturer in the United States recently paid as much as £18,000 for one hour's broadcast of a programme arranged under its auspices, and in addition paid for the talent employed. That manufacturer did not ask the Broadcasting Company to pay him; he paid it that money for the privilege of "going on the air," and he did it because he reckoned the publicity thus secured was worth it. Similarly, theatrical companies frequently pay for part of

their performances to be broadcast merely as an advertisement, and so great is the appreciation of the advertising value of performances put over the air that one broadcasting company alone received an income of nearly a quarter of a million pounds annually for the sale of time and service in this direction. It will be seen, therefore, that the suggestion that the Broadcasting Company should pay for relay performances strikes a note out of harmony with modern broadcast developments. Commercial concerns gladly pay for publicity when it is available, and those behind public meetings and events of interest wisely welcome all the publicity they can get and freely afford all opportunities for it.

WE have dealt with this subject so comparatively fully, because we regard it as important that listeners, whose money it is that is at stake, should understand and appreciate the issue involved.

That issue is that it is not fair or right for listeners' money to be devoted to payments for relaying public performances when no extra cost whatsoever is involved to the organisers of such functions.

Listeners' funds are fully required for the provision of programmes involving individual artistic talent and time, and the maintenance of the station and staff's services. The company is quite satisfied to provide programmes by its own enterprise, but it is also ready when functions of a general character are available, in which listeners would be interested, to give freely of its services and facilities for broadcasting them; but obviously it is not right or possible that payments for such occasions should be made. As the General Manager rightly said:

It is not the Broadcasting Company which is receiving, on such occasions, "something for nothing," but, in reality, the performance that is being broadcast in receiving publicity at the expense of the broadcasting service.

On this point it is to be noted that it has been customary for the fullest possible facilities to be given by practically all organisations for the record of their doings by the public Press. This has grown up because the value of such publicity has been recognised and the right of the public to news appreciated. It is true that there is a distinction between news and entertainment, but the principle of the value of publicity remains, and the greatest beneficiary in all broadcasts is undoubtedly the entertainment which, under our conditions, receives publicity for nothing. Perhaps if the Broadcasting Company were to consider the question of itself imposing a fee for such broadcasts, it would prove the best corrective of the misconception which has been the subject of the General Manager's explanation. We do not suggest there is any intention of doing so—in fact, we have the General Manager's assurance to the contrary in his statement, but on the merits of the case there would be more justification for that course than payment for the privilege of relaying.

On Shortwave

MR. SELLENS' REPORT

A MYSTERIOUS STRANGER

Mr. F. W. Sellens reports:—

During the week I received a card from PCLL, Holland, containing the following particulars: "QRA: Radio-Laboratory, Parkstraat, 29 The Hague. Transmitting station located at Kootwijk, Holland. QRH: 16,600 kilocycles; Power 22 k.w.; Beam-aerial: Direction Holland-Java. An acknowledgment was received from Marconi Works, Chelmsford, of report sent in reference to reception of their test on November 5 from noon till midnight through station 5SW Philips Radio also wrote, but were not able at the time of writing to give any particulars of date of opening of their new station or the wavelength to be used.

On Saturday afternoon, February 11, 2XAD was heard, but was weak. KDKA was louder but speech and music were muffled.

2XAF was fair speaker strength toward the finish of their transmission on Sunday afternoon. Orchestral music was being broadcast.

RFN was heard during the evening after being missed for a week or two. He was working on about 70 metres, and I do not think up to the usual volume.

Monday morning found 3LO testing on 32 metres from 7 a.m. as usual, at good volume and modulation. RFN was on 70 metres. At 10.40 p.m. JHBB, Japan, commenced their test. About 50 per cent. of their English talk was understandable. Good strength and modulation, but a noise like a pump going all the time.

ANE was on the air on Tuesday morning. They went off at 6.15 a.m., but were heard again later on. The 40 metre stranger was heard, but I could not identify him.

This station was heard again on Wednesday morning when I heard "RC" later "New Zealand, Australia." "Here comes" "Radio Station."

PCJJ was tuned in at 6.23 a.m. when a violin solo was heard at good strength, which gradually decreased till 7.30 a.m. when I closed down.

At 10.42 p.m. JHBB was tuned in. Talk was heard till 11.30 p.m., when their musical programme commenced with a stringed instrument. Volume which was good at first, increased as the time advanced. On Thursday morning the elusive 40-metre station was again heard. About 6.25 a.m. another stranger on about 31 metres was heard calling "Hullo, Hullo," this he repeated many times, saying it in different tones, and sometimes singing it, and a whistle at times, but not a clue as to the identity.

RFN was heard on 70 metres during the evening, 40-metre station again on Friday morning. PCJJ was first heard at 6.25, but they started before this. Some fine organ music was heard at first. Volume at this time was fair phone, which continued till about 7 a.m. At 7.25 a.m. strength

had increased. This is quite unusual, as volume as a rule goes off as the sun gets higher.

While listening to 2YA a friend rang up to say that the 31-metre "Hullo" station of Thursday morning was on the air calling various countries at good strength.

I tuned him in at 9.10 p.m. just in time to get him at the finish, but did not hear a call. Volume was very good. I believe this station is the one I often reported as singing "Au Japanese." The voice appeared the same.

At 10.47 p.m. JHBB commenced talking, after putting out some Morse, giving his call and address. Something was said about last day of test, also "listeners-in—results of our test." "Broadcasting station of JOAK." Esperanto—national language." Speech was spoilt by a pumping sound. Volume was quite good.

On Saturday morning at 6.15 a.m. 5SW and 2XAD were talking. The carrier only of the latter station could be heard. 5SW was readable, but was unsteady and weak.

The 40-metre station was going strong, but talking a foreign language while I was listening.

Another Report.

Mr. H. Churton, Mount Eden, Auckland, writes:—In one of the late issues of your paper you request reports from short-wave listeners, but Mr. Sellens seems to be the only "live" one in New Zealand. Perhaps this report may be interesting enough for you to publish.

I have a home-made three-valve "all wave" receiver, the wiring of which is very rough; nevertheless, the results are extremely good. The aerial used, both for short and long waves, is 45 feet high, 80 feet long, and only a single wire. The coils are home-made, being "air supported" (i.e., no coil former), and are plugged into the ordinary three-coil holder. The wave-length range is from 15 to 600 metres. Every one of the stations heard has been picked up on two valves, and if loud enough, put on the speaker with the second audio stage.

The following is the list of stations heard:—Broadcast wave-length: 1YA, 2YA, 3YA, 4YA, 1ZB, 2YK, 2FC, 2BL, 2GB, 2KY, 2UW, 3LO, 3AR, 3DB, 4QG, 5CL, 7ZL. Short waves: OZ's, 1AL, 1AL, 1AN, 1AO, 1FF, 1FF, 1FK, 1FP, 1AK, 2AB, 2AL, 2AQ, 2AT, 2AY, 2BR, 2BY, 2GC, 2AJ, 3AP, 3AU, 3AZ, 4AE, 4AM. O.A's: 2CM, 2FC, 2HM, 8HS, 2LG, 2WC, 3BY, 3KR, 3LO, 3XK, 4NW, 4PN, 5RI, 5DN, 6AG, 6WP, 7CW, 7HL. Out of Australasia: RFM, ANE, 2XAD, 2XAF, 2XG, PCJJ, 5SW, the one in Japan, which, according to Mr. Sellens is JHBB.

There are a number of stations that I have heard, but unfortunately missed the call sign. On Friday, February 9, at about 7.30 a.m. a station was heard on about 26m. Unfortunately I had to leave at 8 a.m., but my brother listened to it till 9.45. Musical numbers were heard at first, followed by what was apparently a children's session, as a lady and a man were giving a children's entertainment. The call sign sounded like WBO, but I could not be sure of this. During the announcement the call sign 2XAF and 2XAD were mentioned. On Wednesday, February 8, at 6.55 a.m., a

station on about 23-24m. was heard giving "test words" like No. 2XG. Could not get his call sign, but when he finished "Test No. 107" he switched over to Morse and kept sending V's and O's. If this letter is his call sign, the station is one of the beam systems in Canada.

At 7 o'clock this morning a station was heard on about 38 metres, when a lady was talking. The strength was R5-6 and modulation nearly perfect. At 7.10 a man commenced to announce, beginning "Achtung." After about five minutes of this language the station commenced V's and AFK on Morse. The AFK identifies it as being in Germany.

The Japanese Station.

J. W. Rait (Brooklyn): Re Japanese station operating on about 38-40 m., I endorse Mr. Sellens' remarks referring station operating on about 38-40m., I received them on Morse and afterwards by voice. Different languages were used, the English being very hard to understand. The musical and vocal items are far from being enjoyable, it being typically Oriental, and the singing sounds like a fish hawk. Reception was very good considering; modulation could be a bit better, no doubt, but the strength of signals were quite possible. Last Thursday, 9/2/28, 6 a.m., I heard a station in Morse send AFK innumerable times. Short talks or speeches were all that were heard, "ick" being heard on several occasions. Strength of signals was R7. A slight fade. Modulation was O.K.

J. M. C. Tingey (Green Island): Having seen many reports concerning the reception of a Japanese station testing on a wave-length of 37.5 metres, I may say that I have picked up that station on several evenings last week.

While listening to it last night at about 11.30 o'clock I distinctly heard the call JOAK, repeated slowly, twice in succession. As I have often heard this station on the broadcast wave-length, I have no doubt in stating that it was the station mentioned. I have a short-wave adapter, constructed by myself, and during the two weeks it has been in operation I have had stations RFN, PCJJ, 3LO, 2AQ, JOAK, together with several other modulated carrier-waves on the 30-metre band, on the speaker.

THE SHORT-WAVE SET

POINTS ON OPERATION

DEAD SPOTS.

ON the broadcast wavelengths, a set can be made to oscillate easily, but on the short waves, below 100 metres, care should be taken in the construction of coils and the disposition of components, or trouble will arise. Dead spots (says the Melbourne "Listener-In") are another cause of faulty reaction control, and these may be prevented by careful adjustment of the size of the aerial coil. If the total wavelength of the aerial, earth and the aerial coil is the same as that situated at some point over the range of the grid condenser, then the set will refuse to oscillate at this point, as the both circuits are

in resonance, and the energy absorbed by the aerial is great, and causes the set to become "dead." Another cause of this trouble is the coming into resonance of the reaction coil, which produces the same effect. So that the efficiency of a shortwave receiver depends mainly on the adjustment of the coils and the distance between them. The distance between the aerial and the grid coils will determine the amount of selectivity which the set will possess, and the further the distance between these two coils the greater the selectivity, but the volume will be less.

Very Fine Tuning.

A distance of half an inch should be ample, as tuning is exceptionally fine on these wavelengths. The grid leak should have a high resistance of from 5 to 10 megohms, not, as is the case with the broadcast receiver, 2 megohms. The grid condenser has a proportionately small value, and should have a capacity in the vicinity of 0.0001 microfarads. A large variable condenser can be used to tune the reaction, as, usually, this adjustment is not critical, especially with continuous wave Morse transmissions. A special valve should be selected, as some will not oscillate on such low wavelengths.

A valve of the 201A type proves excellent for these wavelengths. The special 200A detector is liable to be very noisy and unstable, although it is supersensitive on the broadcast bands.

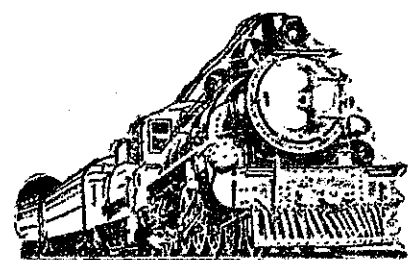
In some improperly built shortwave receivers a howl occurs just on the point of oscillation. This is not noticeable in the detector stage, and goes to prove that the trouble exists in the audio stages. The trouble

can be fixed by burning the filaments of the audio valves beyond normal brilliancy; but this is bad practice, and reduces the effective life of the valves. The best method of eliminating the trouble is to completely shield the detector stage from the audio stages. This should effectively eliminate the howl. Separate rheostat controls should also be fitted as such a howl would be caused by using the one rheostat to control all the filaments.

Radio Frequency.

Old valves in the audio stages also howl, so that it will be seen that there are many sources of this trouble. Radio frequency amplification (apart from the new double-grid valve) offers no advantage under 100 metres, and when stations from all over the world are received with a single valve it will be seen that such amplifiers are not necessary. In any case tuning is difficult enough with the addition of radio stages which complicate tuning to a very great extent.

Most of the low wave transmissions are in code, so that a so-called distortion transformer with an extremely high ratio can be used to amplify the signals before reaching the amplifying valve. Such an arrangement produces frightful results with speech and music, but is worth another stage of audio amplification as regards the increase in volume. A high MU valve of the new type gives a further amplification unobtainable in any other tube. Bearing all these hints in mind, the best can be obtained from a short wave receiver which is giving trouble due to unstable regeneration.



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Communicate with the nearest Stationmaster, Passenger Agent, or District Manager, for full particulars.

THE NEW ZEALAND Radio Record

PUBLISHED WEEKLY.

Printed Tuesdays to permit of effective distribution before the week-end, with full copyrighted programmes for the succeeding week. Nominal date of publication Friday.

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A. J. HEIGHWAY,
Managing Editor,
"The N.Z. Radio Record,"

P.O. Box 1032.
Dominion Buildings, Mercer Street, Wellington.

FRIDAY, FEBRUARY 24.

CONSERVING THE FUNDS OF LISTENERS.

In another column we publish an important article traversing at length the issues involved in the refusal of the authorities governing the Band Contest in Christchurch to permit broadcasting of the contest on the ground that they objected to giving the Broadcasting Company "something for nothing." On this point, Mr. Harris, general manager of the company, has made a public announcement as to the company's attitude to the suggestion which has now been made from a number of quarters that payment should be made for the privilege of broadcasting events of interest to the public. This attitude is apparently based upon the idea that the company is a wealthy private body, which has unlimited sums at command. That idea is wholly erroneous. The company is not engaged in the unchecked private exploitation of the public purse. On the contrary, it is a public company operating a public utility under very close and strictly observed government regulations. It is providing a public service and utility in respect of which it is accorded certain fees from those enjoying and appreciating the service. It is thus very directly a trustee for the wise administration of the sums made available to it. With its revenue it is required to operate four stations and provide suitable musical and artistic programmes thereat. Unlike certain privately-owned stations in other countries, does not secure revenue from the sale of advertising time. In the interests of listeners themselves that avenue is barred, and dependence for financial support placed upon the fees of listeners. With a sum, which, even with the recent accretion of strength, due to the greater popularity of radio, is infinitely smaller than that with which Australian stations operate but one station, the company has managed to provide a series of excellent programmes from four stations. Very little reflection will show listeners that programmes can improve only as finance improves for the payment of high-class artists. If the money required for the employment of artists who give their time and talent for the special purpose of broadcasting is to be diverted for subsidising relays of public performances, then disaster looms ahead.

Listeners must appreciate the point that it is their money that is at stake, and that the company in their interests is adopting the only policy possible for making that money go as far as it should in the service of listeners. Although the broadcasting of public events entails the provision of expensive relay lines and the employment of special operative staffs as well as maintenance of the general service, the Broadcasting Company announces itself as at all times ready to give that service free of charge where functions are of sufficient public interest. But where the function is being held for a purpose quite apart from broadcasting, and where it's being broadcast involves the authorities concerned in no extra expense whatsoever, the company lays it down that, having regard to the interest of listeners and the wise expenditure of the moneys made available by them for the provision of programmes and supplementary service, it cannot see its way to introduce the system of payment. This attitude is sound, and, will, we are satisfied, be endorsed by every listener who gives a moment's thought to the problem. With hundreds of sports meetings held annually—horse racing, athletic meets, cricket matches, football matches, tennis matches, etc.—all of public interest—and with payment to one involving payment to all, an impossible situation would be developed.

But apart from that angle, it is interesting to make a momentary comparison with the situation of the general press. Since the growth of a general public press the practice has grown up of affording all possible facilities to its representatives for collecting news and "broadcasting" the result. The press is universally operated for private profit, but it is recognised that it is serving the public by disseminating news, hence the practice of freely according it the privileges required. The revenue derived by the Press from the collective sale of the news it secures free by grace of the public, is infinitely greater than that accruing to the Broadcasting Company from its listeners for the service they desire. But no outcry is levelled against the Press, or demand made for fees from it—and rightly so, for the Press confers as great an advantage as it receives. Publicity has a cash value and, as the general manager rightly pointed out, it is not the Broadcasting Company which receives "something for nothing," but the entertainment which is broadcast—and it receives free of charge the boon of publicity. We are sure we have said enough to convince listeners that in taking up the attitude it has, the Broadcasting Company is wholly guarding their interests, and conserving their funds for the betterment of the service for which it is only right that payment should be made. Only by efficiency and economy, will the company be able to expand its service, and it should be the object of all right-thinking listeners to support the company in this policy.

It is to be noted that the Broadcasting Company does not take it on itself in the slightest to say to any organisation that it should permit its meeting or function to be broadcast. That is entirely their own affair, and their decision is final, and not the subject of complaint from the Broadcasting Company. The purpose of the general manager's explanation has been, we take it, to correct the attitude of mind revealed in the explanation given by the band authorities. It is their business to say "yes" or "no," but when reasons are given they may fitly be the subject of criticism and correction on our part.

TACKLING HOWLERS

ACTION IN VIEW

WELLINGTON AMATEUR
RADIO SOCIETY MOVES

A special committee meeting of the Wellington Society was held on Thursday last, when among other matters the tackling of the "howler" nuisance was considered.

The Wanganui Society asked the local society to request the Band Contest Committee at Christchurch to permit the Broadcasting Company to broadcast the week's proceedings at Christchurch. As a definite refusal had been decided upon by the Bands Association, it was considered useless sending on the request, as much as the society would like the contests broadcast; further, time was too short to do any good.

The Howler.

The meeting was called to discuss two important matters: "Howling" valves and membership.

The secretary reported that the general manager had stated that the company would be glad to consider the broadcasting of approved matter, calling upon owners of one and two valve sets, and certain other forms of receiving sets, to desist from interfering with listeners who have provided suitable sets for "receiving" long-distance stations. Certain sets have their limitations, and it is unreasonable for listeners to expect to hear distant stations unless they provide the correct and non-interfering type of receiver which is necessary, without interfering with neighbours.

The society is determined to assist as far as possible to reduce this form of interference to a minimum; and asks listeners, dealers, the Broadcast Company, and the "Press" to join in the "attack" upon the incessant "howler." The hon. secretary reported having made arrangements for short special messages to be given by an expert when the time was ripe.

Success of Maori Pageant.

The committee passed a unanimous resolution congratulating the company for the splendid Maori Pageant recently broadcast.

It was noted with pleasure that 3YA will broadcast more light orchestral music shortly, and when possible continue broadcasting until a later hour on Sunday nights.

The society considers Sunday night is a very important night for listeners, in that most set owners are able to devote the Sunday night to listening; and the committee has appealed to the Broadcasting Company to concede this point. The main trouble appears to be, says the committee, difficulty in obtaining artists on Sundays, but the society states they would prefer selected gramophone records in preference to closing down early.

A letter from the company's general manager stated that only lectures of wide general interest and other spoken matter of an entertaining nature will be broadcast after 8 p.m. As far as possible the musical programmes will not be interfered with.

More Members Wanted.

It was decided to make a big effort to enrol more listeners as members, and the hon. secretary was empowered to make certain arrangements with a view to strengthening the society, it being considered that the society has, and is still doing, good work in the interests of listeners, and broadcasting as a whole.

It was resolved that new members joining after this date on payment of their subscription (5s.) would remain financial members until the end of April, 1928; the current year closing April 30 next. In future, special instructive and entertaining evenings will be provided by the society for members.

Co-operation Planned.

The committee recorded its appreciation for the opportunity of meeting the general manager (Mr. A. R. Harris) and Mr. Bellingham (musical director) recently in Wellington, when various important matters were discussed. The society, although desirous of having the silent night eliminated, realises that to duplicate the staff in order to provide nightly transmission is hardly possible just yet, owing to the heavy expense incurred in running four stations, but hopes as the numbers of licensees grows further improvements will be possible.

The society recorded the fact that the company, through the general manager, stated that everything possible was being done to give listeners a good broadcast service.

Society Matters.

The hon. secretary asked the committee to provide an assistant hon. secretary, owing to the large amount of work which the society had to handle. The president and members said they all appreciated highly the enormous amount of voluntary work done by the hon. secretary, and it was decided that Mr. G. W. Morgan—one of the committee—should act as assistant hon. secretary. The hon. secretary's address is: Amateur Radio Society, Wellington, Box 303.

The last conference held in Wellington decided that official correspondents should be appointed by each society in New Zealand, and such correspondent would keep in touch with kindred societies. With this end in view, Mr. Morgan was appointed by the Wellington Society as official correspondent to the Wanganui and Hawke's Bay Societies.

It is requested that all other societies throughout New Zealand notify the Wellington and every society the name and address of its official correspondent. This intercommunication between societies is to facilitate the work of each society.

AUSTRALIAN PRO-
GRAMMES

2BL, SYDNEY

The following are the programmes for 2BL, Sydney (353 metres) for February 22 to 26 inclusive:—

WEDNESDAY, FEBRUARY 22.

8 p.m., G.P.O. clock and chimes; 8.1, recital broadcast from E. F. Wilk's Concert Salon; 9.0, G.P.O. clock and chimes, the Canterbury District Band (bandmaster, Mr. Stan Nicholls) broadcast from Baker's Hall, Campsie; 9.20, Win and Winkle (English entertainers); 9.30, the Canterbury District Band; 9.50, Win and Winkle; 10.0, G.P.O. clock and chimes. Broadcaster's all sports expert will talk on general sporting; 10.15, resume of following day's programme and weather report; 10.18 Romano's Restaurant Dance Orchestra under the direction of Mr. Merv. Lyons; 11.30, G.P.O. clock and chimes; National Anthem.

THURSDAY, FEBRUARY 23.

8 p.m., G.P.O. clock and chimes, Broadcasters' Topical Chorus; 8.3, Broadcasters' Light Orchestra under the direction of Mr. J. Knight Barnett; 8.13 Miss Amy Ostinga (contralto); 8.20, Mr. Raimund Pechotsch (violinist); 8.27, Mr. Peter Sutherland (baritone); 8.34, Mr. Michael O'Connell (elocutionist); 8.41, Mr. Stan Catlett (tenor); 8.48, Miss Mary Charlton (pianist); 8.55, Miss Dulcie Starkey (soprano); 9.2, Broadcaster's Light Orchestra; 9.12, Miss Amy Ostinga; 9.19, Mr. Raimund Pechotsch; 9.26 Mr. Peter Sutherland; 9.33, Mr. Michael O'Connell; 9.40, Mr. Stan Catlett; 9.47, Miss Mary Charlton; 9.54, Miss Dulcie Starkey; 10.0, G.P.O. clock and chimes; 10.1, Broadcaster's Light Orchestra; 10.11, resume of following day's programme, weather report and forecast by courtesy of Mr. C. J. Mares, Government Meteorologist; 10.15, the Wentworth Cafe Orchestra, under the direction of Mr. Cyril Kaye, broadcast from the ballroom of the Wentworth; during intervals between dances "Sun" news will be broadcast; 11.30, G.P.O. clock and chimes; National Anthem.

FRIDAY, FEBRUARY 24.

8 p.m., G.P.O. clock and chimes; 8.1, 2BL, dance orchestra; 9.0, Romano's Restaurant Dance Orchestra, under the direction of Mr. Merv. Lyons; 9.10, Mr. Fred Webber (entertainer at the piano); 9.15, Romano's Restaurant Dance Orchestra; 9.25, Mr. Frank Ryan (elocutionist); 9.30, Romano's Restaurant Dance Music; 9.40, Mr. Fred. Webber; 9.45, Romano's Restaurant Dance Orchestra; 9.55, Mr. Frank Ryan; 10.0, G.P.O. clock and chimes; sporting editor of the "Sun" will talk on the prospects of Saturday's racing; 10.15, resume of following day's programme weather report and forecast by courtesy of Mr. C. J. Mares, Government Meteorologist; 10.20, Romano's Restaurant Dance Orchestra, during intervals between dances "Sun" news will be broadcast; 11.45, G.P.O. clock and chimes; National Anthem.

SATURDAY, FEBRUARY 25.

8 p.m., G.P.O. clock and chimes; 8.1, Broadcaster's instrumental trio; 8.10, vocal recital by Mr. Clive Cary, noted English composer and singer and senior professor of Elder Conservatorium, Adelaide, of Sea Shanties, with brief dissertations on the items to be performed; 8.40 Miss Ethel Friend (contralto); 8.47, Mr. Jack Win (entertainer); 8.57, announcements and weather report; 9.0, G.P.O. clock and chimes; a description of the boxing contest broadcast from the Sydney Stadium, Rushcutters Bay; 9.45, Broadcaster's Instrumental Trio; 9.52, Miss Ethel Friend; 9.59, Mr. Jack Win; 10.0, Broadcaster's Instrumental Trio; 10.16, resume of following day's programme, weather report and forecast by courtesy of Mr. C. J. Mares, Government Meteorologist; 10.20, the Wentworth Cafe Orchestra, under the direction of Mr. Cyril Kaye, broadcast from the ballroom of the Wentworth; during intervals between dances "Sun" news will be broadcast; 11.30, G.P.O. clock and chimes; National Anthem.

(Continued Foot Next Column.)

CHILDREN OF 3YA

Next week's programmes are:— Sunday.—Children's song service, conducted by Uncle Sam, assisted by the scholars from the East Belt Methodist Sunday School.

Monday.—Uncle Jack is here again, telling stories for the boys and girls—and more about the "Water Babies" for the little ones. Aunt Edna is helping with her quaint little songs.

Wednesday.—A happy hour for the children with Uncle Peter and Mother Hubbard. And another exciting experience of "Brer Rabbit." A merry band from the Somerfield School coming along to help in songs and choruses.

Thursday.—"Peterkin" and "Pollyanna" are paying a visit to the studio to-night. So look out for merry jokes and heaps of fun and laughter. Also the Waimairi School cousins in part songs, etc.

Friday.—Big Brother's night in song and story, and a happy band of young entertainers from Shirley, under the direction of Miss K. Moore.

Saturday.—Uncle Sam and Aunt May in merry mood again. Stories and music for folks for five years old to 50 years young.

APPRECIATION

In a letter signed on behalf of "Four Families and More," a correspondent in an outlying portion of the Auckland district writes as follows:—

"Many thanks we send to you for the nice sacred pieces you sent along the last two Sunday evenings. We did enjoy them. God bless you. We do appreciate your efforts to give us such pleasure, so we thought we would let you know and thank you. There were a number in our home listening in, and all join with me in thanks. We do enjoy the beautiful music and sermons."

"I am an invalid and never able to go out, and wish to thank you for the beautiful items you all give. It has been a great pleasure to me. My wireless is beside my bed. The service on Sunday night was splendid. I listened to the Maori radio pageant. The items were very clear and I enjoyed every bit of it."

"The children's session from your station is of great appeal to me and my friends, and Christchurch is fortunate in being able to 'discover' such talent as its broadcasts indicate."

Mr. H. Macintosh, chief traffic inspector at Christchurch, is to speak from 3YA on Friday concerning motor vehicle owners' responsibility and traffic problems.

SUNDAY, FEBRUARY 26.

10.45, special news service; 11.0, service broadcast from Chalmers Street Presbyterian Church. Afternoon session: 2 p.m., G.P.O. clock and chimes, special session for children in hospitals; 2.15, H.M.V. gramophone recital; 2.45, information service; 3.0, G.P.O. clock and chimes; close down. 3.30 organ recital broadcast from Chalmers Street Presbyterian Church; 4.30, Bible class, conducted by Mr. W. "Cairo" Bradley; 5.0, G.P.O. clock and chimes; close down. Evening session: 5.45, G.P.O. clock and chimes; children's session; 7.0, service broadcast from St. Jude's Church of England, Randwick; 7.30, Broadcasters' Instrumental Trio, under the direction of Mr. J. Knight Barnett; 8.37, Miss Norah Alexander (elocutionist); 8.49, Mr. Alfred Wilmore (baritone); 8.56 Mr. Leslie McCallum (flute solos); 9.3, Miss Ada Althouse (soprano); 9.10, Miss Dulcie Blair (violin solos); 9.17, Miss Madge Clague (contralto); 9.24, Broadcasters' Trio; 9.31, Mr. Alfred Wilmore; 9.38, Mr. Leslie McCallum; 9.45, Miss Ada Althouse (flute obbligato); 9.52, Miss Dulcie Blair; 9.59, resume of following day's programme, weather report and forecast by courtesy of Mr. C. J. Mares, Government Meteorologist; 10.3, Miss Madge Clague; 10.10, Broadcasters' Trio; 10.16, National Anthem.



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Some Features of Next Week's Programmes

"BOHEMIAN GIRL" AT 1YA

The Madame Irene Ainsley Quartet will next Tuesday take "The Bohemian Girl" for their weekly presentation of opera. This is now a recognised feature of Tuesday entertainments, and is eagerly looked forward to. A number of the well-known airs of Balfe's exceptionally popular work will be sung. The cast will be—

Arlene Mrs. Parry
Gipsy Queen Madame Irene Ainsley
Thaddeus Mr. Arthur Ripley
The Count Mr. W. Brough

Apart from the scene and excerpts from "The Bohemian Girl," an exceptional programme has been arranged. The vocalists of the Madame Irene Ainsley Quartet will be singing, the Bosworth-Hemus-Towsey Trio will contribute some of their most charming music, while Mr. Dan. Flood will provide humour.

The weekly Wednesday band concert in Albert Park will be relayed by 1YA. Interspersing the selections by the Municipal Band will be items by the Hazell-Sutherland Duo.

Miss Mina Caldwell, Miss Lola Solomon, Mr. Barry Coney, and Mr. Birrell O'Malley are among the singers for the studio entertainment on Thursday. The programme will be of a very bright description. The Snappy Three have again new and fresh songs for the evening.

A talk on "Great Authors" will be given by Mr. Culford Bell on Thursday evening.

Miss Myra Monk and Mr. M. Balance will be heard in solos and duets at 1YA on Friday. One item to be sung by the duo will be the Church Scene from "Faust."

Mr. J. F. Montague will again demonstrate his versatility as an elocutionist on Friday evening. His items will be "Shakespeare: A Tribute," an Irish sketch, and a musical recital entitled "That Old Sweetheart."

Mr. Clyde Howley, well-known as the conductor of the Internationals at the Dixieland Cabaret, will, with his piano, be a radio entertainer on Friday. His items will include "Mother's Rosary of Love," a fox-trot medley, and a humorous monologue.

The Bohemian Trio have some songs of a popular nature for Friday evening.

Mr. Hal McLennan, the well-known Auckland flautist, will be playing at 1YA on Friday.

Mendelssohn's beautiful "On Wings of Song" will be sung as a quartet by the Lyric Four on Saturday evening. Another quartet will be "Fireside Melodies." There will also be a trio, taken from "Faust," sung by Miss A. McGuire and Messrs. Ripley and Thomas.

"Cloze Props" and "Drinking Song" are two solos to be rendered by Mr. Ernest Drake, bass. Mr. Richards will sing "The Secret" and "Parted," and Mr. Ripley "Molly Bawn." Soprano solos to be sung by Miss McGuire will be "Carmena" and "Prince Charming."

Mr. A. McElwain, the Saturday evening humorist of 1YA, will have two very diverting items for the next occasion, namely, "The 11.09 Express" and "The Hinglishman."

A sacred concert will follow the broadcast of the St. Andrew's Church service on Sunday evening, the well-known St. Andrew's Quartet and the Bosworth-Hemus-Towsey Trio being the artists.

2YA NOTES

On Monday the evening's programme will be opened with that rollicking quartet of Easthope Martin's "Come to the Fair." The other concerted numbers will be two of Ciro Pinsuti. This composer's work will demonstrate its always beautiful harmony in "The Sea Hath Its Pearls" and "In This Hour of Softened Splendour."

The solo items include two of Schubert's, "The Trout" and "Evening Boat Song," to be sung by Miss Nora Greene. This young singer's fine contralto voice will delight in these items.

An interesting feature at Tuesday's evening concert session at 1YA will be an address by Mr. H. V. Wilson, entitled "Five Years With the League of Nations." Mr. Wilson is a New Zealander, hailing from Christchurch. He is secretary to Sir Eric Drummond, who is himself secretary to the League of Nations.

Mr. Temple White, the talented organist, will contribute to this attractive programme. His work at the organ is always greatly appreciated.

LOCAL COMPOSER FROM 2YA.

BROADCAST BY SYMONS-ELLWOOD-SHORT TRIO

On Friday evening, March 2, the Symons-Ellwood-Short trio will play a "Phantasy Trio" by the well-known local composer, Mr. Claud M. Haydon, M.A., a number of whose works have been given an enthusiastic hearing in Wellington. Instead of using the ordinary form in three or four movements the composer has written this work in a free form, running the several contrasted moods into one another. Its melodiousness and the transparent treatment of the chief figures make it an extremely effective number, and there are certain to be many requests for repetition performances of it.

The first movement of still another Reissiger trio will be given on Saturday evening. The other trios by this composer which have been performed have evoked many appreciative notices by reason of their pure sunefulness and skilful treatment of the three instruments. Composed by a very able musician who enjoyed great vogue in his day (1798-1859), they have a clear melodiousness which makes them very welcome to the average lover of light music to-day.

The trio in D minor of Mendelssohn is one of the most popular of all trios. The one in C minor, two movements of which are to be played on Tuesday, is not so often played, but it contains elements which make it exceedingly effective. The serenity of the second movement is in

striking contrast to the agitated mood which surges through the first movement.

Miss Ava Symons and Mr. Gordon Short will play the lovely slow movement from Grieg's sonata in C minor. Written by a master hand with this melody as simple as a folk-song, this number always makes a strong appeal to uncultivated as well as cultivated ears.

Mr. Gordon Short will play as solo the ever-popular "Military March" of Schubert arranged in truly massive form for the piano by that pianistic genius, Carl Tausig.

Miss Ava Symons will play "La Precieuse," by Conperin Kreisler and "Serenade" of Drla.

Mr. George Ellwood's solos will include the Russian Song by Salo.



—Tornquist Photo.
MADAME IRENE AINSLEY,
who will give "The Bohemian Girl"
from 1YA on Tuesday.

Mrs. Amy Dunn has selected Elgar's "Like to the Damask Rose," and her rendition of this song will again proclaim her the talented artist she is.

Landon Ronald's "O Lovely Night" and Coates's "I Heard You Singing" are eminently suited to Mr. William Renshaw's delightful tenor voice, while Mr. Wilbur Davies will charm with "The Late Player" and "Spanish Gold."

Mr. Walpole's mirthful meanderings, on this occasion dealing, we believe, with matters incidental to babies, hold promise of a hearty laugh.

The Orpheus Quartet will on Tuesday, February 28, give all their numbers from Sir Edward German's delightful comic opera, "A Princess of Kensington."

As is usual in the concert version of comic opera, the story is somewhat disjointed, but the scene is laid in early midsummer-day morning. The fairies are called forth to the court of King Oberon. The fishermen appear, and are joined by the fairies disguised as fisher-girls, and through their good offices the two lovers, Brook and Kenna, are brought together after matters have been put straight. It appears that an interfering band of gypsies had carried away Brook when he was a child of two. Then comes the "Bridal March." The music is very melodious, and the presentation should prove most acceptable to listeners-in. Mr. Len. Barnes's experience in comic opera in London and the United States of America is of great value to these performances.

The Two Boiled Owls will present a further batch of comicalities.

JOTTINGS FROM 3YA

The Municipal Band and 3YA artists will provide the studio concert on Monday. Included amongst these will be Madame Litchfield (contralto), Mr. Fred. A. Miller (bass), Mr. E. Rogers (tenor), Mr. C. O'Connor (comic songs) and Mr. Darragh (humour).

Mr. Fred A. Miller (bass), who is to sing "The Song of the Bow" and "Simon the Cellarer" at 3YA on Monday evening, is a son of Mr. Alex. Miller, who for over 35 years was one of the senior bass lay clerks and choir soloists at the Christchurch Cathedral, and a leading bass in all oratorio in Christchurch.

The humorous items to be given by Mr. J. Darragh on Monday evening will be "Straight from the Horse's Mouth" (a coster's visit to a racecourse) and "Guy de Vere's Night Out."

The vocalists for Wednesday evening will be the Aeolian Quartet, comprising Mrs. Claris Shaw, Miss Mildred Russell, Mr. Gregory Russell, and Mr. W. J. Richards. The programme will include quartets and some very fine duets. Mrs. Shaw and Mr. Gregory Russell will enact a scene from "Carmen," in which the "Castanet Song" and "The Flower Song" will be sung. These two artists will also sing "Believe Me, if all those Endearing Young Charms." Another duet will be that sung by Miss Russell and Mr. W. J. Richards, "Arise O Sun."

Mr. A. H. Todd, elocutionist, of Ashburton, will give on Wednesday evening, among other items, Blascheck's amusing "The Country J.P."

"Somebody," from the "San Toy" opera, will be a soprano solo, with chorus, to be sung by Mrs. Claris Shaw on Wednesday. Mr. Gregory Russell will sing "The Fuchsia Tree," from "Yes, Uncle." The Broadcasting Trio will also play selections from operas.

A programme of Welsh airs will be presented at 3YA on Thursday by the Madame Gower Burns Grand Opera Quartet. The entertainment will commence with the singing by Mr. Renell, with chorus, of the stirring "Land of My Fathers." Madame Gower Burns will sing "Risings of the Lark," "My Little Welsh Home," "My Master hath a Garden," and "God Bless the Prince of Wales," to which solo there will be a chorus by the quartet. Miss Jessie King will be singing "Bells of Aberdovey," and one of Mr. Prescott's songs will be "In the Vale of Llangollen." The quartets will comprise "Welsh Rhapsodie" and "A Welsh Carol." The Broadcasting Trio will play "Men of Harlech."

The Melodious Four, the quartet headed by Miss Frances Hamerton, L.A.B., will on Friday present the romantic opera "Monsieur Beaucaire," by Andre Massager. The opera is founded on Booth Tarkington's novel.

Andre Massager (born 1853) was a pupil of Saint-Saens, and for many years was artistic director at Covent Garden and at the Paris Opera. He made a great success in light music—operettas and comic operas. He is almost the last of a long line of French composers in this vein. He has been fairly prolific and has continued to produce musical works until late in life.

Friday being dance night, selections will be played by Mr. Lyndon Christie's orchestra, and will intersperse the vocal items of "Monsieur Beaucaire."

A rare aggregation of talent will contribute to the Saturday evening programme at 3YA. It will be such a programme as the variety lover revels in. Singing songs of a classical as well as

popular character will be Miss Thomas and Mr. Dave McGill, and a new vocalist will be Miss Dulcie Mitchell. That joyous trio, the Misses Johns and Johnson, are also engaged.

The church service to be broadcast on Sunday evening will be that conducted by the Rev. J. Robertson at Oxford Street Baptist Church. Afterwards will follow the studio concert. The vocalist will be Mr. Frank Morrison, possessor of a fine tenor voice, who has previously sung at 3YA. Items will be played by the Broadcasting Trio and by Miss Irene Morris (violin).

4YA NOTES

The service to be broadcast on Sunday next is from Knox Church. The preacher will be the Rev. Tulloch Yuille, B.D., M.A.

Mr. Lloyd Ross, who, it will be remembered, gave several interesting addresses under the auspices of the Workers' Educational Association last winter, will be on the air again on Tuesday at 7.30 p.m. His subject on this occasion will be "An Early Visit to China."

Owing to the band contest which is to be held in Christchurch, the usual band night on Tuesday will not take place. A first-class programme, however, has been arranged. The vocal portion of this programme will be provided by Mr. Alfred Wainwright (tenor), Miss Catherine Law (mezzo-soprano), Mr. Reg. Richards (baritone), and Mr. Chas. Rowand (comedian). The instrumental music will be provided by Mr. O. Judd (cornetist) and Miss Rita Holmes (pianist). Miss Anita Winkel and Mr. J. B. McConnell will be heard in elocutionary items.

On Thursday night a magnificent programme will be heard. Miss Winnie McPeak (contralto) will sing, among other numbers, O'Connor Morris's charming little song, "I am Longing for the Spring." Miss Rita Holmes (soprano) has chosen three modern numbers. Mr. F. M. Tuohy will render Pinsuti's "The King's Minstrel" and Tosti's "Beauty's Eyes." Mr. E. G. Bond (bass) has chosen "An Ancient Mariner" as one of his numbers. Miss Alice Wilson, F.T.C.L., has chosen more compositions by modern and older composers for her pianoforte selections, and Mr. Malcolm Robilliard will assist with cello solos.

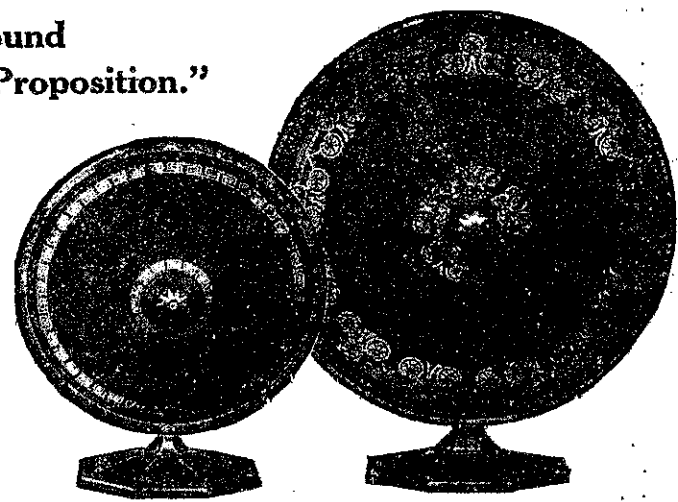
A feature of Thursday evening's programme will be an address by Pastor W. D. More. This time his subject will be "Unconscious Absurdities." Just what he means by this is not clear, but a good address can be guaranteed. Orchestral music under the conductorship of Mr. L. D. Austen will be relayed at intervals from the Octagon Theatre.

Saturday night at 4YA will be a night of opera. A group of Dunedin's most successful singers will contribute various numbers from popular works. Miss Florence Sumner will sing songs representative of "La Tosca," "Faust," and "Lolita." Miss Irene Hornblow, L.R.A.M., will render "Softly Awakes My Heart," from "Samson and Delilah," "Dido's Lament," from "Dido and Aeneas," and "Che Faro," from "Orfeo and Euridice." Mr. Arthur Langley will sing the "Toreador Song," from "Carmen," and the "Loving Smile of Sister Kind," from "Faust." Mr. R. A. Mitchell has chosen "Then You'll Remember Me," from "The Bohemian Girl," "La Donna e Mobile," from "Rigoletto," and "Derserta in Terra," from "Lucia di Lammermoor." Appropriate instrumental music will be provided by Mr. J. Stewart (flautist), Mr. A. R. Watson (violinist), and Mr. George Christie (cornetist).

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Full Programmes for Next

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NOTES AND COMMENTS

(By "Switch.")

The radio writer in the Melbourne "Argus" says that "Although interference from ship stations is not so serious in Australia as it is in Great Britain, where no parts of the country are very far from the sea, and where there is a concentration of shipping, it is often heard even in the large Australian cities. In centres round the coast, and some distance from broadcasting stations, a good deal of interference occurs from time to time, and an improvement of the apparatus carried by all ships in Australian waters would improve broadcasting in many districts." New Zealanders are not free from the same trouble.

Dr. Goldsmith, who designed the 50,000 watt station WEA, New York, predicts 1,000,000 watt stations in the near future. When aerials sizzle with this great power, the station would have to be situated a good distance from large cities in order to prevent "blanketing" of nearby receivers, and a power plant big enough to light a fair-sized town would be necessary to supply the electrical energy.

Serious interference with broadcast listening can be created by X-ray apparatus. Old type X-ray apparatus used by many doctors may cause interference to listeners within two city blocks. The latest type of X-ray plants is not a disturber of the ether.

Where cotton-covered wiring is used the ends of the wire usually present a frayed appearance. A few drops of collodion painted over the end of the wire immediately after the insulation has been stripped off, will give the end a neat appearance, and prevent the objectionable fraying.



MR. WILBUR DAVIES

Who will sing from 2YA next week.

The Radio Manufacturers' Association of U.S.A. has recently been successful in its contention that a storage ("wet") battery is not "an article of household use." This is not propaganda for socket-power units, however, but was called for by an official construction of a law requiring that a poison label or sticker be placed upon articles of household use containing caustics or corrosives. The Department of Agriculture, accordingly, has ruled that batteries need not be so labelled for interstate shipment; but that the electrolyte should be, if it is shipped in separate containers suitable for household use.

Medals and silver cups rank among the prizes which are to be offered by 2KY, the Sydney Trades Hall broadcast station, in an interesting competition that is being arranged by that station. Listeners will be asked to vote for artists who entertain from 2KY, and the winners will receive medals. The eventual winner of winners will be presented with the silver cup.

Among the worst causes of interference with broadcast listening are electric motors. A simple way to cut down trouble from this source is to insert a filter between the motor and the power lines. Filters are now made expressly for this purpose, and may easily be connected in the circuit by any fan.

Where a receiver has to be worked, e. stored, in a damp atmosphere the interior of the cabinet may be kept free from moisture by a few lumps of calcium chloride placed in a suitable receptacle inside of the cabinet. A small bottle clamped vertically to the side of the cabinet will be found best, as the narrow neck will prevent the chemical from being spilled. The calcium chloride should be examined from time to time and renewed when necessary. The need for the renewal will be indicated by the fact that the solid lumps have entirely gone into solution with the moisture absorbed from the air.

The capital cost of the Rugby Radio Station (Morse), in England, is approximately £100,000. Expenditure per annum is rated at about £123,000, and revenue about £57,000.

Sunday, February 26th

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

- 3 p.m.: Afternoon session—Selected Studio items.
4.0: Literary selection by the Announcer.
4.30: Close down.
6.0: Children's service, conducted by Uncle Leo.
6.55: Relay of evening service from Baptist Tabernacle. Preacher, Rev. J. Kemp; organist and musical director, Mr. Arthur E. Wilson.
8.30: Vocal quartet—St. Andrew's Quartet, "Holiest, Breathe" (Old Italian).
8.34: Contralto solo—Miss Phyllis Gribben, "The Lord Is My Light" (Allitsen).
8.39: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio, Op. 25—Finale" (Bach).
8.49: Bass solo—Mr. Arthur Colledge, "Within These Sacred Portals" (Mozart).
8.53: Vocal quartet—St. Andrew's Quartet, "Quando Corpus" (Rossini).
8.57: Tenor solo—Mr. Robert Peter, "The Soft Southern Breeze" (Barnby).
9.1: Violin and piano duet—Miss Ina Bosworth and Mr. Cyril Towsey, "Sonata for Violin and Piano in F Major—Allegro and Finale" (Grieg).
9.11: Vocal quartet—St. Andrew's Quartet, "I Will Lay Me Down in Peace" (Galsby).
9.15: A thought.
9.17: Close down.

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

- 6 p.m.: Children's service, conducted by Uncle Ernest.
6.55: Relay of evening service from Taranaki Street Methodist Church. Preacher, Rev. Clarence Eaton; organist and choral director, Mr. H. Temple White.
8.30: Mezzo-contralto solo—Miss N. Coster, "Like to the Damask Rose" (Elgar).
8.35: Vocal quartet—Ariel Singers, (a) "The Ash Grove" (Welsh air, arr. by Crampton); (b) "Sleep, Gentle Lady" (Bishop).
8.43: Instrumental quartet—Symons-Ellwood String Quartet, "Andante Cantabile" from "D Major Quartet" (Tschaiowsky).
8.48: Tenor solo—Mr. Roy Hill, "Praise Ye the Lord" (Bantock).
8.52: Vocal duet—Miss N. Coster and Mr. J. M. Caldwell, "Love Divine" from "The Daughter of Jairus" (Stainer).
8.57: Vocal quartet—Symons-Ellwood String Quartet, (a) "First Movement from G Major Quartet" (Mozart); (b) "Minuetto" (Boccherini).
9.3: Soprano solo—Miss Jeanette Briggs, "The Willow" (Goring Thomas).
9.8: Vocal quartet—Ariel Singers, "The Winds" (Cymson).
9.14: Cello solo—Mr. Geo. Ellwood, "Air with String Accompaniment" (Bach).
9.20: Tenor solo—Mr. Roy Hill, selected.
9.25: Bass solo—Mr. J. M. Caldwell, "The Windmill" (Nelson).

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

- 5.45 p.m.: Children's song service, conducted by Uncle Sam, assisted by the East Belt Methodist Sunday School.
7.0: Relay of evening service from St. Andrew's Presbyterian Church. Anthems, (a) "I Was Glad When They Said Unto Me" (Elvy); (b) "The Sun Shall Be No More" (Woodward). Preacher, Rev. N. L. D. Webster; organist, Mr. R. E. Lake; choirmaster, Mr. J. McLean.
After the church service, the following concert will be given from 3YA Studio:—
8.15: Baritone solo—Mr. Francis Jones, "Thou Art Passing Hence, My Brother" (Sullivan).
Soprano solos—Mrs. Frank O'Brien, (a) "At Dawning" (Cadman); (b) "Light Has Sent Me Many Roses" (Lohr).
Clarinet solo—Mr. M. E. Withers, "Scena et Aria" (Bergson).
Contralto solo—Miss Nancy Bowden, "O, Rest in the Lord" from "Elijah" (Mendelssohn).
Baritone solos—Mr. Francis Jones, (a) "Nazareth" (Gounod); (b) "A Song of Sleep" (Somerset).
Soprano solo—Mrs. Frank O'Brien, "Rumanian Night Song" (Lohr).
Clarinet solo—Mr. M. E. Withers, "Ave Maria" (Schubert).
Contralto solo—Miss Nancy Bowden, "Creation's Hymn" (Beethoven).
God Save the King.

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

- 5.45 p.m.: Children's song service, conducted by Big Brother Bill.
7.0: Relay of evening service from Knox Church. Preacher, Rev. Tulloch Yuille, B.D., M.A.; organist, Mr. W. Paget Gale.
8.15: Studio concert.
9.15: Close down.

Monday, February 27th

1YA AUCKLAND (333 METRES)—MONDAY, FEBRUARY 27.

SILENT DAY.

2YA WELLINGTON (420 METRES)—MONDAY, FEBRUARY 27.

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
5.0: Close down.
6.0: Children's hour—Toby and Jeff.
7.0: News session, market reports, and sports results.
7.40: Lecture—Mr. H. C. South, "Books—Grave and Gay."
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—"Plantation Songs" (Clutsam).
8.5: Vocal quartet—The William Renshaw Quartet, (a) "Come to the Fair" (Martin); (b) "The Sea Hath Its Pearls" (Pinsuti).
8.12: Recitation—Miss Isa McLeay, "Land of the Might Have Been."
8.17: Instrumental trio—Symons-Ellwood-Short Trio, "First and Second Movements—Trio in F" (Gade).
8.27: Bass solo—Mr. Wilbur Davies, "The Lute Player" (Allitsen).
8.31: Original entertainment—Mr. H. Montgomery, "A Little Pal of Long Ago" (Dixon).
8.36: Cello solo—Mr. Geo. Ellwood, "Russian Song" (Lalo).
8.40: Meanderings of Egbert—Mr. R. Walpole, "Egbert on Child Welfare."
8.47: Soprano solo—Mrs. Amy Dunn, "Like to the Damask Rose" (Elgar).
8.50: Tenor solos—Mr. William Renshaw, (a) "O, Lovely Night" (Ronald); (b) "I Heard You Singing" (Coates).
8.58: Weather forecast.
9.0: Recitation—Miss Isa McLeay, "Ojis.oh" (Pure White Star).
9.7: Instrumental trio—Symons-Ellwood-Short Trio, "Third and Fourth Movements—Trio in F" (Gade).
9.19: Contralto solos—Miss Nora Greene, (a) "Evening Boat Song" (Schubert); (b) "The Trout" (Schubert).
9.27: Original entertainment—Mr. H. Montgomery, "Ragging Thru the Rye" (Emmett).
9.32: Bass solo—Mr. Wilbur Davies, "Spanish Gold" (Fisher).
9.37: Cello solo—Mr. Geo. Ellwood, "Le Cygne" (St. Saens).
9.41: Soprano solo—Mrs. Amy Dunn, "Here's to Love and Laughter" from "The Sunshine Girl" (Rubens).
9.47: Meanderings—Mr. R. Walpole, "Monty on Advertising."
9.54: Vocal quartet—The William Renshaw Quartet, "In This Hour of Softened Splendour" (Pinsuti).

3YA CHRISTCHURCH (306 METRES)—MONDAY, FEBRUARY 27.

- 3 p.m.: Afternoon session—Selected studio items.
4.30: Close down.
6.0: Children's hour—Uncle Jack and Aunt Edna. Stories, songs, and birthday greetings.
7.15: News and reports.
8.0: Chimes.
Relay of orchestral music from Strand Theatre Orchestra, under the conductorship of Mr. Harry Ellwood.
Studio band concert by Christchurch Municipal Band, under the conductorship of Mr. A. J. Schnack, assisted by 3YA artists.
8.14: Bass solo—Mr. Fred. A. Millar, "The Song of the Bow" (Aylward).
8.18: March—The Band, "Half-and-Half" (Morrison).
8.24: Humorous recitation—Mr. Jack Darragh, "Straight from the 'Orse's Mouth" (a Coster's visit to a racecourse) (own arrangement).
8.28: Dance—The Band, "Moon Madrigal" (Willeby).
8.32: Contralto solos—Madame Eva Litchfield, (a) "Remembrance" (Cowan); (b) "Snowflakes" (Cowan).
8.38: Selection—The Band, "Something to Adore."
8.44: Tenor solo—Mr. Ernest Rogers, "Mona" (Adams).
8.48: Hymn—The Band, "Abide With Me" (Monk).
8.51: Happy song—Mr. Cheslyn O'Connor, "That's a Good Girl" (Berlin).
8.55: Selection—The Band, "Le Domino Noir" (Auber).
8.59: Weather forecast.
9.0: Relay of orchestral selections from Strand Theatre.
9.15: Bass solo—Mr. Fred. A. Millar, "Simon the Cellarer" (Hatton).
9.19: March—The Band, "On Tour" (White).
9.27: Humorous recital—Mr. Jack Darragh, "Guy de Vere's Night Out."
9.32: Contralto solo—Madame Eva Litchfield, "Douglas Gordon" (Kellie).
9.36: Air varie—The Band, "Welsh Melody" (Rimmer).
9.41: Tenor solo—Mr. Ernest Rogers, "Bird Songs at Eventide" (Coates).
9.45: Selection—The Band, "Andan'e in G" (Batiste).
9.51: Happy song—Mr. Cheslyn O'Connor, "I Wonder Where My Baby is To-night" (Donaldson).
9.55: March—The Band, "Punchinello" (Rimmer).
10.4: God Save the King.

4YA DUNEDIN (463 METRES)—MONDAY, FEBRUARY 27.

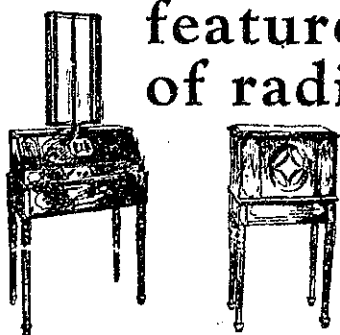
SILENT DAY.

Tuesday, February 28th

1YA AUCKLAND (333 METRES)—TUESDAY, FEBRUARY 28.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.30: Close down.
6.0: Children's hour—Cinderella. Piano solos—Cousin Alick, (a) "Volga Boat Song"; (b) "Russian Folk Song." Song, Squeak, "Billy Boy" (Albert). Letters and birthdays. Duet, Pip and Squeak, "Sea Chanties." Dialogue, Cinderella, Pip and Squeak. Piano solo, Cousin Alick, "Sailor's Song" (Grieg). Cinderella, story time.
7.15: News and reports.
8.0: Chimes.
8.1: Relay of orchestral overture from Majestic Theatre Orchestra, under the conductorship of Mr. J. Whiteford-Waugh.
8.6: Soprano solo—Mrs. Parry, "Serenata" (Tosti) (with violin obbligato by Miss Ina Bosworth).
8.10: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio in A Major—Andante and Finale" (MacFarren).
8.18: Baritone solos—Mr. Walter Brough, (a) "Stockrider's Song" (James); (b) "The Windmill."
8.26: Relay of musical interlude from Majestic Theatre.
8.31: Contralto solo—Madame Irene Ainsley, "Ah Fe Tu, Dormi" from "Romeo and Juliet."
8.36: Pianoforte solo—Mr. Cyril Towsey, "Andante in F" (Beethoven).
8.40: Tenor solo—Mr. Arthur Ripley, selected.
8.44: Violin solo—Miss Ina Bosworth, "On Wings of Song" (Mendelssohn).
8.48: Humorous recitation—Mr. Dan Flood, "By Special Messenger" (Henry).
8.53: Relay of vocal and musical interlude from Majestic Theatre.
8.28: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Marche Militaire" (Schubert).
9.6: Weather forecast.
9.8: Talk on "League of Nations," by Dr. Mildred Staley.

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Week - All Stations - to Mar. 4

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- 9.20: Vocal duet—Messrs. Ripley and Brough, "Watchman, What of the Night?" (Sargeant).
9.25: Contralto solo—Madame Irene Ainsley, "Lilies" (Barry).
9.29: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio, Op. 112, Third Movement" (Raff).
9.38: Humorous recitation—Mr. Dan Flood, "The Parson at the Sewing Party."
9.43: Scene and excerpts from "The Bohemian Girl," by Balfe, produced under the direction of Madame Irene Ainsley. Cast: Arline, Mrs. Parry; Gipsy Queen, Madame Irene Ainsley; Thaddeus, Mr. Arthur Ripley; the Count, Mr. Walter Brough.
Arline—"I Dreamt that I Dwelt"
Thaddeus—"When Other Lips."
The Count—"The Heart Bowed Down."
Gipsy Queen—"Love Smiles but to Deceive."
Quartet—"From the Valleys and Hills."
Trio—"Through the World"; and dialogue.
At the estate of Count Arnheim, in Austria, festivities are being held. A troop of Gypsies come on the scene and induce Thaddeus, a rebel, to join them. News is brought by some of the hunting party that Arline, the Count's daughter, is being attacked by a stag. Thaddeus rescues her, and he and the Gypsy chief take her to her father's castle. Thaddeus is given wine and asked to drink to the Emperor. He refuses. In the ensuing uproar he escapes, and in revenge steals the little daughter of the Count. The girl Arline grows up amongst the Gypsies, and falls in love with Thaddeus. She tells him that in her dreams she sees the marble halls of her childhood. She is accused of stealing a medallion, and subsequently taken before the Count, her father, who recognises her by a scar. The story, however, ends happily. Arline being restored to her former position confesses her love for Thaddeus, who proves to be of noble birth, and is allowed to marry Arline.
10.0: A thought.
10.3: God Save the King.

2YA WELLINGTON (420 METRES)—TUESDAY, FEBRUARY 28.

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
3.30: Lecturette—Mrs. Sinclair, of S. Brown, Limited, "Electric Cooking."
3.45: Selected gramophone items.
5.0: Close down.
6.0: Children's hour—Uncle Jasper.
7.0: News session, market reports, and sports results.
7.40: Lecturette by representative of Agricultural Department, "For the Man on the Land."
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—"Selection for Brass and Organ" (Purcell, arr. Sir Henry Wood).
All vocal numbers taken from "A Princess of Kensington," by Edward German.
8.5: Soprano solo and quartet—Mrs. Alice Harris and the Orpheus Quartet, "Midsummer Day."
8.9: Italian mandolin—Mr. Lad Haywood, "Slow River" (Schwab).
8.13: Soprano, tenor, and quartet—Mrs. Alice Harris, Mr. Arthur Coe, and Orpheus Quartet, "Hail, Oberon."
8.17: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement—C Minor Trio" (Mendelssohn).
8.27: Tenor solo—Mr. Arthur Coe, "A Song of Rose Marie."
8.31: Cello solo—Mr. Geo. Ellwood, "Prelude in B Minor" (Chopin).
8.35: Vocal duet—Mrs. Alice Harris and Mr. Len Barnes, "Seven o'clock in the Morning."
8.39: Recitation—Miss Violet Wilson, "The Highwayman" (Noyes).
8.45: Vocal quartet—The Orpheus Quartet, "Who That Knows I Love You?"
8.49: Weather forecast.
8.50: Lecturette—Mr. J. V. Wilson, private secretary to Sir Eric Drummond, Secretary-General to the League of Nations, "The Aims and Objects of the League of Nations."
9.0: Organ recital—Mr. H. Temple White, (a) "By the Sea" (Schubert); (b) "Prayer and Cradle Song" (Guilmant); (c) "Fanfare" (Lemmens).
9.15: Soprano solo—Mrs. Alice Harris, "Twin Butterflies."
9.19: Instrumental trio—Symons-Ellwood-Short Trio, "Second Movement—C Minor Trio" (Mendelssohn).
9.29: Vocal quartet—The Orpheus Quartet, "Yo Ho, Heave Ho."
9.33: Italian mandolin—Mr. Lad Haywood, "Lay My Head Beneath a Rose" (Falkenstein).
9.39: Baritone solo—Mr. Len Barnes, "Four Jolly Sailors."
9.43: Cello solo—Mr. Geo. Ellwood, "Gavotte" (Popper).
9.47: Contralto solo—Miss Lily Mackie, "A Mountain Stood."
9.51: Humour—Miss Violet Wilson, "Mrs. Brown at the Play" (Sketchley).
9.56: Vocal quartet—The Orpheus Quartet, "Bridal March."

3YA CHRISTCHURCH (306 METRES)—TUESDAY, FEBRUARY 28.

SILENT DAY.

4YA DUNEDIN (463 METRES)—TUESDAY, FEBRUARY 28.

- 3 p.m.: Town Hall chimes.
3.1: His Master's Voice recital.
3.15: Fashion talk by a representative of the D.I.C.
3.30: Studio music.
4.0: Address on the "Domestic Uses of Electricity," by a representative of Turnbull and Jones.
4.15: His Master's Voice recital.
4.30: Close down.
6.0: Town Hall chimes.
6.1: Children's hour—Big Brother Bill and cousins.
7.15: News session.
7.30: Address by Mr. Lloyd Ross, Secretary of the W.E.A., "An Early Visit to China."
8.0: Town Hall chimes.
8.1: Tenor solos—Mr. Alfred Walmsley, (a) "A Farewell" (Liddle); (b) "She is Far from the Land" (Lambert).
8.8: Recitation—Miss Anita Winkel, "Annabel Lee" (Poe).
9.12: Cornet solos—Mr. O. Judd, (a) "O, Lovely Night" (Round); (b) "Wendouree" (Code).
8.18: Mezzo-soprano solo—Miss Catherine Law, "The Lotus Flower" (Schubert).
8.21: Violin solo—Mr. W. Le Gal, "Dream Thoughts" (Moss).
8.26: Humorous songs—Mr. Chas. Rowand; (a) "It's Never Too Late to Mend" (Rowand); (b) "One of the Boys" (Rowand).
8.35: Recitation—Mr. J. B. McConnell, "The Cane-bottomed Chair" (Thackeray).
8.40: Baritone solos—Mr. Reg. Richards, (a) "O Star of Eve" from "Tannhauser" (Wagner); (b) "Only a River Running By" (Hopkins).

- 8.47: Pianoforte solos—Miss Rita Holmes, (a) "Andante and Rondo Capriccioso" (Mendelssohn); (b) "Waltz, Op. 34, No. 2" (Chopin).
9.0: Town Hall chimes, weather report, and forecast.
9.3: Tenor solo—Mr. Alfred Walmsley, "An Evening Song" (Blumenthal).
9.7: Humorous recitals—Miss Anita Winkel, (a) "Next Week"; (b) "Mrs. Arris."
9.17: Cornet solo—Mr. O. Judd, "My Dreams" (Tosti).
9.22: Mezzo-soprano solos—Miss Catherine Law, (a) "Birth of Morn" (Leoni); (b) "Little Blue Bay" (Del Riego).
9.28: Violin solos—Mr. W. Le Gal, (a) "Polonaise" (Bohm); (b) "The Old Refrain" (Kreisler).
9.37: Comedy songs at the piano—Mr. Chas. Rowand, "Have a Drop of Gin, Joe" (Champion).
9.42: Recitations—Mr. J. B. McConnell, (a) "The Dandy Fifth"; (b) "Chance It" (Barnaby).
9.50: Baritone solo—Mr. Reg. Richards, "Country Folk" (Brahe).
9.53: Piano solo—Miss Rita Holmes, "Automne" (Chaminade).
10.0: Close down.

Wednesday, February 29th

1YA AUCKLAND (333 METRES)—WEDNESDAY, FEBRUARY 29.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.30: Close down.
6.0: Children's hour—Uncle Tom. Song, Cousin Jesmond, "Just Round the Corner" (Von Tilzer). Talk on Greek mythology, by Uncle Tom. Song, Cousin Connie, "Only a River Running By" (Hopkins). Letters and birthdays. Recitation, Cousin Muriel, "The Wedding Present" Song, Cousin Connie, "Hills of Donegal" (Sanderson). Uncle Tom, story time.
7.15: News and reports.
7.45: Talk on "Physical Culture," by Mr. Norman Kerr.
8.0: Chimes.
8.1: Relay of Municipal Band concert from Albert Park. Bandmaster, Mr. Christopher Smith; assisted by the Hazell-Sutherland Duo, who will intersperse the band programme with the following items:—
Contralto solos—Miss Phyllis Hazell, (a) "High on the Sleepy Hills" (Loughborough); (b) "A Brown Bird Singing" (Wood).
Bass solos—Mr. Frank Sutherland, (a) "The Gladiator" (Adams); (b) "Drumadon" (Sanderson).
Vocal duets—The Hazell-Sutherland Duo, (a) "The Day is Done" (Lohr); (b) "Come, Sing to Me" (Thompson).
10.0: A thought.
10.2: God Save the King.

2YA WELLINGTON (420 METRES)—WEDNESDAY, FEBRUARY 29.

SILENT DAY.

3YA CHRISTCHURCH (306 METRES)—WEDNESDAY, FEBRUARY 29.

- 3 p.m.: Afternoon session—Selected studio items.
4.30: Close down.
6.0: Children's hour—Uncle Peter and Mother Hubbard and a merry band of scholars from the Somerfield School.
7.15: Adding stock market reports.
7.30: News and reports.
8.0: Relay of orchestral selections from Grand Picture Theatre Orchestra, under the conductorship of Mrs. K. Black.
8.15: Vocal quartet—The Aeolian Quartet, "Basso Profundo" (Bliss).
8.18: Scene from "Carmen"—Mrs. Claris Shaw and Mr. Gregory Russell, "Castnet Song," "Flower Song."
8.33: Cello solo—Mr. Harold Beck, "Berceuse" (Jarnfeldt).
8.37: Contralto solo—Miss Mildred Russell, "The Fairy Lough" (Stanford).
8.40: Instrumental trio—Christchurch Broadcasting Trio, "Allegro from Trio in D Minor" (Jurgensen).
8.46: Soprano and tenor duet—Mrs. Claris Shaw and Mr. Gregory Russell, "Believe Me if All those Endearing Young Charms" (arr. Stephen-son).
8.50: Flute solo—Mr. W. Hay, "Alla Mazurka" (Rudd Carte3).
8.54: Humorous recital—Mr. A. H. Todd, "Slow, Ain't It?"
8.59: Weather forecast.
9.0: Relay of orchestral selections from Grand Picture Theatre.
9.15: Baritone solo—Mr. W. J. Richards, "Loving Smile of Sister Kind" from "Faust" (Gounod).
9.19: Cello solo—Mr. Harold Beck, "Minuetto" (Mozart).
9.23: Tenor solos—Mr. Gregory Russell, (a) "The Fuchsia Tree" (Quilter); (b) "A Boat Song" from "Yes, Uncle (Ayer).
9.28: Contralto and baritone duet—Miss Mildred Russell and Mr. W. J. Richards, "Arise, O Sun" (Day).
9.31: Humorous recitals—Mr. A. H. Todd, (a) "The Country J.P." (Balscheck); (b) "Shell Shock" (Jackson).
9.37: Soprano solo with chorus—Mrs. Claris Shaw and Aeolian Quartet, "Somebody" from "San Toy" (Jones).
9.40: Instrumental trio—Christchurch Broadcasting Trio, (a) "Salve Dinora" (Gounod); (b) "Toreador's Song" from "Carmen" (Bizet).
9.48: Baritone solo—Mr. W. J. Richards, "The Windmill" (Nelson).
9.52: Flute solo—Mr. W. Hay, "Romance" (Durand).
9.56: Vocal quartet—The Aeolian Quartet, "Me and My Shadow" (Jolson).
God Save the King.

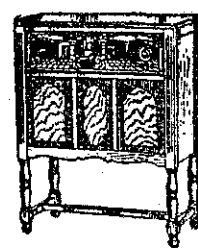
4YA DUNEDIN (463 METRES)—WEDNESDAY, FEBRUARY 29.

SILENT DAY.

Thursday, March 1st

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

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.30: Close down.
6.0: Children's hour—Peter Pan. Recitation, Cousin Nancy, "Story of a Bad Pencil." Song, Cousin Anita, "Little Pink Petti." Peter Pan will answer questions of general interest sent in by cousins. Song, Cousin Anita, selected. Recitation, Cousin Leone. Story-time.
7.15: News and reports, book review.
8.0: Chimes.
8.1: Relay of orchestral overture from Rialto Theatre Orchestra, under the conductorship of Henry C. Engel.
8.16: Vocal quartet—The Premiere Quartet, "Old Mother Hubbard" (Wheeler).
8.21: Baritone solo—Mr. Barry Coney, "Credo" from "Otello" (Verdi).
8.26: Instrumental trio—The Bosworth-Hemus-Towsey Trio, "Trio in D Minor, Op. 32—Allegro Moderato" (Arensky).
8.36: Vocal trios—The Snappy Three, (a) "Yesterday"; (b) "Cock-a-doodle-Do."
8.42: Contralto solo—Miss Mina Caldwell, "A Summer Night" (Thomas).
8.46: Cello solo—Miss Lalla Hemus, "Song Without Words" (Mendelssohn).
8.51: Talk on "Great Authors," by Mr. Culford Bell.
9.0: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Londonderry Air" (arr. O'Connor).
9.12: Tenor solo—Mr. Birrell O'Malley, "Ave Maria" (Kahn).
9.16: Relay of orchestral interlude from Rialto Theatre.
9.26: Soprano solos—Miss Lola Solomon, (a) "Ave Maria" (Gounod); (b) "She Wandered Down the Mountainside" (Clay).
9.33: Baritone solo—Mr. Barry Coney, "Thou Art Like a Tender Flow' (Liszt).
9.36: Vocal Trios—The Snappy Three, (a) selected; (b) "Frankie and Audrey"; (c) "Precious."
9.45: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio in D Minor, Op. 32—Scherzo and Elegia" (Arensky).
9.54: Contralto solos—Miss Mina Caldwell, (a) "If" (Novello); (b) "Nesting Time" (Goatley).
9.58: Tenor solos—Mr. Birrell O'Malley, (a) "Elegie" (Massenet); (b) "The Star."
10.4: Vocal quartet—The Premiere Quartet, "O, Happy Eyes" (Elgar).
10.8: A thought.
10.10: God Save the King.



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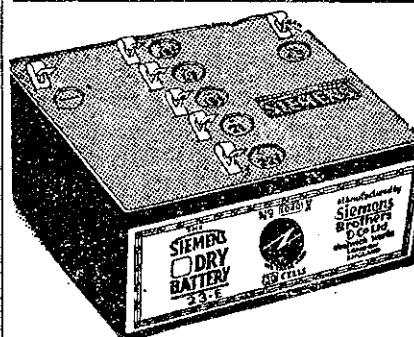
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Ailsa Craig, the island rock at the mouth of the Clyde, where most good curling stones come from, is to be equipped with a wireless transmitter and receiver. Apart from the keepers of the lighthouse, the only other occupants are myriads of seabirds.



Photo Steffane Webb.
MADAME LICHFIELD.
Whose fine contralto voice will be heard from 3YA next week.

In addition to the American short-wave relay stations which operate in connection with broadcast stations, some are equipped with transmitters for purely experimental use. Station WEBB, Boston, has a portable 100-watt transmitter of this nature, licensed as WTAT. When the recent floods took place in New England, this was rushed by truck to the scene of disaster to provide two-way communication.



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Programmes Continued

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2YA WELLINGTON (420 METRES)—THURSDAY, MARCH 1.

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
3.2: Close down.
3.3: Children's hour—Uncle Sandy.
3.4: News session, market reports, and sports results.
3.5: Chimes of the General Post Office clock, Wellington.
3.6: Contest march—First Wellington Regiment Band, "Port Lincoln" (Ord Hume).
3.7: Tenor solo—Mr. Frank Skinner, "Duna" (McGill).
3.8: Bass solo—Mr. Jas. Cooke, "Chip of the Old Block" (Squire).
3.9: Contest selection—First Wellington Regiment Band, "Tchaikowsky's Works" (Reynolds).
3.10: Vocal quartet—The Clarion Quartet, "De Sandman" (Protheroe).
3.11: Baritone solo—Mr. Ray Kemp, "Swing Song" (Cook).
3.12: Trombone solo—Bandsman W. Matson, "The Firefly" (Ord Hume).
3.13: Vocal duet—Messrs. W. Hancock and R. Kemp, "Qui Vive" (Planquette).
3.14: Descriptive march—First Wellington Regiment Band, "Paddy's Patrol" (Dacre).
3.15: Weather forecast.
3.16: Humorous quartet—The Clarion Quartet, "An Alliterative Poem" (Hall).
3.17: Contest selection—First Wellington Regiment Band, "Spohr's Works" (arr. Reynolds).
3.18: Tenor solo—Mr. Will Hancock, "God Touched the Rose" (Brown).
3.19: Hymn—First Wellington Regiment Band, "Jesu, Lover of My Soul."
3.20: Vocal quartet—The Clarion Quartet, "Gorgeous" (Akst, arr. Len Barnes).
3.21: Pianoforte solo—Mr. Andrew White, "Improvisation."
3.22: Tenor solo—Mr. Frank Skinner, "A Night Idyll" (Loughborough).
3.23: March—First Wellington Regiment Band, "Kneller Hall" (Greenwood).
3.24: God Save the King.

3YA CHRISTCHURCH (306 METRES)—THURSDAY, MARCH 1.

- 3 p.m.: Afternoon concert—Selected studio items.
3.1: Close down.
3.2: Children's hour—Chuckie. Birthday greetings, songs, stories, assisted by our little friends from the Wainari School.
3.3: News and reports.
3.4: Talk—Mr. W. Peers, of the Christchurch Philatelic Society, "The Postage Stamps of the Air."
3.5: Relay of orchestral music from Everybody's Picture Theatre Orchestra, under the conductorship of Mr. Albert Bidgood.
3.6: Welsh concert, by Madame Gower-Burns's Grand Operatic Quartet.
3.7: Baritone solo and quartet—Mr. Bernard Rennell and Grand Operatic Quartet, "Land of My Fathers" (James, arr. Davis).
3.8: Soprano solos—Madame Gower-Burns, (a) "The Rising of the Lark" (traditional); (b) "My Little Welsh Home" (Williams).
3.9: Recitation—Mr. J. J. Flewellyn, "The Empire Spirit."
3.10: Tenor solo—Mr. Harold Prescott, "The Nightingale" (traditional).
3.11: Contralto solo—Miss Jessie King, "The Bells of Aberdovey" (traditional).
3.12: Instrumental trios—Christchurch Broadcasting Trio, "Scherzo Adagio from Trio in D Minor" (Arensky).
3.13: Baritone solo—Mr. Bernard Rennell, "All Through the Night" (traditional).
3.14: Pianoforte solo—Miss Lucy Fullwood, "Troika" (Sleigh Ride) (Tschai-kowsky).
3.15: Vocal quartet—Madame Gower-Burns's Grand Operatic Quartet, "A Welsh Carol" (traditional).
3.16: Weather forecast.
3.17: Relay of orchestral selections from Everybody's Theatre.
3.18: Soprano solo—Madame Gower-Burns, "My Master Hath a Garden" (Guyther).
3.19: Tenor solo—Mr. Harold Prescott, "In the Vale of Llangollen" (traditional).
3.20: Recitation—Mr. J. J. Flewellyn, "Two Embarrassing Situations."
3.21: Contralto solo—Miss Jessie King, "Gwendoline's Repose" (traditional).
3.22: Baritone solo—Mr. Bernard Rennell, "Adieu to Dear Cambria" (traditional).
3.23: Instrumental trios—Christchurch Broadcasting Trio, (a) "Ar Hyd y Nos"; (b) "Men of Harlech" (arr. from Welsh airs).
3.24: Vocal quartet—Madame Gower-Burns's Grand Operatic Quartet, "Welsh Rhapsodie" with tenor solo by Mr. Harold Prescott.
3.25: Pianoforte solo—Miss Lucy Fullwood, "Deuxieme" (Chopin).
3.26: Soprano solo and vocal quartet—Madame Gower-Burns and quartet, "God Bless the Prince of Wales."
3.27: God Save the King.

4YA DUNEDIN (463 METRES)—THURSDAY, MARCH 1.

- 7 p.m.: Town Hall chimes.
7.1: Request gramophone concert.
7.2: News session.
7.3: Town Hall chimes.
7.4: Relay of light orchestral music from the Octagon Theatre Orchestra, under the conductorship of Mr. L. D. Austen.
7.5: Contralto solos—Miss Winnie McPeak, (a) "I'm Longing for the Spring" (Morris); (b) "Requiem" (Homer).
7.6: Baritone solo—Mr. F. M. Tuohy, "Ave Marie" (Schubert).
7.7: Cello solo—Mr. Malcolm Robilliard, "Valse Triste" (Sibelius).
7.8: Soprano solos—Miss Rita Holmes, (a) "She Wandered Down the Mountain Side" (Clay); (b) "In the Garden of My Heart" (Ball).
7.9: Bass solo—Mr. E. G. Bond, "An Ancient Mariner" (Sanderson).
7.10: Relay of orchestral music from the Octagon Theatre.
7.11: Address by Pastor W. D. More.
7.12: Weather report and forecast.
7.13: Contralto solo—Miss Winnie McPeak, "Summer Night" (Thomas), with cello obbligato.
7.14: Pianoforte solos—Miss Alice Wilson, F.T.C.L., (a) "Impromptu in G Major" (Schubert).
7.15: Baritone solos—Mr. F. M. Tuohy, (a) "Still as the Night" (Bohm); (b) "The King's Minstrel" (Pinsuti).
7.16: Cello solo—Mr. Malcolm Robilliard, (a) "Coronach" (Barrett); (b) "Plaint d'Amour" (Pellier).
7.17: Soprano solo—Miss Rita Holmes, "I Wonder if Love is a Dream" (Forster).

Severe static may often be almost eliminated by simply connecting the aerial terminal of a loop aerial to earth, the earth terminal to an aerial. Further range and selectivity will be possible, and tonal quality will be excellent. Another welcome feature is that this arrangement causes tuning to be sharp.

Until May, 1923, ocean travellers had to wait until they reached port before they could buy a newspaper. Now, however, a newspaper is printed on board and distributed among the passengers, the news being wirelessly by an Australian wireless company. This ocean newspaper was the pioneer journal of its kind, and was first published on British steamers in the Pacific Ocean. Publication was later extended to inter-colonial steamers trading between Australia and New Zealand, and also to vessels trading between Australian ports. The first ship to publish one of these papers on board was the T.S.S. Jervis Bay, which ship recently created a long-distance world's record by keeping in touch with Penryn Hills V.I.S., New South Wales, for a great distance.

More than 800 telephone calls from radio listeners were received at the WPAF studios, New York, on a certain night regarding the unannounced failure of the station to broadcast the weekly historic episode known as "Great Moments in History" at the appointed hour of 8 o'clock. The change in the schedule was made that the final Aeolian concert might be broadcast from 8 to 9 o'clock. The number of protests received brought out the fact that radio fans may tune in on a programme regularly, but few write expressions of their appreciation.

A small condenser connected between the make and break of a front door buzzer or bell, will prevent sparking, and thus will keep the contact points from burning out. Any capacity condenser may be used for this purpose, providing the capacity is small. The noise in many radio sets can frequently be traced to the sparking of the door buzzer, and by connecting the condenser as explained above, this noise can be eliminated.



Photo S. P. Andrew.

MISS LILY MACKIE.
Miss Lily Mackie will be heard from 2YA during the coming week.

The Melbourne "Listener-In" says: "It is surprising the number of bad audio amplifiers there are in existence. The owners of receivers in which faulty amplification is installed become used to their receivers after a while and do not recognise the obvious distortion present, and which can be recognised by others." We have observed the same thing in New Zealand.

New Zealand listeners are looking forward keenly to the forthcoming Australian grand opera season. It is understood that within the next two or three months two grand opera companies will be heard in Sydney and Melbourne, and one at least, probably both, will be broadcast. Listeners will remember the extraordinary boom in radio in Australia which was the result of the grand opera season of Toti del Monte three or four years ago, when nearly everybody in Australia rushed to buy a radio set. Broadcasting receivers have improved immensely since that date, and although so many persons now have their homes equipped with radio that no one expects a similar boom, it is believed that thousands in Australia who have never yet had a radio set of their own will become listeners within the next month or two.

As a preliminary to the Australian grand opera season, both the Sydney A class broadcasting stations are giving listeners something of grand opera. Station 2BL has been specialising in the works of German, Italian, and French composers, and 2FC now announces that the works of the great masters will be explained both literally and musically, listeners being told of the plot of the opera and the principal parts being played with full orchestral effects. Station 2FC has engaged Signor A. Polli and Mr. Carlton Fay especially for the grand opera season. These artists each have a distinguished career, and their work will surely be appreciated by listeners who are lovers of high-class music.

Mr. Joe Aronson and his famous jazz band have concluded their engagement with A.O., Melbourne. His company is now playing at a fashionable dance cabaret in Melbourne.

- 9.33: Vocal duet—Miss Rita Holmes and Mr. F. M. Tuohy, "Beauty's Eyes" (Tosti).
9.36: Pianoforte solo—Miss Alice Wilson, "Nocturne in E Minor" (Chopin).
9.48: Bass solos—Mr. G. Bond, (a) "Muletter of Mulagar" (Trotter); (b) "Youth" (Allitsen).
9.47: Relay of orchestral music from the Octagon Theatre.
10.0: Close down.

Friday, March 2nd

1YA AUCKLAND (333 METRES)—FRIDAY, MARCH 2.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.30: Close down.
6.0: Children's hour—Nod. Recitation, Cousin Doreen, selected. Song Cousin Moya, "Little Yaller Dog" (Gallatly). Letters and birthdays. Violin solo, Cousin Moya, "Shepherd's Dance." Recitation, Cousin Doreen, "Chinese Dinner." Nod, bedtime stories.
7.15: Talk on "Motoring," by Mr. Geo. Campbell.
7.30: News and reports.
8.0: Chimes.
8.1: Relay of orchestral overture from Rialto Theatre Orchestra, under the conductorship of Mr. Howard Moody.
8.11: Bass solo—Mr. Maurice Ballance.
8.15: Vocal trios—The Bohemian Trio, (a) "Honolulu Moon"; (b) "Down Kentucky Way."
8.22: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio, Op. 66—Scherzo and Finale" (Mendelssohn).
8.30: Vocal duet—Miss Myra Monk and Mr. M. Ballance, "Church Scene" from "Faust" (Gounod).
8.35: Elocution—Mr. J. F. Montague, "Shakespeare—A Tribute."
8.40: Flute solo—Mr. Hal McLennan, "Carnival of Venice—Introduction and Variations" (Demersseman).
8.45: Vocal and piano—Mr. Clyde Howley, (a) "It's Too Late to be Sorry"; (b) "Mother's Rosary of Love."
8.53: Soprano solo—Miss Myra Monk, "Mother, You Know the Story" from "Cavalleria Rusticana" (Mascagni).
8.58: Weather forecast.
9.2: Relay of orchestral interlude from Rialto Theatre.
9.4: Vocal trio—The Bohemian Trio, (a) "So Blue"; (b) "Plantation Lullaby."
9.9: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Anura's Dance" from "Peer Gynt Suite" (Greig).
9.17: Bass solo—Mr. M. Ballance.
9.23: Flute solos—Mr. H. McLennan, (a) "La Perle du Nord" (Kohler); (b) selected.
9.27: Soprano solo—Miss M. Monk, "Sing, Sweet Bird" (Ganz).
9.34: Elocution—Mr. J. F. Montague, (a) Irish sketch, "The Old Shibeen"; (b) "musical recital, 'That Old Sweetheart'."
9.38: Vocal and piano—Mr. Clyde Howley, (a) fox-trot medley; (b) humorous monologue.
9.46: Piano and cello duet—Miss Lalla Hemus and Mr. Cyril Towsey, "Finale from Grand Duo" (Gotterman).
9.52: Vocal duets—Miss Myra Monk and Mr. Maurice Ballance, (a) "Calm, Silent Night" (Bohm); (b) "Sincerity."
10.0: A thought.
10.2: God Save the King.

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

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
3.30: Lecturette—Miss Christian, of the Wellington Gas Company, on "Gas Cooking."
3.45: Selected gramophone items.
5.0: Close down.
6.0: Children's hour—Uncle Ernest.
7.0: News session, market reports, and sports results.
7.40: Lecturette—Mr. D. G. Paris, Wellington Centre, A.A.A., "Athletics."
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—"Melody" (Davies).
8.5: Vocal quartet—The William Renshaw Quartet, "Comrades in Arms" (Adam).
8.9: Hawaiian guitars—Berthold and Bent, (a) "So Blue" (De Sylva); (b) "One, Two Three, Four."
8.17: Tenor solos—Mr. William Renshaw, (a) "Passing By" (Purcell); (b) "Faery Song" (Boughton).
8.24: Instrumental trio—Symons-Ellwood-Short Trio, "Phantasy Trio" (Haydon).
8.33: Contralto solos—Miss Nora Greene, (a) "Sea Fever" (Ireland); (b) "My Ships" (Barratt).
8.40: Pianoforte solo—Mr. Gordon Short, "Military March" (Schubert-Tansig).
8.46: Bass solo—Mr. Wilbur Davies, "Cheerily, Yeo Ho" (Phillips).
8.50: Humour—The Two Boiled Owls, "Mrs. May."
8.58: Weather forecast.
9.0: Lecturette—Editor-Announcer, "Imperial Affairs."
9.10: Soprano solo—Mrs. Amy Dunn, "A Farewell" (Liddell).
9.14: Instrumental trio—Symons-Ellwood-Short Trio, "Third Movement, C Minor" (Mendelssohn).
9.24: Vocal duet—Miss Nora Greene and Mr. Wm. Renshaw, "Where the Violets Grow" (Lohr).
9.28: Hawaiian guitars—Berthold and Bent, (a) "Love is Just a Little Bit of Heaven" (Baer); (b) "Aloha" (Kalani).
9.36: Bass solo—Mr. Wilbur Davies, "The Jug of Punch" (Wood).
9.40: Humour—The Two Boiled Owls, "Upright and Grand and Other Odds and Ends."
9.50: Soprano solo—Mrs. Amy Dunn, "Sing, Sing, Blackbird" (Phillips).
9.55: Vocal quartet—William Renshaw Quartet, "Summer Day" (Wheeler).
9.56: God Save the King.

3YA CHRISTCHURCH (306 METRES)—FRIDAY, MARCH 2.

- 2.15 p.m.: Relay from Lancaster Park of cricket match—Australia v. Canterbury.
Interspersed with selected gramophone items.
6.0: Children's hour—Big Brother. Stories, birthday greetings, and good songs and choruses by a jolly band from Shirley.
7.15: News and reports.
8.0: Relay of orchestral music from Crystal Palace Theatre Orchestra, under the conductorship of Mr. A. J. Bunz.
Excerpts from the romantic opera, "Monsieur Beaucaire," by Messenger, followed by a dance programme.
8.15: Vocal quartet—The Melodious Four, "Voyager's Song."
8.18: Tenor solo—Mr. Russell Sumner, "Red Rose."
8.22: Contralto and bass duet—Miss Belle Renaut and Mr. T. D. Williams, "A Little More."
8.25: Saxophone solo—Mr. Lyndon Christie, "Quartet" (Verdi).
8.29: Quartet and soprano solo—The Melodious Four and Misses Frances Hamerton, "Come with Welcome," "I Do Not Know."
8.35: Soprano and tenor duet—Miss Frances Hamerton and Mr. Russell Sumner, "Lightly, Lightly."
8.39: Humorous recitation—Mr. Ronald Foster, "Listening In" (Rutherford).
8.44: Vocal quartet—The Melodious Four, "Rose Minuet."
8.48: Baritone solo with chorus—Mr. T. D. Williams and Melodious Four, "When I Was King of Bath."
8.51: Saxophone solos—Mr. Lyndon Christie, (a) "Because I Love You So" (Berlin); (b) "The Gondolier's Song" (Dare).
8.54: Vocal quartet—The Melodious Four, "When the Sun is Golden" (Pastoral Fete).
8.57: Contralto solo, with tenor and baritone—Miss Belle Renaut and Messrs. Russell Sumner and T. D. Williams, "That's a Woman's Way."
9.0: Weather forecast.
9.1: Relay of orchestral selections from Crystal Palace Theatre.
9.15: Soprano solo—Miss Frances Hamerton, "Philonel."
9.18: Dance music—Lyndon Christie's Jazz Orchestra, "Red Lips Kiss My Blues Away" (Wendling).
9.23: Vocal quartet—The Melodious Four, "Have you Heard."
9.27: Dance music—Lyndon Christie's Orchestra, "Just an Ivy-covered Shack" (Davidson).
9.32: Soprano and tenor duet—Miss Frances Hamerton and Mr. Russell Sumner, "Say No More."
9.35: Dance music—Lyndon Christie's Orchestra, "I Wonder How I Look When I'm Asleep" (Henderson).

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Programmes Continued

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9.40: Recitation—Mr. Ronald Foster, "The Student" (Edwards).
9.45: Dance music—Lyndon Christie's Orchestra, "What Does It Matter?" (Berlin).
9.50: Tenor solo—Mr. Russell Sumner, "Under the Moon."
9.53: Dance music—Lyndon Christie's Orchestra, "Just Like a Butterfly in the Rain" (Dixon and Woods).
9.58: Contralto and baritone duet—Miss Belle Renaut and Mr. T. D. Williams, "We Are Not Speaking Now."
10.1: Dance music—Lyndon Christie's Orchestra, "Stepping on the Ivorys" (McLaughlin).
10.6: Baritone solo—Mr. T. D. Williams, "A Son of France."
10.10: Dance music—Lyndon Christie's Orchestra, selected.
10.15: Vocal quartet—The Melodious Four, "Way for the Ambassador."
Lyndon Christie's Orchestra will dispense dance music at short intervals until 11 p.m.
God Save the King.

4YA DUNEDIN (463 METRES)—FRIDAY, MARCH 2.

3 p.m.: Town Hall chimes.
3.1: His Master's Voice recital.
3.15: Afternoon tea music from the Savoy.
3.30: Studio music.
4.0: Music from the Savoy.
4.15: His Master's Voice recital.
4.30: Close down.
6.0: Town Hall chimes.
6.1: Children's hour—Big Brother Bill and the cousins.
7.15: News session.
7.30: Address.
8.0: Town Hall chimes.
8.1: Bass solos—Mr. J. B. Macpherson, (a) "Beware when Bright Eyes Glance" (Hedgecock).
8.8: Mezzo-soprano solo—Miss Mollie Andrews, selected.
8.12: Recitation—Miss Sheila Neilson, (a) "Marguerite"; (b) "Public Conversations."
8.21: Tenor solo—Mr. L. E. Dalley, "Afton Water."
8.25: Soprano solos—Miss Roma Buss, (a) "Mimi's Song" from "La Boheme" (Puccini).
8.31: Pianoforte solo—Miss Aroha D. Allan, "First Movement of Sonata in D Minor" (Beethoven).
8.36: Bass solo—Mr. J. B. Macpherson, "The Fisherman of England" (Philips).
8.41: Mezzo-soprano solos—Miss Mollie Andrews, (a) selections from "No, No, Nannette" (Youman); (b) "Flower Song" from "Faust" (Wagner).
8.49: Humorous monologue—Miss Sheila Neilson, "Froggie Face."
8.54: Tenor solos—Mr. L. E. Dalley, (a) "Sylvain" (Sinding); (b) "The Secret" (Scott).
9.0: Pianoforte solos—Miss Aroha Allan, "Second and Third Movements of Sonata in D Minor" (Beethoven).
9.10: Soprano solo—Miss Roma Buss, "Spinning" (Clarke).
9.15: Relay of dance music from the Savoy.
10.0: Close down.

Saturday, March 3rd

1YA AUCKLAND (333 METRES)—SATURDAY, MARCH 3.

3 p.m.: Afternoon session—Selected studio items.
4.0: A literary selection by the Announcer.
4.30: Close down.
6.0: Children's hour—Cinderella. Violin solo—Cousin Dorothy, "Minuet." Duet, Cousins Coral and Laurel, "Two Dolls." Letters and birthdays. Song, Beryl, "Rendezvous" (Alletter). Violin solo, Cousin Dorothy, "Spring Song" (Mendelssohn). Song, Cousin Laurel, "Child's Good Night" (Gatti). Bedtime stories.
7.15: News and sports results.
8.0: Chimes.
8.1: Relay of orchestral overture from Strand Theatre Orchestra, under the conductorship of Eve Bentley.
8.16: Vocal quartet—The Lyric Four, "On Wings of Song" (Mendelssohn).
8.20: Tenor solo—Mr. Arthur Ripley, "Molly Bawn" (Old Irish).
8.24: Humorous recitation—Mr. Alan McElwain, "The 11.69 Express" (Baginall).
8.29: Soprano solos—Miss Alma McGruer, (a) "Carmena" (Lane-Wilson); (b) "Prince Charming."
8.36: Bass solos—Mr. Ernest Thomas, (a) "Cloze Props"; (b) "Drinking Song."
8.43: Relay of orchestral interlude from Strand Theatre.
8.53: Vocal trio—Miss A. McGruer and Messrs. Ripley and Thomas, "Trio" from "Faust" (Gounod).
8.59: Humorous recitation—Mr. A. McElwain, "The Hinglishman."
9.4: Weather forecast.
9.6: Tenor solos—Mr. Herbert Richards, (a) "The Secret" (Scott); (b) "Parted" (Tosti).
9.13: Vocal quartet—The Lyric Four, "Fireside Melodies."
9.18: Relay of dance music from Dixieland Cabaret by The Internationals, under Mr. Clyde Howley.
11.0: A thought.
11.2: God Save the King.

2YA WELLINGTON (420 METRES)—SATURDAY, MARCH 3.

3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
5.0: Close down.
6.0: Children's hour—Aunt Dot.
7.0: News and information.
7.15: Sports results.
7.30: Reports.
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—"Pixie Dance" (Whitlock).
8.5: Tenor solo—Mr. Sara Duncan, "Sally in Our Alley."
8.9: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement, C Minor Trio" (Reissiger).
8.19: Baritone solo and quartet—Mr. R. S. Allwright and Melodie Four, "Nile Night" (De Freyne).
8.24: Hawaiian trio—Mr. E. J. Palmer's Hawaiian Trio, "Honolulu Bay Waltz."
8.28: Tenor solo—Mr. Frank Bryant, "At Dawning" (Cadman).
8.32: Vocal quartet—Melodie Four, "What Does it Matter?" (Berlin, arr. Crowther).
8.36: Piano and violin—Miss Ava Symons and Mr. Gordon Short, "Second Movement, C Minor, Sonata for piano and violin" (Grieg).
8.45: Bass solo—Mr. W. W. Marshall, "Off to Philadelphia" (Haynes).
8.49: Hawaiian trio—Mr. E. J. Palmer's Hawaiian Trio, "To-night You Belong to Me" (Berlin).
8.55: Vocal quartet—Melodie Four, "So Blue" (arr. Crowther).
9.0: Weather forecast.
9.1: Relay of Charles Dalton's Columbian Solo Six Orchestra from the Kibbirnie Cabaret.
11.0: Close down.

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

2.15 p.m.: Relay from Lancaster Park of cricket match—Australia v. Canterbury.
6.0: Children's hour—Uncle Sam and Aunt May. Birthday greetings, songs, and stories.
7.15: News and reports.
7.30: Sports results.
8.0: Relay of orchestral selections from Liberty Theatre Orchestra, conducted by Ernest Jamieson.
8.15: Soprano and tenor duet—Miss Mabel Thomas and Mr. David McGill, "Torn Ami a Der" from "Don Pasquale" (Donizetti).
8.19: Piano duets with vocal chorus—Misses Dorothy Johnson and Muriel Johns, (a) "My Idea of Hawaii" (Johnson); (b) "Charmaine" (Pollard).
8.25: Soprano solo—Miss Mabel Thomas, "Sing, Sweet Bird" (Ganz).
8.29: Instrumental trio—Christchurch Broadcasting Trio, "Finale, D Minor Trio" (Arensky).

They have some weird "stunts" over in South Australia. A report states:—"During the past year the Radio Poultry Club connected with SCL, Adelaide, has made wonderful progress under the guidance of Mr. A. M. Whittenbury, the president. A competition for hens was commenced this year, and next year a duck egg-laying competition is also to be inaugurated, in addition to the hen test which will be run at the same time. Recently the members of the club visited the site of the competition at Norwood, and were delighted with the conditions under which the birds are kept. They also expressed surprise at the fine health of the birds. Visitors are welcome to visit the site of the competition at any time."

"I have noticed with pleasure that the class of story told to children by the aunts and uncles of the various stations is devoid of the old-fashioned terror element. Still, I think, and, being a school teacher, my opinion may be of help to you, that more time might be spent on the fairy-tale, with its simplicity and sweetness. There is a difference between the minds of kiddies of five and six and those of nine and ten. Most of the stories, I find, dwell on the adventures in the country of boys and girls of the older school age. I would like to see more tales woven around flower and tree life—the more poetic type. Rudyard Kipling's 'Just-so Stories,' and a selection from Grimm's 'Fairy Tales,' would be especially appropriate, I think. Perhaps some of the uncles could condense one or two of the 'Arabian Nights' Entertainments' to suit the older juveniles."

Sometimes an emergency alcohol lamp is needed where gas or electricity cannot be obtained for heating purposes. Such a lamp may be made from an old India ink bottle. The cork and moulded cover should be drilled, and a lamp wick inserted. A small quantity of wood alcohol placed in the bottle then furnishes a satisfactory emergency lamp.



MR. W. BROUGH.
Who is taking the role of The Count in "The Bohemian Girl" at 1YA.

An American observer writes:—"Church services by radio have had profound effects on the lives of many individuals. Not only have they brought incalculable comfort to many persons lonely or ill or despairing, but they have actually brought persons up from moral failure to moral success. Persons who had not been inside a church for a score of years have, by radio, been led to see the value not only of worshipping, but of worshipping with their fellows. Many aged, ill, and infirm people attend worship by radio regularly."

The editor of the New York "Wireless Weekly" writes: "Are battery sets obsolete?—No. Battery sets will be in use for many years to come. Wherever there is an unsuitable supply of electricity, such as direct current, or 110-volt, 25-cycle current, or 32-volt farm-light current, battery sets will be used. Indeed, there may be, in time, a grand come-back of the battery-operated sets, due to the development of different tubes. We already have the double-grid tube, which uses only a fraction of the current that other tubes take; but its possibilities are yet more or less in the future."

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8.41: Contralto solo—Miss Dulcie Mitchell, "My Heart is Weary" from "Nadeshda" (Thomas).
8.45: Humorous recitation—Mr. H. Instone, "Scottish Patter."
8.48: Popular song medley, with ukulele accompaniment, the Joyous Trio (Misses Dorothy and Edna Johnson and Muriel Johns, (a) "A Lane in Spain" (Lewis); (b) "Blue Heaven" (Donaldson); (b) "What Does It Matter?" (Berlin).
8.56: English concertina—Mr. E. W. Heald, (a) "Tournament March" (Bonheur); (b) "Old-time Choruses."
9.0: Weather forecast.
9.1: Relay of orchestral music from Liberty Picture Theatre Orchestra.
9.15: Tenor solo—Mr. David McGill, "That's How the World Was Made" (Nicholls).
9.18: Soprano and tenor duet—Miss Mabel Thomas and Mr. David McGill, "Terra Addio" from "Aida" (Verdi).
9.21: Humorous recitation—Mr. H. Instone, "Jellaby's Melodrama" (Wood).
9.29: Soprano solo—Miss Mabel Thomas, "One Fine Day" from "Madame Butterfly" (Puccini).
9.33: English concertina—Mr. E. W. Heald, (a) "The Wanderer's Return" (own comp. and arr.); (b) "Will Ye No Come Back Again" (with imitation bagpipes).
9.39: Contralto solo—Miss Dulcie Mitchell, "Thank God for a Garden" (Del Riego).
9.42: Instrumental trios—Christchurch Broadcasting Trio, (a) "Serenade" (Lange-Muller); (b) "Danse Hongroise" (Brahms); (c) "Serenade" (Haydn); (d) "Chanson Triste" (Tschalkowsky); (e) "Bolero" (Arbos).
9.56: Tenor solo—Mr. David McGill, "At Dawning" (Cadman).
9.59: Medley of Hawaiian melodies with ukulele—The Joyous Trio.
God Save the King.

4YA DUNEDIN (463 METRES)—SATURDAY, MARCH 3.

7.15 p.m.: News session.
7.30: Address.
8.0: Town Hall chimes.
A Night of Opera.
8.1: Relay of orchestral music from the Empire Theatre Orchestra, under the conductorship of Mr. Chas. Parnell.
8.11: Baritone solo—Mr. Arthur Lungley, "Onaway, Awake" (Cowan).
8.15: Cornet solos—Mr. George Christie, (a) "Titania"; (b) "Will Ye No Come Back Again?"
8.30: Soprano solos—Miss Florence Sumner, (a) "Love and Music" from "Tosca" (Puccini); (b) "When All Was Young" from "Faust".
8.35: Flute solo—Mr. J. Stewart, "Frühlingstraum" (Klose).
8.40: Contralto solos—Miss Irene Hornblow, (a) "Softly Awakes My Heart" from "Samson and Delilah" (Saint-Saens); (b) "Dido's Lament" from "Dido and Aeneas" (Purcell).
8.49: Violin solos—Mr. A. R. Watson, (a) "Adagio" from "Seventh Concerto" (Rode); (b) "Gondolier" from "Venetian Suite" (Nevin).
8.56: Tenor solo—Mr. R. A. Mitchell, "Then You'll Remember Me" from "Bohemian Girl" (Balfé).
9.1: Relay of orchestral music from the Empire Theatre.
9.10: Baritone solos—Mr. Arthur Lungley, (a) "Song of the Toreador" from "Carmen" (Bizet); (b) "Loving Smile of Sister Kind" from "Faust".
9.19: Cornet solo—Mr. George Christie, "Le Zepher" (Rimmer).
9.29: Soprano solo—Miss Florence Sumner, "Louise" from "Louise" (Charpentier).
9.34: Flute solos—Mr. J. Stewart, (a) "Hilton Idyll" (Kohler); (b) "Idyll" (Walthew).
9.44: Contralto solo—Miss Irene Hornblow, "Che Faro" from "Orfeo and Euridice" (Gluck).
9.49: Violin solo—Mr. A. R. Watson, "Dudziarz Mazurka" (Wienawski).
9.54: Tenor solos—Mr. R. A. Mitchell, (a) "La Donna e Mobile" from "Rigoletto" (Verdi); (b) "Deserta in Terra" from "Lucia di Lammermoor" (Donizetti).
10.0: Close down.

Sunday, March 4th

1YA AUCKLAND (333 METRES)—SUNDAY, MARCH 4.

3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.30: Close down.
6.0: Children's service, conducted by Uncle Leo, assisted by cousins from Beresford Street Sunday School Choir.
6.55: Relay of evening service from St. Andrew's Church. Preacher, Rev. Lamb-Harvey; organist, Dr. Neil MacDougall.
8.30: Vocal quartet—The St. Andrew's Quartet, "Through Peace to Light" (Turner).
8.35: Contralto solo—Miss P. Gribben, "Harvest" (Del Riego).
8.39: Tenor solo—Mr. Robert Peter, "Be Thou Faithful Unto Death" (Mendelssohn).
8.44: Instrumental trio—Bosworth-Hemms-Towsey Trio, "Trio in C Minor, Op. 1, No. 3, Allegro" (Beethoven).
8.54: Vocal quartet—St. Andrew's Quartet, "O, Saviour of the World" (Goss).
8.59: Weather forecast.
9.1: Bass solo—Mr. A. Colledge, "O, God Have Mercy" (Mendelssohn).
9.5: Vocal duet—Miss Taylor and Mr. Peter, "Love Divine" (Stainer).
9.10: Instrumental trio—Bosworth-Hemms-Towsey Trio, "Trio in C Minor, Op. 1, No. 3, Andante and Var." (Beethoven).
9.20: Vocal quartet—St. Andrew's Quartet, "Turn Thy Face" (Sullivan).
9.25: A thought.
9.27: God Save the King.

2YA WELLINGTON (420 METRES)—SUNDAY, MARCH 4.

6 p.m.: Children's service, conducted by Uncle Ernest.
6.55: Relay of evening service from St. Andrew's Presbyterian Church. Preacher, Rev. R. J. Howie; organist, Mr. Frank Thomas.
8.30 (approx.): Studio concert.
Bass solo—Mr. J. M. Caldwell, "The Lute Player" (Allitsen).
Instrumental quartet—Symons-Ellwood String Quartet, "Allegro and Dumka from Quintet" (Dvorak), with assistance of Mr. Gordon Short.
Vocal quartet—Ariel Singers, "Who is Sylvia?" (German).
Tenor solo—Mr. Roy Hill, "Only Be Still" from Cantata No. 93 (Bach).
Vocal duet—Miss N. Coster and Mr. J. M. Caldwell, "The Day Is Done" (Lohr).
Instrumental quartet—Symons-Ellwood String Quartet, "Largo from Quartet in E Major" (Haydn).
Soprano solo—Miss Jeanette Briggs, "When Celia Sings" (Moir).
Vocal quartet—Ariel Singers, "The Minister Bell" (Leslie).
Instrumental Quartet—Symons-Ellwood String Quartet, "Serenade" (Widor).
Mezzo-contralto solo—Miss N. Coster, "Arise, O Sun!" (Del Riego).

3YA CHRISTCHURCH (306 METRES)—SUNDAY, MARCH 4.

5.45 p.m.: Children's song service, conducted by Uncle Sam, assisted by scholars from the Riccarton Presbyterian Sunday School.
6.30: Relay of evening service from Oxford Terrace Baptist Church. Preacher, Rev. J. Robertson, B.A.; organist, Mr. Melville Lawry. Conductor and choir-master, Mr. Vic. C. Peters.
After the conclusion of the church service, a studio concert will be given by the Christchurch Broadcasting Trio and the Dulcet Quartet.
4YA DUNEDIN (463 METRES)—SUNDAY, MARCH 4.
5.45 p.m.: Children's song service, conducted by Big Brother Bill.
6.45: Sacred concert and service by the International Bible Students' Association. Speaker, Mr. O. G. Canty.
9.10: Close down.

S-O-S

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Mainly about Construction

BY "MEGOHM"

A CRYSTAL RECEIVER WITH TWO-COIL TUNING

SIMPLE TO MAKE, EFFICIENT IN USE

LAST week the making of basket or spider-web coils was dealt with, and it was also shown how one coil could be made to permanently tune-in the local station by finding the correct number of turns to give maximum signals. It will now be shown how two coils may be made with a suitable number of turns and provided with a simple means of varying their distance apart or "coupling," so that any broadcast wavelength may be tuned in.

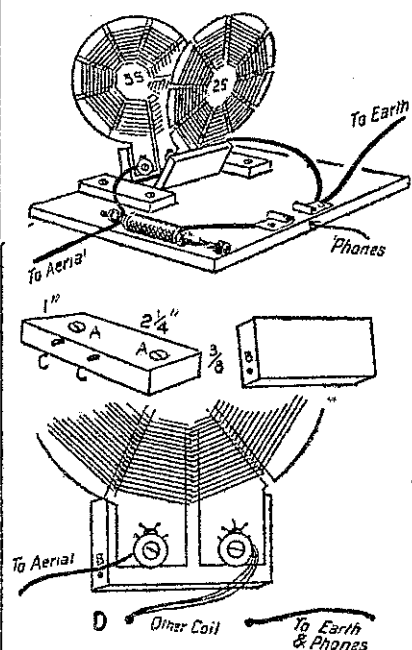
A coil with 35 turns and another with 25 turns will tune-in 2YA, and will no doubt tune-in 1YA and 3YA also. Possibly for 4YA it might be necessary to increase the 25-turn coil to 30 or so. The correct wire is 26's s.w.g. enamelled.

The circuit and other arrangements will be the same as for the one-coil arrangement described last week, only instead of screwing one coil to the back edge of the board we shall employ two coils and make them both moveable, as by the simple method shown it is easier to make both move than to make one move and have the other fixed. Four pieces of wood 2 1/2 by 1 by 1/4 in. will be required, the amount of finish given to them being determined by the constructor. Two of these are drilled 1-8 in. for two screws as shown (A). The other two, which will support the coils, are to have holes bored at the ends with a thin awl 1-8 in. from the lower edge, and central with the two sides (B). The blocks with the screw-holes are now taken, and 1-8 in. below the top edge two 1/4 in. nails are driven in part way, 1/4 in. apart, a shade more, rather than less. The heads are now cut off these nails, leaving less than 1/4 in. projecting. The next operation is screwing the coils to the moving strips, and this is best done by means of a washer, under which the connecting wires can be clipped. When making basket coils they should all be commenced, wound, and finished in the same way, and a large number indicating the turns marked on the side on which the beginning of the coil comes through the central portion and crosses to commence the turns. Be careful to clean all enamel off top surface of turns of wire round edges of the securing slots before fastening down with the washers. The two coils are to be fastened to the two moving pieces, so that when the coils are put close together the numbered side of each is facing the operator. Then the left-hand of the back coil connects to aerial and crystal; the right hand is connected by two or three thin wires (for flexibility) to the left hand of front coil, and right hand to earth and 'phones. The other end of crystal is connected to the remaining 'phone clip, and all is ready when the earth and aerial are connected.

Tuning is effected by varying the distance between the two coils until the maximum volume is obtained. The

higher the wavelength the closer will the coils couple. If the coils are separated as far as possible, and yet a station does not appear to be at maximum, then one of the coils should be exchanged for one of fewer turns. High wavelengths require most turns to tune-in.

This is a simple two-coil outfit, but a regular two-coil holder and plug-in coils can be purchased ready-made if



desired. If thicker wire than 26's is used, more turns will be required on the coils, as increasing the gauge decreases the wavelength for a given number of turns.

TRACING FAULTS.

It has been noticed that many amateurs, when searching for elusive faults, show a tendency to place too much confidence in certain components. Either because they are new or the products of firms whose name is well known, the usual tests are not applied, and the source of the trouble may easily be missed. It should be realised that many pieces of wireless apparatus are fragile, and though all reputable manufacturers carry out exhaustive tests before dispatch, accidents can and do happen in transit or during assembly into the receiver. In this matter it is wise to reverse the principles of English law, and to consider every part as guilty until it is proved to be innocent.

B BATTERY ELIMINATOR FOR D.C. MAINS

ALTHOUGH most places in New Zealand are supplied with alternating electric current, inquiries have at times been sent in regarding an eliminator to work off direct current. Usually this presents a much simpler problem than dealing with alternating current, and certainly entails less expense. Direct current from the mains, however, is not like direct current from a battery, as owing to the method of its production by a dynamo, it carries an objectionable "ripple," caused by the system of rectifying by means of a commutator on the machine. This ripple is not altogether the mere break that might be caused in certain cases by the transfer of the brushes from one segment to the next, but is in many cases a slight back-voltage, which necessitates the use of low-resistance chokes to assist in smoothing current for eliminator use.

Roughly speaking, a d.c. eliminator is the same as one for a.c., minus the transformer and rectifying tube. Direct current does not allow of a step-up in voltage, as may be effected from alternating mains, but where the available voltage is 230 this need cause no concern. In the case of direct current, a certain amount of smoothing takes place in the mains, where the positive and negative leads run alongside, so that current that has travelled the greatest distance in this way will tend to be the smoothest, but at the same time is, perhaps, more liable to pick up interference from trams, etc.

THE CIRCUIT DIAGRAM.

THE diagram shows the general sequence of parts, commencing with a fuse on each main, which may be strips of tinfoil 1-16-inch wide, clamped under washers at each end on a strip of fibre or ebonite, preferably with a strip of mica under each fuse. Then a sixty-watt lamp of the mains voltage is placed in each lead. On the positive side one or two choke coils of 20 or 30 henries impedance are included. One choke should be

ferred a socket, in line with the others.

A tin case finished with black cycle enamel forms a neat container, and only a strip of ebonite is required to take the row of sockets and negative B terminal. The B positive voltages are tapped off by wires running to the respective valves, and provided with a pin or wander-plug for making connection. A twin flexible wire of suitable length with an adapter, provides for connection with the lighting circuit. If a lamp-socket is wired in close to the adapter plug, then the latter can be inserted into any convenient light-socket, and the lamp placed in the extra socket, so that the light is not interfered with.

WHEN POSITIVE MAIN IS EARTHED.

SOME constructors of D.C. eliminators have struck trouble, finding it impossible to get a satisfactory B supply. This is sometimes the case when the positive main is earthed, and one remedy recommended is to place an H.F. choke in each lead on the inner side of the fuses. Such a choke was described in the A.C. eliminator article, and consists of 1000 turns of 36's enamelled wire wound in a flat spool with 1/4-inch wood centre, two fibre discs 2 1/8-inch diameter, 3-16-inch apart. Instead of placing a second choke in the positive lead, it may be placed in the negative, opposite the one in the positive. A high standard of insulation must be maintained between the A accumulator and earth.

Fuses as shown must on no account be omitted, as their inclusion prevents the house fuses from "blowing" if a short-circuit occurs in the receiver.

The smaller the power supply installation, the more likely is the D.C. to be "rough," and the voltage erratic. The former trouble is reduced by having two chokes, each of high inductance, up to 100 henries, which would however, cause a reduction in voltage output. Increasing the capacity of the 2 m.f.d. condensers to 4 or 6 m.f.d.'s will also help to smooth out any obstinate ripple.

CHOOSING SUITABLE VALVES

Assuming that the experimenter has made himself familiar with the published data regarding the various classes of valve, there remains the question as to which valve should be selected for any specific purpose.

We may deal first with the case of so-called power valves. These are intended for connection to a loudspeaker, or for any other purpose where an output of considerable power is required (as opposed merely to the production of amplified voltage). In the consideration of a valve of this type a distinction must be drawn between its efficiency when reproducing a weak signal and its capacity for handling power without distortion. As an example we may compare the performance of two valves in a receiver which is sensitive enough to produce ample voltage from a strong local station for application to the grid of the last valve. If we insert our valves in such a receiver and adjust the volume until it is as loud as possible, while being free from distortion, we shall obtain a reliable estimate of the second characteristic of the valve; but if we tune the receiver in to a very weak station and, in making the comparison, refrain from altering the tuning controls, so that precisely the same small signal voltage is applied to the grid circuit of each of the valves under test in turn, we shall get a comparison under the first heading which may give us an entirely different result. In fact, we may say, as a general rule, that if a valve is constructed so as to be capable of large undistorted output, it will be less efficient as a reproducer of weak stations than a valve of similar type in which the undistorted output is less.

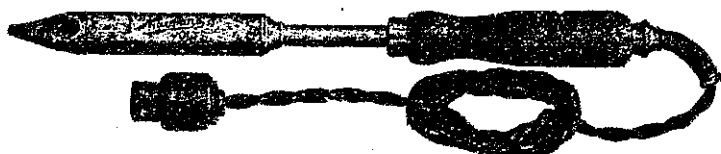
DYNAMIC CHARACTERISTIC.

Power valves are usually designed to have an internal resistance of less than 7000 ohms, and not infrequently as low as 2000 or 3000 ohms. In comparing two valves which have equal internal resistances, the valve with the higher magnification factor is the better, though this does not quite constitute a complete survey of the problem. It is highly desirable that the valve used in the last position should have a straight characteristic of considerable extent, the limits being, on the one hand, the bottom bend, and, on the other hand, the point at which the grid circuit begins to flow. Information on this point can be obtained from published characteristics, and it will be found that in general the lower the resistance of the valve the greater the "straight range."

A word may be said regarding the correct adjustment of grid bias in the case of a loudspeaker valve. Manufacturers' published characteristics are taken without any load in the plate circuit, and it is customary, in the case of a loudspeaker, to make the average impedance of the windings equal to the resistance of the valve, so as to get the optimum efficiency of reproduction. Needless to say, this cannot be achieved at all frequencies, and it is not intended to do more than emphasise that under practical conditions there is impedance in the plate circuit, and in consequence the valve will have a more gentle slope than appears in the published characteristic. We can assume that the theoretical conditions are complied with and that the loudspeaker is in fact a resistance equal to the internal resistance of the valve.

We next come to valves which have been classified in a somewhat indeterminate manner as H.F. and L.F. amplifiers. These valves do not profess to have any very great range of straight characteristic, although the class of L.F. amplifiers may be used for a moderate volume of loudspeaker reproduction. Setting aside this use we may consider for what remaining purposes in a set various types of valves under this heading are suitable. In a low-frequency amplifier employing transformers it may at first sight

(Continued on Page 11.)



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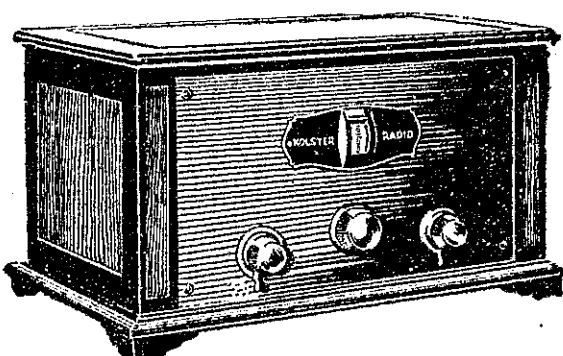
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tried first, and if there is still hum owing to the nature of the ripple in the mains, another choke can be added. If only one choke is used the condenser X will be omitted. The choke may be made as directed in the issue of November 18 for use in the a.c. eliminator. The 2 m.f.d. condensers may be the ordinary paper insulation type, Dubilier or T.C.C. make. It is important to note that with this eliminator in use a .5 m.f.d. fixed condenser must be placed in series with the earth lead from the set, and this condenser must be one of high voltage test and reliable make. The reason for its inclusion is that very often the positive main is earthed, and the condenser prevents the current from taking a short-cut return through the set.

The output may be provided with variable resistances as shown, one for each voltage, a fixed condenser being connected across any found to require it, and a fixed resistor totalling, say 15,000 ohms across the last tap and the negative B. A fixed Dubilier or T.C.C. condenser of .5 m.f.d. is also placed across as shown.

A POTENTIAL DIVIDER.

INSTEAD of providing variable resistance across the output, a better plan is to purchase a "potential divider" (climax) which costs about 12s. 6d. This is an arrangement of a continuous resistance with ten taps, each of which may be connected to a socket on the panel, each socket giving a different B voltage. The voltages that may be expected from 230-volt mains should not be less than 160 (max), 136, 112, 88, 64, 56, 48, 40, 32 and 24 volts respectively. Higher voltages may quite likely be obtained, but whatever the maximum voltage, all the tapings will be raised in exact proportion, so that if the maximum turns out to be 180, then the tapings will be 153, 126, 99, 72, 63, 54, 45, 36, and 27 respectively. The low potential end of the divider connects to negative B, which is provided with a terminal, or if pre-

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As One Woman To Another

My Dear Elisabeth:

"JAP SHAN BARGS!" This is not a Russian oath nor the wail of a lost soul. 'Tis but a cryptic inscription that lately caught the eye of the wayfarer. Pondering its meaning, after long travail I reached unravelment. No announcement this of warring submarines or midnight marauders; merely a fog to the consciousness of the passing pedestrian that Japanese Shantung silk was going, going cheap. To what base use is put the sweetness of the tongue of Shakespeare's England! Alas, that so many decently educated and worthy people positively prefer words that are ugly, phrases hideously contracted, sometimes with a little American slang thrown in for luck, the whole combining to produce a truly terrible tour de force.

Exceeding English in character, and admirable in skill and sincerity, are the painting of Gyneth Richardson, now on exhibition at the McGregor Wright Gallery, in Lambton Quay, Wellington. Clear and cool are these lovely landscapes, with their gleams of sunshine, and of a colour and draughtsmanship that make one marvel, reflecting that a few years back this young painter, little more than a child herself, sat sketching bouncing babies at Oriental Bay. Among many poems in paint calculated to convert some of us into kleptomaniacs, was a harbour in Cornwall—whither sooner or later wend their way most people who paint—very lovely in gentle colouring of blue and cream and buff; also a Lych Gate at Panhurst, small in size and low of tone, the drawing of a striking fidelity. An Old Market in Gloucestershire holds great appeal, its singular clearness of atmosphere calculated to bring peace on the hottest of hustling days. Two sketches of St. Ives ravish the eye; while a small painting of Henry James' house, at Rye, is correct, precise, and gentle as some of his own lovely sentences. A russet and blue street in beautiful Sussex attracted many lovers of that country we call Home, nostalgia for which has found jerky expression from a modern poet:

If I might see you yet!
See you once more
and for a moment forget—
See you once more and then
(England, England!)
Before I remember again,
Die!

Towards the clamorous present-day pendant for harsh streaks and stridency, so exasperating to the taste of many people, Miss Richardson shows no tendency. This artist will go far, with her concentrated vision, her talent and her youth. Only as yet is the dawning of artistic life in this Dominion: infinite possibility lies in the future. The generation now in the first flush of endeavour and tentative achievement will hew out its own niche in the building of the temple, and it is not difficult to predict that the work of Gyneth Richardson will hold high place.

Appreciation of beauty is a gift of the gods, a bounty from the fairies to the baby in its cradle; a subtle emanation of personality, some wireless of the spirit, vouchsafed to a few, denied to those of denser perception. It may be that this clear outlook, combined with the capacity to work in its light, is the highest form of sanity. In a strange, frank book recently published, "Reluctantly Told," by Jane Hillyer, are some illuminating passages. The writer suffered a mental breakdown, and tells the tale of her unhappy illness with truth and courage. Simply and plainly she sets forth the causes that led to it, chief among them being an unhealthy habit of introspection, that morbid attitude of mind that feeds upon its own disability, limitations of environment, and blows of circumstance. With force and clarity she traces the course of incipient melancholia, which culminates in the darkness of mental disorder, for a time reason apparently being in shreds. Gradually, however, through wise restorative treatment, aided by a love of the "good brown earth," little growing grasses and "flowers in the cranied wall," came health of mind and body, and joy in the life of the normal world of work and nature and

friends was restored. Of the making of books there is no end, but surely this revelation of intimate experience is unique.

Laments of eloquence and sincerity have been said and sung for that great soldier whose spirit passed from our world to the plaudits of his fellow-men and the love of many regiments. "Death is but crossing the world, as friends do the sea," William Penn reassured his generation. And now that the tribute of the trumpets is stilled, the Last Post sounded for Haig of Bemerseyde, it is hoped that his Great Memorial will materialise in Homes for those ex-service men whom he so loyally held in mind. Not in monument, not in tablets, should be the memorial to this modest and noble-hearted soldier: but a Roof, and Food and Shelter for those who are greatly in need:

We owe more tears
To those dead men than time
shall see us pay.

And we owe more than tears to the living who fought for us and many of whom have played so gamely a losing game. I am told that many of our own men are in need, discharged by the Government, with no pension, no work, no nothing, except a remembrance, now turned to bitterness, of the tumult and the fighting that are past, the waving banners, the cheers and the promises of 1914. Words, words!

One who recently traversed the roads of Otago and South Canterbury laments the ugliness and inadequacy of some of the war memorials. By contrast, Oamaru to some of its trees has attached name-plates; part of an admirable scheme to beautify the town and at the same time accord lasting remembrance to those who rest in "silence and eternal sleep."

A Celtic Cross of grey granite, well placed at the corner of a road near Timaru, is arresting and beautiful; and the Bridge of Remembrance in Christchurch a big conception.

Dunedin's tall column commands admiration in its austerity and beauty; while some of the smaller

memorials here and there strike a simple and poignant note. In a large warehouse in Christchurch is to be observed an exquisitely carved tablet, the roll of honour enclosed in imperishable brass of rarely beautiful design: and in the Training College of the Cathedral Town, halfway up the staircase glows and glimmers a Window, the clear and shining colours literally throwing a light upon the path of those who climb, on which is inscribed two lines from Laurence Binyon's great tribute:

At the going down of the sun
and in the morning,
We will remember them.

All of which goes to show how slack, how lamentably apathetic in the erection of a War Memorial, has the Capital City proved itself.

Your
ANNABEL LEE.

They Say:—

That Lady Mary Lygon, Lord Beauchamp's youngest daughter, will be one of London's prettiest debutantes this year.

That the little Princess Elizabeth is not in the least bit shy, but looks straight at people when she is being shown to them, and never thinks of hiding her face in her nurse's shoulder, as many baby girls do.

Tiny Feet.

Lady Georgina Shelto Douglas, who recently left London for Hollywood, where she intends taking up film work, claims to have the smallest feet in European society. They are "size ones," and she has insured them for \$20,000. She took with her seventy pairs of shoes, eighty dresses, and thirty hats, and hopes to be the best dressed woman in Hollywood.

Women's Hour at 3LO.

The new morning session at 3LO—"The Women's Hour"—although it has barely commenced, is already arousing widespread interest, especially amongst country women, and seems to be filling a long-felt want. It is an hour that offers tremendous possibilities. Already arrangements have been made to have a series of talks on every conceivable subject dear to the feminine heart, and it is sought to make these addresses as practical as possible, not forgetting, of course, that a little brightness and humour will make the wheels run very smoothly.

The Ugly Duchess.

Another romance, which excites and sustains interest in a hideous heroine—albeit, a romance unfulfilled—comes from the pen of the author of "Jew Seiss." Lion Frachtwanger writes of the unequal contest between beauty and brains, but it is difficult to believe that a duchess with brains and a statesmen to boot, however ugly, could become such easy game to mere brainless beauty. Throughout the whole of her embittered life, from her child-marriage, through stormy youth, middle age which brought her inexpressible boredom through the passion of a beautiful golden youth, her final tragic abdication, and lonely old age, when the smell of her dinner is all she lives for, she has the reader's entire sympathy.

Our Splendid Women.

A great tribute to our women M.P.'s at Home is paid by an ex-chairman of the Parliamentary Lobbyists. He says: "Up in the long row of committee rooms, as well as in other parts of the great Palace of Westminster, the women M.P.'s (there are seven) have done a great deal of unseen, unlimelight work. It was the special care of the women suffragists when fighting for the vote to make it plain that they did not want to come to Parliament merely as women. Their aim was to come in and work on all questions, without being barred because they were women. They did, and they do."

No woman M.P. speaks in the House of Commons without speaking to the point. They are usually equipped with special knowledge of the subject under debate. The women who have got into Parliament already have, by their reticence, their quiet work and their earnest and gentle application to the problems of the people, dispelled all fears as to whether women would be able to do the job and do it well."

Government's Only Woman M.P.

In the House of Commons the Duchess of Atholl looks less like a duchess than any of the other women M.P.'s. She goes quietly about her work in a long, almost dowdy, dark dress, her unshingled hair done up in the old-fashioned style, and carrying a big black silk bag full of dry documents. Down at the Highland castle of her people she is the duchess.

After a long day's work in the Education Department or in the House of Commons, or both, she thinks nothing of going home after 11 o'clock of nights a-jostle in the theatre crowds on the Underground, hanging on a strap. If you told the smartly-dressed shop-girls and typists in the train that this was a duchess, an M.P., and a Minister of the Crown, they would not believe you.

Construction Continued

CHOOSING SUITABLE VALVES. (Continued)

seem a matter of indifference whether with a valve of low resistance or a transformer of low ratio with a valve of high resistance. In order to construct a transformer of high ratio is used sider this question, two facts must be borne in mind; first, that, in the case of any given construction of valve in which only the density of the grid mesh is varied, the ratio of the magnification factor to the internal resistance is approximately constant; secondly, that, in the case of transformers of a given type, but having varying numbers of turns on the primary winding, and consequently different step-up ratios, the appropriate valve internal resistance varies inversely as the square of the ratio. Thus, if we have a 3:1 transformer, which is recommended for use in conjunction with a valve of internal resistance of 24,000 ohms, a 6:1 transformer of the same type will operate in conjunction with a valve having an internal resistance of a quarter of this value, namely, 6000 ohms. But the former valve, if constructed in the same manner as the latter, would have a magnification factor four times as great; hence, since the total magnification is equal to "magnification factor" multiplied by "step-up ratio," we shall obtain twice as much magnification from the valve of high internal resistance with the low ratio transformer as we obtain from the other combination. There is, further, the advantage of a lower H.T. consumption, which is by no means a negligible factor.

Valves for use in the earlier stages of a set should be built to have as high a resistance as is consistent with an adequate range of working characteristic, and with as high a magnification factor as the particular form of construction will allow.

RESISTANCE AND CHOKE L.F. COUPLINGS.

For the purposes of low-frequency amplification, where either a choke or a resistance is employed, there is an opportunity for using valves of exceptionally high magnification, and this class of valve has recently come into prominence to a considerable extent. If we can succeed in building an impedance, either in the form of a choke or a resistance, which is large in comparison with the internal resistance of such a valve, we get, practically speaking, the whole of this amplification at each stage, though there are complications, of a character by no means negligible, introduced as a result of the inter-electrode capacities of the amplifier. However, it may be said that the results

obtained on these lines have led to a very great advance in the design of resistance-capacity amplifiers, and have established these valves of high-magnification factor firmly in the popular favour. The advantages offered by such valves, apart from their actual efficiency in operation, is their extremely low H.T. consumption.

MEASURING ELECTRICAL ENERGY

Current supply from the mains is measured in kilowatt-hours, or legal units. A watt is one ampere flowing at one volt for one hour. A thousand watt-hours make one unit or kilowatt-hour. Now this thousand watt-hours may be used up in many different ways, the whole thousand being consumed in one hour, or ten watts may be used per hour, and the unit (costing an average of 6d.) will then last for 100 hours. An ordinary 50-candle power lamp uses 60 watts or watt-hours, so that to consume one unit it will give light for nearly 17 hours. The watt is the product of the amperes flowing and the volts applied irrespective of time. Thus if 4 volts are driving half an ampere through a valve filament, the power being used is 2 watts.

Many electrical meters have two additional small dials showing tenths and hundredths of a unit, each division on the latter representing ten watts or watt-hours. Meters register kilowatt-hours and fractions thereof.

TIPS AND JOTTINGS

Many new listeners will be interested to hear that during the currency of the Dunedin Exhibition of 1925-6, the broadcast station, VLDN, at the exhibition employed fairly high power. Transmission was six nights a week, chiefly of the Argyll and Sutherland Highlanders' Band, which, unfortunately, seldom came through as it should have done from the outside bandstand. Items from the concert hall came in at Wellington with good volume and quality, "Megolm" employing a five-valve T.A.T. circuit. The closing ceremony of the exhibition took place in the afternoon, which was sunny and bright in Wellington, and with the circuit mentioned, the writer, seated some

distance from the loudspeaker, heard quite distinctly every word of the valedictory speeches.

A unit that will interest experimenters and others is known as the "Abox" Filter, now on the American market. This permits those who have a good two-ampere or five-ampere charger to convert it into an A eliminator. The Abox filter smooths out the current from the charger, and thus perfect A elimination is obtained, sufficient to run six valves of the 201A type, provided that the charger will supply not less than two amps. The filaments remain wired in parallel in the usual way.

The life of valves and lamps is often quoted as being 1000 hours. This represents twelve months' service at the rate of nearly 2½ hours every night.

The object of the fixed condenser across the primary of the first audio transformer is to shunt to earth the radio frequency currents necessary to supply reaction, after they have passed through the detector plate circuit. These R.F. currents are earthed to prevent them entering the audio side, from which all R.F. must be excluded. A capacity of .001 has no effect upon audio frequencies of as high as 5000 cycles, and larger valves may often be used without distortion occurring, but only if necessary to control tone. But in a resistance capacity coupled amplifier the by-pass condenser has quite a different effect, and must be kept very small in capacity, say .0001 in a circuit with moving tickler.

If howling occurs in a two-stage crystal amplifier, reversing the connections to the primary of the second transformer will often effect a cure. An American radio journal expresses the opinion that manufacturers have of late devoted more attention to decorating the loudspeaker than to improving its reproducing qualities.

When working several valves off a B accumulator, to prevent unequal drain upon groups of cells supplying R.F. detector, and audio, the full battery voltage may be taken and resistances inserted in the common plate circuit of valves requiring less than the maximum voltage. This means dealing with the accumulator output in the same way as is done with B eliminator voltage.

In the explanation last week of how to check up B eliminator consumption on the meter, the "hundreds" dial was mentioned, but this should have read "hundredths."

(END OF CONSTRUCTION.)

The New York "Times" says: "Two places named Brooklyn, on opposite sides of the globe, were linked recently by short-wave amateur radio, when station 2APD, of Brooklyn, N.Y., succeeded in operating with the station owned by J. Johnson, in Fortuna Street, Brooklyn, Wellington, New Zealand, according to Nathan Pomerantz, of 1324 Forty-ninth Street, Brooklyn, operator of 2APD."

S.O.S. GAMBLE

PROGRAMME INSURANCE.

In the United States each broadcast station employs a listener, whose duty is to be on the alert for an SOS call from any ship which may be in distress. Every station in proximity to the coast must close down when an SOS call is heard.

Lloyds, of London, were willing to give SOS insurance as protection for the Victory Hour broadcast scheduled recently, when Al Jolson at Ned Orleans, Will Rogers at Hollywood, Fred and Dorothy Stone at Chicago, and Paul Whiteman's Orchestra at New York, faced the microphone of WEAL, New York, and forty-six other stations. The programme cost the sponsors of the event 67,000 dollars (£13,400).

"Lloyd's are willing to insure the programme on a 5 per cent. basis," said Edward L. Bernays, representative of the sponsors, "but we could not find an American underwriter to do it. Lloyd's, for a payment of a premium of 3000 dollars (£600) will pay 60,000 dollars (£12,000) should an S.O.S. stop

the programme. Or for a payment of 1200 dollars (£240) they will pay 1000 dollars (£200) a minute if the SOS interruption is for more than five minutes. In other words, Lloyd's will bet 60,000 dollars against £3000 that a distress call will not stop the concert.

"We have not accepted the Lloyds' offer as yet, but expect to decide to accept or reject it on Tuesday afternoon. At that time we may use the transatlantic radiophone to communicate with Lloyd's and accept the offer," said Mr. Bernays. "If we do, I believe that it will be the first time that a nation-wide broadcast programme has been insured against an SOS."

The Australian stations have been in tip-top form lately, after 11 p.m. Our old friend, 3LO, Melbourne, has bucked up, and at times rivals 2FC, Sydney, after 1 a.m. 4QG, Brisbane, is still suffering from asthma, and only occasionally is worth listening to for a few minutes at a time. This station gives plenty of volume, and one can only deplore the horrible blurring which appears to be chronic now.

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Possible Causes of Fading and Distortion

The Part of the Monitor in Governing Modulation

By "M.J.R.E."

THE question of fading and distortion of broadcast signals has long been, and is still, a vexed one in New Zealand, as well as in other parts of the world. Due to the fact that there is only the one company in New Zealand, and they are looked upon as a monopoly, they have come in for severe criticism. Putting aside the question of whether the power, wavelengths, and location of the stations are strictly technically right (and such a question bristles with technicalities, both radio and commercial, and is one which the saying concerning the fools and the angels is applicable), the fact remains that in certain districts, where good, reliable signals from the nearest station might have been reasonably expected by listeners, there have been disappointing results. The transmitting stations have come in for the blame, and in most cases they have been as blameless as a lighthouse giving its usual output, but blinded by fog or clouds from giving its light to passing shipping. The nature of the fog or clouds which blind a radio transmitting station will be briefly outlined, but before dealing with this question the possibilities of the transmitting apparatus or personnel being blameworthy will be discussed.

THE MONITOR'S DUTIES.

AS is well known, there is in the studio of the broadcasting station a sound pick-up device called a microphone, which converts air waves into electrical impulses. The air waves, of course, represent the sounds of music or speech created by the artist or speaker. The electrical impulses are taken into a control room, in which is located electrical apparatus for the purpose of checking the purity and strength of signals, and the duty of the operator or attendant there (who is usually called the "monitor") is to maintain the purity of signal delivered from the microphone, and check its issue from the transmitter. He has in his charge amplification apparatus and a volume or "monitoring" control whereby the output from the studio and the input to the actual transmitting set (which may be a mile or more away and con-

nected by wires) may be varied at will.

NOW, the monitor can vary the power of the transmitter from zero to maximum by a simple rotation of the volume control in the monitoring room and by a turn of a switch he can listen to the purity and volume of signals anywhere up to the time they leave the monitoring room as well as after they leave the transmitter as ether waves because a standard radio receiver is installed in the monitoring room.

It is a fact which is very seldom appreciated that the power of a broadcast station is not the power of the carrier wave, but is the depth or amount of modulation applied to the carrier of a transmitter of a certain capacity. For instance a transmitter rated at 100 kilowatt emits a carrier wave of a certain amplitude or strength, and this carrier wave is capable of travelling large distances. If it were possible in practice to modulate this carrier wave 100 per cent., then the whole energy of that carrier wave would be devoted to carrying the broadcast signals to maximum distance. Actually in practice a depth of modulation of 70 to 80 per cent. can be obtained, and this means at once that the actual telephonic power available on the carrier wave is that due to an expenditure of 70 to 80 kilowatt instead of the 100 k.w. used in setting up the carrier. If the telephonic input to the transmitter is cut down to such an extent that the depth of modulation is 1 per cent. only, then the equivalent signal strength in a receiver tuned to the 100 k.w. carrier is only the equivalent of a 1 k.w. station fully modulated.

THE question might be asked whether the 100 k.w. station's carrier would travel further than that of the 1 k.w., and that the 1 per cent. modulation of the former would deliver a greater signal strength than that of the 100 per cent. modulation of the 1 k.w. carrier with its limited range. Actually in practice other factors would have to be considered, and the results would be problematical, but theoretically the expenditure of telephonic power is the same, and the results would be approximately the same so far as signal

strength in the receiving aerial is concerned.

SUBSIDIARY CONTROLS.

IT is seen therefore that the power output of the transmitter is in the hands of the monitor because the carrier wave is maudlin in the receiver (providing the receiver is correctly adjusted), and merely provides the connecting link between transmitter and receiver just as though a wire were joined between the two as in the case of ordinary telephony. Whatever the monitor allows to be put into the carrier becomes available in the receivers tuned to that carrier. The monitor is consequently a very responsible link in a broadcast system.

IT will be seen at once that any lack of attention on the part of the monitor to his job may result in fading or distortion. If the input to the transmitter is cut down during an item an apparent "fade" at relatively distant points will be noticed. If in changing from studio to relay, or vice versa certain necessary readjustments are not made to compensate for different strengths of pick-ups, then fading or blasting will result so far as observations at distant points are concerned.

Sometimes there is a sub-monitor engaged in the case of an outside relay, and the operator in charge of the transmitter has the ability in an emergency of regulating the input to his transmitter. In a properly regulated broadcast system neither the sub-monitor nor the transmitting operator should tamper with volume controls, and this duty should be strictly confined to the regular monitor while programmes are being transmitted.

THE OBJECTIVES AIMED AT.

OBVIOUSLY the ideal the monitor is aiming at is to put out the maximum amount of power compatible with purity. The check on signal purity is made by observing the radio signals returning from the transmitter, and the monitoring adjustments are always made using the radio signals as a guide. If distortion is noticeable, a turn of a switch enables the monitor to check the

input to the transmitter. If the input to transmitter is right and the output distorted, while the strength of input is normal, then it is the duty of the monitor to call the transmitting operator's attention to the fact. The operator should have noticed the trouble as soon as it occurred in any case, as he is in a position to listen to the input and output of his transmitter.

WITH modern apparatus very little trouble should be occasioned by distortion actually in the electrical portion of the transmitting system. Particular and constant attention has to be paid to the studio, where the studio attendants have to arrange the relative positions of artists and microphone. Naturally the monitor can give material assistance in increasing the flexibility of the system by compensating for errors on the part of the studio by an increase or decrease of amplification.

The monitor attendant has to be on the job the whole time, and has to be experienced to enable a professional finish to be imparted to the material broadcast.

OTHER FACTORS AT WORK.

THE foregoing has given some idea of possibilities of distortion and fading likely to be traceable to the actual transmitter. To the casual reader it may be likely to appear as though the possibilities are so great that the percentage of "fades" observed are very largely the result of slips on the part of the monitor, while the number of times the signals become mushy are merely due to the fact that the transmitter attendant is sucking his thumb instead of attending to his job.

In reality the blame definitely traceable to variations from the transmitter is an extremely small proportion, the majority being due to atmospheric conditions, which will form the subject matter of this column next week. Of course, the broadcasting company are alive to the necessity of minimising unnatural fades, and a constant check is kept on the station output.

It is the practice in many modern stations to use mechanical or electrical instruments to check the station output, and to keep photographic records of modulation percentages taken

periodically. At the same time, visual indications of average modulation percentages may be constantly available in the transmitting room, monitoring room, and also in the studio manager's control room.

ALL PARTS LINKED UP.

NATURALLY every section of a broadcast system is in quick telephonic communication with every other section, and in the case of the studios, control room, and monitoring room, not only is there quick communication, but by means of large plate-glass windows it is possible to see everything that is going on. Even artists awaiting their turn to perform can see what is going on in the particular studio in operation and by means of a loudspeaker also hear the performance.

ALL that organisation and electrical and mechanical devices can do is done in a modern broadcast station to cut out human error and the minimising of the latter is naturally dependent on quality of personnel.

So far as New Zealand is concerned, there is a much greater necessity for care than in other countries, where more stations are available per head of population or per square mile to be covered. Owing to absence of population, and large areas to be covered, the very most has to be made of the power available from the four stations, and if listeners close to the stations notice a certain amount of furriness of signals, due to slight overloading of the transmitter, in order to make the most of the power available, and get programmes into distant parts of the country, they should sympathise with the ambitions of the monitor in this direction. Nevertheless, it is naturally most desirable to limit the modulation of the station to such safe limits as to ensure faithful reproduction over a limited area, rather than take the edge off good music, and make it available over larger areas.

In next week's issue, therefore, an attempt will be made to explain in as popular a manner as possible the cause of fading and distortion, as well as the reason that signals transmitted on the standard broadcast wavelength carry to greater distances in the night than during the day.

Our Mail Bag

Relays and Other Things.

"Quite Contented" (Dunedin).—I notice in the mail columns of your excellent paper, "Radio Record," that daylight saving seems to be annoying some listeners-in, especially in the country. I notice also that someone suggests the relaying of stations. Well, I would like you to have my opinion on both these subjects. I wish to say, first, that daylight saving doesn't bother me in the least where New Zealand stations are concerned. I have been enjoying the benefits of radio for three years now, and I fail to see how one hour is making a difference. Naturally, the Aussies aren't quite the same, but why worry? The New Zealand concerts are just as good as the Aussies'. I think it is just that "distance-getting ability" that is worrying some folks to-day. My set is a four-valve Browning-Drake, which I built myself, and gives excellent results. I had the set with me at Queenstown during Christmas; the daylight reception from there was perfect, 3YA and 4YA being the stations listened to. Now for the relaying of stations. I see it is a Wellington suggestion. Well, all I can say is this: that I hope 4YA doesn't attempt it. I have heard 3YA relaying quite nicely, but 4YA's relay of the Maori page-

ant was very poor. I am sure there is room for improvement in 4YA. My aerial is two miles from 4YA. I get 3YA and 2YA good during the day. 3YA fades rather badly at night, whilst 2YA and 1YA are good. 4YA, of course, doesn't fade here, but he stops quite a lot for adjustments. However, taking radio reception as it is, it's not bad. I for one would be absolutely lost without it; it takes us old chums to appreciate the improvements, so here's to wishing the B.C.C. the best of luck.

Sidey Time.

F. Carter (Bay of Islands).—I have been waiting for someone from this district to write to the "Record" on the question of "Sidey" time in regard to reception by country listeners. I have yet to hear of a five-valve set that can get 2YA in this district before 7.30 p.m. That is to say, speaker strength and intelligible. Personally, I have got a five-valve set, with a 60 foot aerial and 40 feet high, and a good earth, and at 7.30 p.m. I can just hear 2YA on the speaker, and only just, but I certainly couldn't write down what the announcer was saying. Although it is bad for wireless, I hope "Sidey" time has come to stay, on account of its advantages to the great majority of workers in New Zealand. In this week's "Record" I see there is a suggestion by "43349 Wellington" re a "dictionary column." I would

like to congratulate your correspondent for his suggestion, as I think it is a splendid idea for beginners, like myself. I notice also that some of your readers have been asking for the "silent nights" to be done away with. Surely, Mr. Editor, the station staffs are entitled to one night off out of seven?

Bad Reception.

C.F.S. (Shannon): As reception from 2YA continues to be mushy and distorted, I would be pleased to know if the new land line that was spoken of shortly after the opening of 2YA, has ever been installed, and if so, when? Until about a month ago the station was fairly successful as a source of entertainment during the afternoon (though useless, at times, of a night). Latterly the afternoon session reception is the most distorted. Doubtless, the class of artists employed leaves little to be desired, but the type of music played by the best, the famous trio, is not altogether appreciated. "Home, Sweet Home" was never too humble for Dame Melba to sing. "Killarney," etc., etc., are pieces that the multitude understand and appreciate. A few of such as the pieces mentioned, or even more recent ones, would be hailed with delight. This locality would welcome a visit from someone in authority from 2YA to report on its reception here, and a dozen machines of six or seven makes, would be at the disposal of such a representative, as it is the desire of local listeners to assist all we know how in the endeavour to improve on what seems at present a waste of good music as far as here is concerned. Just one more point I would like to touch on. About twelve months ago, a special programme was broadcast from 1YA, a sample of

what we were to expect when the licenses reached 40,000 in number. Special attention was drawn to the fact that only one artist appeared on the programme twice (or was it two artists?). As the number of licenses is now in excess of the above-mentioned number, local listeners are asking each other when do we get the programmes promised. I cannot believe that the Broadcasting Co. made the undertaking lightly, but it would be interesting to know when to expect the change. A musical comedy was also broadcast from 1YA about twelve months ago, and it was announced that there was a likelihood of more such relays. When?

[We would welcome reports from other districts regarding reception of 2YA, so that it may be determined whether this is a local or general trouble. What adjustments were necessary in regard to equalising equipment have been made.—Ed.]

Sydney Heard.

Mr. D. W. White, Elizabeth Street, Wellington, reports increasingly good reception of Sydney. This was particu-

larly the case on February 14, when 2YC was received at good loudspeaker strength on 4 valves. The major part of the programme was listened to with great interest. Other listeners report increasingly good reception of Australian stations, with the lengthening of the hours of darkness.

SPORTING

CRICKET NEXT WEEK

March 2 and 3—Australia v. Canterbury (subject to permission C.C.A.)—3YA.

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