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Television Broadcasts



THE first public experimental broadcast of radiovision took place at the offices of the Baird Television Company in London on September 30. This demonstration marks the close of a long and bitter struggle, for it is only at this stage that radiovision has been granted a recognised place on the ether. Even now, the opportunities afforded of publicly developing this new branch of science are extremely limited.

Facilities are restricted to five half-hours per week; further, only one frequency is available, whereas for the simultaneous transmission of sound and vision two are necessary. The extra frequency will be available when the two transmitters of Brookman's Park are working. Meanwhile the Baird Company will operate with single transmission, the speaker being first heard and then radiovised, instead of both operations taking place simultaneously.

At the first official demonstration, the radiovised images of the speakers and artists were conveyed from a studio at the company's offices by land-line to the B.B.C.'s transmitter at Oxford Street, from which they were broadcast. The transmission was picked up and shown on a Baird radiovision set. The speech was relayed direct from the studio by land-line.

As seen by the assembled guests, the images were about an inch and a half long and half an inch wide, and the transmission throughout revealed a steadiness and clearness that was not thought possible a few months ago. First Mr. Sydney Moseley, the announcer, read a message of goodwill from Mr. William Graham, president of the Board of Trade, and afterwards Sir A. Fleming spoke a few words in a similar

strain. He was then radiovised. Professor Andrade, a leading authority on the science of wireless, spoke and was radiovised, his face being clearly discernible. After this there were "turns" by Sidney Howard, a comedian, who contributed a specially-written monologue, Miss Lulu Stanley, and Miss King, all of whom appeared in succession on the screen.

MUCH controversy is centring round the question of television (or radiovision) in England at the present time. It will be remembered that some time ago, the B.B.C. consented to experimental broadcasts, and this only after a sustained appeal by the television promoters, the Baird Co. The first broadcast has now taken place and the accompanying article tells of limitations which will hamper radiovision development for some considerable time.

Mr. Baird, the inventor of radiovision, stated after the ceremony that he was quite satisfied with the demonstration, but he hoped to obtain much better results as the experiments continued. He pointed out that there had been very little time indeed for tuning-in, a most important operation. There would be no difficulty whatever in broadcasting and receiving speech and vision simultaneously, as this was done during the test before the Postmaster-General last March.

Another official of the company said extremely few receiving sets were in the hands of the public yet. The company would not manufacture sets, but would license firms to do so. It would be possible to buy a model for receiving vision alone for about £12. All that would be

necessary would be to connect it up to an ordinary set of, say, four valves. A model to receive both vision and sound would, of course, cost more.

THE latest issue of "Wireless World," makes interesting comment concerning these broadcasts:—

"The past week has seen the inauguration of experimental transmission of the Baird system of television from the B.B.C. London station, 2LO, but the number of people who are the wiser now that these transmissions have begun is very limited indeed, and the whole position appears to us to be so absurd that we wonder whether the inauguration of these experiments is really intended to be taken seriously or not.

"Those who have witnessed Baird television demonstrations in the past will know that only two or three people can 'look in' at a time to one instrument, and there are, we understand, at the very most, half a dozen instruments set up in this country to receive the B.B.C. transmissions. Add to this the fact that the transmissions are being conducted at 11 o'clock in the forenoon—a time when very few of those likely to be interested in the development of television are able to avail themselves of the transmissions—and we have altogether a collection of very good reasons why television is not likely to make much progress in this country at present.

"The Baird Company are not at present undertaking to manufacture television receiving sets; their object appears to be to endeavour to establish a patent situation under which they license radio manufacturers generally to draw royalties on every receiver sold.

—Continued on page 2.

Radiovision in England**Wireless Telephone
Communication**

(Continued from front page.)

This is no doubt a policy which it is thought will, in the end, be to the advantage of the Baird Television Company's shareholders, but in the meantime manufacturers are, quite naturally, in no hurry to sign a licensing agreement which will presumably tie them up to paying royalties over a period, whether or not they may be dependent on Baird patents in the manufacture of receivers.

"The only way in which we can foresee success attending the efforts to launch television is if these efforts are wholehearted, and there is a genuine endeavour made to rouse enthusiasm on all sides. The Baird Company will gain nothing by stifling the project at the outset because they desire to guarantee their own participation in the financial gain which may accrue, neither can we expect any headway to be made so long as the B.B.C. conduct the experimental transmissions at a time when the amateurs and experimenters who are most likely to provide the enthusiasm needed to carry the thing through are unable to participate in the tests.

"It would be far better that the transmissions, or at least some part of the transmissions, should take place in the evenings or over week-ends, for that is the only way in which publicity amongst enthusiasts can be attained and when it will become possible for them to co-operate in the experimental transmissions and probe the possibilities of the system."

Prior to the commencement of the tests the following statement was issued jointly by the B.B.C. and the Baird Television Development Company, Limited: "The experimental broadcasting of Baird Television outside programme hours will begin on September 30. These transmissions normally will take place through London (2LO) from 11 a.m. to 11.30 a.m. daily except on Saturday and Sunday. The object of the demonstrations is to afford the Baird Company wider opportunity than they have hitherto possessed for developing the possibilities of their system of television and for extending the scope and improving the quality of reproduction. In granting facilities for these experimental demonstrations, in which the public can, if they so desire, take part, neither the Postmaster-General nor the B.B.C. accept any responsibility for the quality of the transmission or for the results obtained."

It will be some time before radiovision broadcasts commence in New Zealand, but it must be remembered that as this science is but in its infancy, such transmissions are at present more for the purpose of experiment than for entertainment. However, as a compensation for the present lack of radiovision in this country, it should be realised that when transmissions do commence, they will, by virtue of improvements which are bound to result from research developments, be technically far more perfect than those at present being broadcast in England.

The result of these experiments will be long in reaching the public and no one should hesitate before plunging into radio in the hope that next season will see a radiovision equipment attached to their receiver. In fact, it almost seems as if an entirely new system is necessary.

English Experts' Opinions

SIR WILLIAM NOBLE, a director of the British General Electric Company, who arrived at Auckland from Sydney by the Aorangi, is impressed with the possibilities of wireless telephone communication between England and Australia and New Zealand.

While in Sydney recently Sir William Noble had a conversation with friends in England by wireless telephone. Communication was with two stations, Reading and London. He was able to carry on conversation fairly well with the former and excellently in the case of London, the speech being as clearly heard as if the other person was in another part of the same city.

Favourable atmospheric conditions were a factor in this good result, but he believed that the service between London and Australia could be regularly established on a commercial basis at an early date. It was intended to confine the service to the hours of about 5 p.m. to 8 p.m. Australian time, although for serious conversation Sir William thought that midnight in Australia was the most favourable time.

The possibility of wireless supplanting the cables is not viewed seriously by Sir William. He said that for strategic reasons the Empire must retain the cables, and apart from that limitation of the hours during which wireless services around the world were efficacious would prevent them from ousting the older form of communication which could be used throughout the 24 hours. Lack of secrecy would not seriously hinder the development of wireless conversation. He thought the speech could only be picked up on correct apparatus, which was very expensive to install.

Aeroplane Photographs**Successful Transmission**

SUCCESSFUL transmission of photographs to airplanes by wireless was made on October 2 for the first time in Europe, when the Lufthansa radio station at Tempelhof Airport sent three photographs to a airplane flying high over Berlin. An Associated Press correspondent was aboard the plane, and watched the photographs come in.

The first was a weather map, showing conditions which would be met by the pilot flying from Tempelhof to Cologne, over the regular air route from Berlin to Paris. The second showed storm conditions, and the third was a photograph of the landing field at Tempelhof showing a rain-soaked section of the airport where a landing would be difficult for a pilot.

The photographs received showed only slight variation from the original in all cases, and the reception was effected within five minutes by an ordinary radio set equipped with a small apparatus known as a "fultograph."

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Radio Broadcasting Service Reviewed

Some Interesting Observations



At the conclusion of the Christchurch Radio Olympia, Mr. L. B. Scott, chairman of the Exhibition Committee, was interviewed by a "Sun" reporter. Mr. Scott had some very interesting observations to make concerning broadcasting.

"The radio show," said Mr. Scott, "has created more interest than it was thought it would. The public that went to see it has recognised that radio is established, and that even though its members may not have sets to-day, they will have them later. Changes in radio development have been taking place so gradually that they have almost been imperceptible. New Zealand now has not only the best artists obtainable for the stations—and those artists available are the best, although they have certain imperfections which the critics like to write to the papers

sessions have been a revelation to the public. Not only are the dialogues and stories, etc., attached to the juvenile mind, but also there is a wonderful wealth of artistry displayed that would grace any stage.

"As an educational force radio must exceed any other form of instruction, because there is the personal appeal in it that the performer is speaking directly to the listener.

"CANTERBURY

has lagged behind Auckland and Wellington in radio, and it is hard to understand the reason for this, particularly in view of the fact that at one time Christchurch was better catered for than the North Island.

"One would think as a natural inference that the man in the land, cut off from many of the pleasures of city life, would eagerly seize on radio. Often speakers have emphasised the monotonous life of farm workers who cannot attend the places of amusement the same as their town fellows. Yet we do not find them eager to make up the deficit by installing radio, and it is possible to get a set at a very moderate figure to fulfil their requirements.

"To the farmer himself there is a direct benefit in being in touch with markets as well as gaining the broadening effect from contact with affairs of the outside world.

"Innumerable instances can be quoted of the use of weather reports, especially at harvest and shearing times, and intelligent use of these accurate reports—and they are accurate—would not only save labour and money, but also a great deal of annoyance.

WITH regard to the sets themselves, so much has been written about oscillations, frequencies, and other fussy expressions, that many people will have been misled into thinking that technical knowledge is necessary to operate a radio set. This is far from being the case, for the modern receiver is no more difficult to operate than many other articles of everyday domestic use. Certainly the 'innards'

are complicated, and require a capable man to repair them if trouble arises, but the modern set of to-day is reliable. In fact, we have to-day practically trouble-free listening-in.

"The workings of the totalisator are most probably highly complex, but one wishing to chase that elusive big dividend is not concerned with whether the totalisator is worked by electricity or by hand, but solely with the method of investing with hopes of a profit. There is a difference between the totalisator and radio in that you purchase a £1 or 10/- ticket, and later on have the doubtful pleasure of tearing it up (as a rule), whereas radio pays a dividend every time.

"Motor-cars have brought forcibly to the notice the question of upkeep in purchasing any article, and it is here that radio is unique. There is no form of amusement, irrespective of quantity and quality, which can be obtained at an outlay at all comparable.

"For each listener in the cost an hour works out at a very small fraction of a penny.

"It is a regrettable fact that only adverse criticisms of the broadcasting programmes come from the public notice, there being a singular lack of appreciation of the innumerable excellent broadcasting features. The public takes too many of these as merely a matter of course. The mid-day weather reports were undoubtedly of very great service to the

think of various services, has to grope blindly towards the light."

A "SUN" reporter asked Mr. Harris if he had any comment to make on Mr. Scott's observations, particularly in regard to his remark with reference to the number of radio licenses in Canterbury. Mr. Harris put the matter in a different light. He said that he had read with very great interest and appreciation the statement of Mr. Scott in "The Sun." Mr. Scott's prominent association with the radio world entitled his opinion to very serious consideration, and there could be no doubt that much that he had said would prove an inspiration to the people of the Canterbury district, more particularly to those who had not yet availed themselves of the broadcasting service. In stating, however, that Canterbury had lagged behind Auckland and Wellington in radio, Mr. Scott



MISS MAISIE CARTE-LLOYD,
One of Auckland's foremost elocutionists

—S. P. Andrews, photo.

about—but also behind the Radio Broadcasting Company there is a very powerful organisation, not only of the company, but of a number of committees consisting of men and women interested in the particular subject.

"For instance, there is a committee to deal with the children's sessions consisting of representatives of the various associations concerned in child welfare.

"Similarly, the Radio Broadcasting Company has the advantage of a committee of representative musical interests, and the public can rest assured that if the musical authorities of the city consider the types of programmes suitable, it is not for some person with no knowledge of the public demand to set himself up as an authority.

"During the exhibition the children's

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MISS PHYLLIS HAZELL
A leading Auckland contralto.

—S. P. Andrew, photo.



MISS MADGE CLAGUE
An English contralto, and a very popular artist at IYA.

—S. P. Andrew, photo.

had no doubt misinterpreted what might be termed the bulk figures for each province, or rather postal district.

These figures did not give a true indication of the position. An examination of the service range of the radio stations in each of the main centres, as compared with the size of the license districts concerned, showed that the licenses allocated to any particular district could not be taken as the service value of its station and could not be accepted as an indication of its particular popularity. It was not practicable to estimate the service value of the respective stations, because of the unknown factors surrounding a broadcast transmission after it left the aerial system. One method of comparison, however, was to take the percentage of licenses to the population of the postal districts to which licenses were allocated. These figures had been taken out, and they showed that, contrary to the general opinion, the Canterbury district led Auckland, with Wellington holding first place, because, no doubt, of its having a more

farming community, and yet the farmers' organisations and the farmers themselves expressed no gratitude to Dr. E. Kidson, who put himself to personal inconvenience, and to the Broadcasting Company, for their efforts.

"If the listening-in public cannot look after its own interests and express appreciation of the efforts being made to give it service, it has only itself to blame if some of these benefits which meet with unanimous approval and are of service to certain sections of the community, are lost.

"The Broadcasting Company, being in ignorance of what the listeners

powerful station and a wider service range.

The figures are based on the percentage of equivalent full-time licenses. Obviously it would be impracticable to arrive at a reliable average based on part-time licenses. The figures up to August 31, 1929, are as follow:—

Equivalent full-time licenses: Auckland 14,166, Wellington 17,635, Christchurch 7692, Dunedin 3565. Percentage of full-time licenses to population of respective postal districts to which licenses are allocated: Auckland 3.3, Wellington 3.7, Christchurch 3.4, Dunedin 1.7.

"On these figures, obviously, Canterbury cannot reasonably be said to be apathetic in its attitude toward radio, as may be judged from the bulk figures," concluded Mr. Harris.

A Secret Radio Station

Operated by Rum-runners

PROBABLY one of the most original uses to which radio has yet been put was its recent adoption as a means of communication between various secret haunts of a bootlegging gang in America. A transmitting station for controlling, both by sea and land, the activities of the smugglers was installed near New Jersey. The transmitter, which operated on short wave, was used for sending messages which were, of course, in code.

The syndicate controlling the smuggling operations possessed six racing

motor cruisers, armed with machine-guns for use against the coastguard cutters, which incessantly patrol the shores, constantly on the lookout for rum-runners. Besides these six cruisers, numerous small motor craft were used by the bootleggers to ferry their illicit cargoes between the larger boats and the shore. They also maintained a fleet of motor-lorries, with specially-designed bodies to disguise their real purpose.

Operations proceeded perfectly for more than a year, and during that period immense profits, totalling over £2,000,000, were netted by the gang. Early in October, however, a listener who lived near the smugglers' headquarters became suspicious as to the origin of the coded messages which he was able to receive, chiefly after midnight. Finally, he reported the mysterious transmissions to the police, and supplied them with enough of the messages to enable them to decipher the code in use. Thus the police discovered that certain prohibition agents had turned traitor, and were working hand-in-glove with the rum-runners, thus enabling the latter to ply their nefarious trade with impunity.

After weeks of listening and planning, squads of police officers were detailed to make simultaneous surprise raids on every rendezvous. These proved completely successful. Thirty-two liquor depots were seized, including the central offices of the ring in New York, and 36 smugglers were finally taken prisoner after many a desperate struggle.

A special squad of officers was instructed to rush the gang's secret radio station, and prevent the operators there from dispatching any warning messages to their cruisers, which at the time were outside the three-mile limit awaiting orders. This was successfully accomplished, and a police operator, by sending out orders in the gang's code, succeeded in trapping one of the rum-running vessels into territorial waters, where it was seized by two patrol cutters. The crew of the vessel, after

making a futile attempt to outdistance the speedy patrol cutters, put up a desperate fight, but were finally overpowered and disarmed.

Near the radio station the police seized the gang's headquarters, which were located in an elaborately-furnished and innocuous-looking country residence.

All its approaches, however, were guarded by machine-gun emplacements, while its basement led into tunnelled chambers where liquor was stored. Large quantities of arms and ammunition were found, but owing to the surprise nature of the raids, no resistance was offered.

Thus one of the most extensive and well-organised rum-running gangs were operating in America was successfully broken up. It is rather curious that the very initiative and resourcefulness of the syndicate should have been the cause of their downfall; for it is certain that had they not employed radio as a means of communication, they would probably have still been operating.

A New Australian

A LOW-POWER Australian station which has recently risen into prominence is 3DB, Melbourne, 255 metres (1175 k.c.). The other evening "Switch" had 3DB louder than 3LO and 3AR, Melbourne. This was about midnight, and 3DB quickly increased in volume from thence onward. It was about four times as loud as 3UZ, Melbourne, another low-power station, which formerly came in with good loudspeaker volume. Apparently there is some unknown reason why these low-power stations sometimes reach Wellington with such volume. Possibly there is some relationship between distance and wave-length. These small-powered stations are on a wave-length below 300 metres (1000 k.c.).

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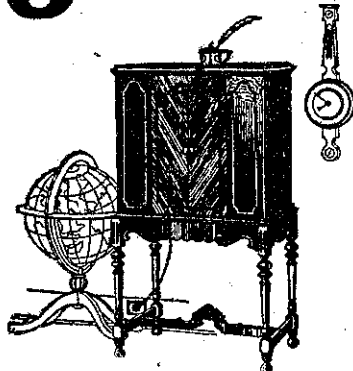
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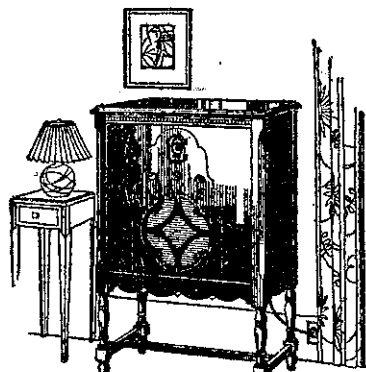
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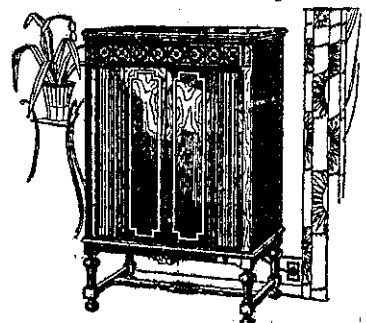
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Make SURE of your Seat on the Holiday Train.

THE loneliest island in the world, that of Tristan da Cunha, is now able to listen in to 5SW, Chelmsford, for recently the inhabitants of the island were presented with a short-wave receiving set. The minister of the island, while on his way back after a holiday in England, was given detailed instructions on the operation of the set. Though slight trouble was at first experienced, the set eventually operated excellently, and 5SW is constantly received at good loudspeaker strength over a distance of 6000 miles.

TWO unusual records in connection with broadcasting have recently been created in South-Eastern Europe. A new high-powered station at Bucharest, which commenced its transmissions a few months ago, announces itself in no fewer than five languages, namely: Rumanian, French, German, Italian, and Hungarian. The other unique occurrence happened in Budapest. The owner of a particularly loud and raucous loudspeaker persisted in ignoring the complaints and threats made by neighbours against his persistence in using the instrument, practically all night. He is now in the hospital recovering from an assault made by an exasperated neighbour, while the latter has been charged with attempted murder.

THE City Council of Verdun (Quebec), the fourth largest city in the province, are considering installing loudspeakers on the boardwalk, which stretches four miles along the river front. In the summer time radio concerts would thus be broadcast to thousands of residents and visitors who take the air nightly on the boardwalk, which is the finest in Canada. The plan is to install a dozen loudspeakers to be operated from the city's central power plant. Important messages can also be broadcast to the crowd in this manner.

IT is understood that a Catholic radio company at Cologne is planning to build a huge broadcasting station in Belgium, which may be ready for use this October. The Catholic Broadcasting Company in Holland also operates the station at Huizen, which is five times as powerful (according to the "Catholic Herald") as the largest American Catholic broadcasting station. This organisation is now making strenuous efforts to secure time from the Dutch Government station for communicating with the colonies, Sumatra, Java, and Dutch Guinea.

ANY idea which may have been cherished that radio advertising, which has always been so prominent a feature of American broadcasting, was on the wane must receive a setback from facts and figures recently published. It appears that so far from suffering any diminution, advertising by the microphone has increased during the first seven months of this year by 94.3 per cent., as compared with the corresponding period of 1928. During these seven months advertisers have spent very nearly £2,000,000, compared with a little over £1,000,000 for a similar period last year. The growth of newspaper advertising, according to a survey of fifty leading cities, was only 18.8 per cent. Prodigious though the above figures seem, they cover only the National Broadcasting Company and the Columbia Broadcasting Company.

THE sixth annual New York Radio Show, which closed on September

28, had a record attendance. With the close of the show the manufacturers began packing up their displays for shipment to Chicago in readiness for the opening of Chicago's eighth annual Radio Show, which will be held during the week of October 21. The show management is laying plans to make the Chicago show not only an interesting display of radio receivers of the latest and finest type yet seen by the public, but also to provide as extra attractions displays of unusual interest. In this connection there will be a television exhibition with voice and pictures synchronised. There will also be a display depicting the progress of radio during the last four decades. Prize contests and exceptional programmes will also help make the period of the show a red-letter week for Chicago.

THE League of Nations Sub-committee considering the matter has unanimously pronounced in favour of the proposal that the League's new wireless station shall be worked in normal times by a Swiss wireless company, and handed over to the League in times of crisis, when a Swiss observer would be present. The Swiss wireless company will undertake to establish alongside the existing station near Geneva short-wave transmitters for communications beyond Europe. The League of Nations would pay for the first few years about 200,000 francs (Swiss) annually to cover expenses, which sum, however, would diminish as exploitation of the station increased.

IT was stated recently in London that if wireless telephony to Australia is shortly to be introduced, it will be limited to a speaking box in Sydney. It is explained that the present apparatus used in Sydney allows excess waves of current to run back along the outgoing circuit to England, creating "singing," which prevents switching to subscribers' telephones or a connection with Melbourne. To overcome this the British Telephone Department is building a duplicate of its valve switch gear which is operated by the speaker's voice, shuts the return circuit, and prevents "singing."

A DELEGATION of German radio officials has been making a tour of inspection of the United States. It is stated that the chief object of the visit was to determine the feasibility of exchanging German programmes with the United States, and tests on the short waves are to be made from the chief station near Berlin this month. Dr. Kurt Magnus, of the German Broadcasting Company, declared that American programmes re-broadcast have been heard clearly in Germany. A notable experiment with re-broadcasting was conducted when the German delegation was travelling to the United States on the new liner

the Bremen. Each night a report of the liner's progress in the attempt to set up a speed record was broadcast on the short waves and picked up in Berlin and re-broadcast not only throughout Germany but to other parts of the Continent.

AT the Radio Exhibition at Copenhagen, held recently, statistics indicated that the percentage of listeners in each country in Europe proves that Britain is third on the list with 64.7 per thousand population; Denmark appears to have the highest percentage of listeners per population with 77.4; Sweden being next with 67.8; Austria is fourth with 54.5; and Germany fifth with 44.7.

ONE of the most curious chess games ever played will be that which has been arranged between Dr. A. N. Shaw, of McGill University, Montreal, and Mr. F. I. Davies, who is a member of the Byrd Antarctic Expedition, which is at present in the grip of the Antarctic winter. The game will be played, of course, through the medium of radio short-wave communication, the players being separated by close upon 8000 miles!

ACCORDING to a census of licenses recently made in Scotland, there were only half the number of listeners there per 100 of population that there are in England. As there seemed to be no important reason why listening should not be as popular in Scotland

as in England, the Post Office authorities became suspicious, and a wireless detective van was brought into commission. Its initial appearance in Glasgow was immediately followed by a strangely large increase in the number of licenses taken out. It seems as though the canny Scot hastily hove his national prejudices overboard, and made a dash for the nearest post office.

A CORRECT studio "atmosphere" has always been regarded in America as a vital necessity to the sensitive broadcast artist, and many ingenious architectural devices have been employed to obtain various effects such as the "Palm Court" and the "Terraced Garden." Now Dr. M. Luckiesh, described as Cleveland's "lighting wizard," has devised a system of illumination for the National Broadcasting Company of America, which can transform any studio into a cathedral or a severe Roman forum by the turn of a switch. The effects are obtained by concealed lights and cunningly designed shadows which give the studio walls the appearance of receding or advancing according to the requirements of the producer.

EVERYONE has at some time or other said or thought uncharitable things about his neighbour for interfering with his evening broadcast reception. Matters have become so bad in Germany that a Government department has been asked to forbid the use of electrical apparatus (such as violet-ray machines, refrigerators, vacuum cleaners, and so on) during broadcast hours. The aggrieved listeners, however, received cold comfort from the authorities, who have only pointed out that the state of the law in Germany does not permit of any action on their part, and merely add that manufacturers of electrical apparatus should take care that it is so designed as not to cause interference with radio reception.



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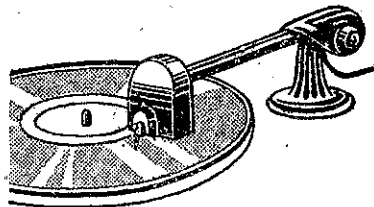
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WELLINGTON, FRIDAY, NOVEMBER 29, 1929.

ELECTRICITY IN THE HOME.

CONGRATULATIONS may fitly be extended by radio interests to what may be regarded as a sister enterprise, the electrical trade, on the successful exhibition of electrical appliances recently made in the Wellington Town Hall. In some measure the lines of policy adopted by the radio exhibition were followed in the electrical exhibition, in that a very meritorious programme was arranged for the afternoon and evening at the exhibition, and this was broadcast in large measure by 2YA. Radio owes its being to electricity. In that field electricity is performing probably its most wonderful function in the service of the human race. Its capacity for service, however, is not thereby exhausted. In numerous other fields it delights to render service. In the domestic field, in particular, the exhibition came as an astounding revelation as to the extent to which electricity can be harnessed for domestic needs. The truly modern electrically-equipped home lightens the task of the housewife to a surprising degree. There seems to be nothing that electricity cannot be adapted to do. It will heat the water for the daily bath. It will activate and energise an invigorator following that bath. It will massage the scalp and dry the hair. It will do the weekly wash, and round out with the weekly ironing. It will cook the daily food. It will warm the largest room with the similitude of a glowing coal fire. It will cool the room with an efficient fan. It will beat eggs and mix dough. It will light a cigar, as well as illuminate the room. In all of these ways, electricity stands supreme as a ready-to-hand servant of civilisation.

IN view of the close alliance of interests between radio activities and electrical appliances in both the popular and trade fields, we as a journal serving radio interests are now prepared to expand our activities and cover the electrical home field as well. Announcement is made elsewhere in this issue as to an important departure in that direction.

WITH the first experiment in the broadcast of television by the B.B.C. now an accomplished fact, interest in the average listener is steadily awakening in this development. A warning, however, should be given that too much must not be expected as yet. Many

inquiries have been made, even locally, as to receivers coming on the market in the near future being equipped for the reception of television waves. To set at rest inquiries in this direction communication was made with important American manufacturers. The reply of one trader was: "Future of television still in laboratory. Static must first be overcome and controlled before commercial value is available." Another inquiry resulted in this warning being given: "Present television highly unsatisfactory ordinary performances. Recommend extreme caution in purchasing." We, as well as all listeners, are intensely interested in the future development of television, but it is not desirable that undue expectations should be aroused. The results secured by the Baird system on their first experimental effort were satisfactory in a laboratory sense, but it is necessary that vast improvements be made both in the direction of satisfactory equipment for transmission, as well as receiving, before commercial satisfaction can be secured.

Enlargement of Radio Record

Incorporation of Electrical Home Section

AS from the middle of January the "Radio Record" will be enlarged and improved, first, by the addition of more pages to give space for a section dealing with the electrical home and appliances suitable for use in the home; and secondly, by the addition of a cover to the magazine.

There is a certain community of interest between radio interests and electrical interests. All those who enjoy radio are benefiting by electrical development in a certain field. They may thus be expected to be predisposed towards electricity in other fields. This section will aim to make available to the general public authoritative detailed information concerning all existing appliances and future development in domestic equipment as actuated by electricity. The field is a large one, and may be expected to possess a particular appeal to the feminine section of our readers.

The Child's Career Station Manager at 3YA

WITH the approach of the end of the school year parents whose children will be leaving school find themselves seriously exercised as to the choice of suitable post-primary school courses or of congenial and fitting occupations for their children. Particular interest, therefore, will attach to a lecture to be delivered from 2YA at 7.40 p.m. on the 30th inst. by an officer of the Education Department. The title of the lecture will be: "Your child; Advice as to his post-primary education and career," and the basis of the lecturer's remarks under this heading will be the pamphlet entitled "Careers," which is to be published shortly under the authority of the Hon. Minister of Education, and a copy of which is to be handed at the end of the school year to each child leaving primary or post-primary schools.

Mr. L. Slade Resigns

MR. L. SLADE, who has for the past 2½ years been Station Manager at 3YA, has resigned in order to go into private business. All listeners-in to 3YA will wish him well. The Christchurch station has a high reputation for the quality and attractiveness of the entertainment it broadcasts, and in the attaining and maintaining of that standard for which 3YA is noted, Mr. Slade has been in a large measure responsible.

He leaves the Broadcasting Company's service with much regret, for he is a great enthusiast in radio. He has been associated with broadcasting in Christchurch since the pioneering days, and successfully managed the amateur station 3AC when conducted by the Christchurch Radio Society, from whom the Radio Broadcasting Company took it over.

Talks on Motoring

MR. R. E. CHAMPTALOUPE, touring manager of the Auckland Automobile Association, will on Wednesday, December 4, give a talk on "New Motor Routes in Out-of-the-way Places in the North Island." On December 10 Mr. Champtaloupe will broadcast a talk from 2YA.

Old-Time Concert

LISTENERS-IN who delight in old time concerts will be pleased to hear that 3YA is presenting another on Saturday, December 14. It will be a variety programme, and will be complete with old-time dances played by the Williams Dance Band.

C. R. RUSSELL M.Sc.,
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THE BACHELOR SAVES MONEY.

"I bought that cake of soap," said the bachelor, "because the advertisement said, 'Would not shrink!' I've used it for a week, and look at it!" Sydal greatly assists in the economy of soap. Rub very little into the skin, then wash, using very little soap. Result, a perfect wash! Economy!! Satisfaction!!!

Wireless in Hospitals

Appeal for Inmates of Victoria Hospital

THE secretary of the Wellington Red Cross Society, Mr. M. S. Galloway, has instituted an appeal to the public for funds to provide for the installation of radio equipment in Victoria Hospital, Wellington. This objective is a worthy one, and we have pleasure in giving the hospitality of our columns to the appeal. The secretary writes:—

"Some time ago an appeal was made for funds to carry out the installation of radio apparatus to enable the patients at the General Hospital to enjoy the benefit of wireless programmes broadcast. Though the response was generous, the total amount received was inadequate to permit of the service being extended to the Victoria Hospital. In this institution the aged and infirm and those suffering chronic disability are being treated, and we feel that all will unanimously agree that no effort should be spared that will strengthen the hands of those who are so nobly ministering to their needs and which will give a richer measure of happiness to the patients concerned.

"Appreciating what an added joy wireless facilities will mean, the society has undertaken to raise the amount required, i.e., £150. As a nucleus we are handing over the profits which have accrued from the Red Cross cafeteria at the General Hospital, £50, leaving a balance of £100 to find. With the approval of the board we are promoting a garden fete early in the New Year, but we feel it would be a fine action and in keeping with the approaching season of the year if the amount required could be made available and the installation completed in the form of a Christmas present. Such a sentiment would be a tangible expression of our gratefulness for the blessing of health and strength, and that we are not unmindful of those less favourably placed. By way of attaining this end we desire to appeal to your readers for support. Subscriptions marked "Victoria Hospital Radio Fund" sent to the undersigned will be gratefully received and acknowledged. —I am, etc., M. S. GALLOWAY, Secretary, Red Cross Society, Box 969."

Change of Name

NOTICE is hereby given that the firm formerly carrying on business as E. Sime and Co., Ltd., at 148-150 Wakefield Street, Wellington, is now to be known as The Vesta Battery Co. of N.Z., Ltd., which will be situated at the old address and under the same management.

Have you secured your copy of
"N.Z. Radio Listener's Guide?"

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

Now Available.

Christchurch Exhibition

Novel Effects Create Interest

THE radio dealers of Christchurch who organised the first radio exhibition held in this city, and thus blazed the trail for what will be an annual event, are to be congratulated on the success of the initial venture. The exhibition closed its five-day session on Saturday evening with the Choral Hall crowded.

The Christchurch Radio Exhibition was different from the usual conception of an exhibition, and meant something vastly more than a display of products arranged by any trade. A home-like atmosphere pervaded. The Choral Hall had been furnished to give that effect, for a radio receiving set is, after all, a home instrument. The whole of the central floor space of the Choral Hall had been carpeted and furnished as a lounge, and the various rooms in which radio apparatus was on view opened off the lounge. The effect was decidedly pleasing.

In a sense, the Christchurch Radio Exhibition was a musical festival, for there was displayed a diversity of instruments capable of creating out of the thin air the whole gamut of music. No one without a wireless set in the home could fail to be impressed, when visiting the exhibition, with the desirability of owning one of the music reproducing instruments of the kinds shown. While broadcasting is now a household word, there are many people who have not lived down the aversion to it engendered by the poor reproduction of music they may have at some time heard. The modern receiving set

reproduces instrumental music and the human voice well nigh perfectly.

The exhibition was intended to demonstrate to visitors that in radio broadcasting science had opened up for man an opportunity of expanding his life to the fullest extent. It showed that the pleasures and advantages hitherto associated with wireless are but a small part of the immense field of education, utility and amusement afforded by the latest types of radio receivers and the improved standard of components.

During the exhibition the Broadcasting Company supplied the entertainment programmes every night. In accordance with practice, programmes of different types were presented nightly—band concert, classical, operatic, and vaudeville—in order to show the diversity of entertainment provided in the regular service. These programmes were broadcast from a model studio at the exhibition, and showed the extent to which the entertainment talent in Christchurch has been availed of for radio.

The exhibition set out to show people not already wireless enthusiasts that a broadcasting service was well worth while being availed of, and that the 1929-30 receiving sets are practically perfection. The modern set, particularly the all-electric one, is apparently incapable of improvement. For beauty of tone, efficiency and simplicity of operation, low initial cost and low upkeep, it is the last word in the development of what is the greatest gift of modern science to mankind.

Otorohanga Concert

An Impending Broadcast

A VERY enjoyable concert will be relayed from Otorohanga on Friday, December 6, and broadcast by IYA. A splendidly diversified programme has been arranged, and the contributing artists are the best in the district, where talent is of no mean order. The concert marks the opening of the newly-renovated Town Hall and the proceeds are in aid of the funds of the Beautifying Society.

The full programme is published on our programme pages. The organiser is Mr. Wreford Wade, a well-known Otorohanga musician and talented entertainer. He is conductor of the local Symphony Orchestra, and he will also contribute vocal numbers to the programme. One of the vocalists for the evening will be Mrs. C. Corboy, who sang for 3LO. Other soloists will be Miss D. Briggs, Mrs. R. V. Garrett, and Mr. G. Corboy.

Captain P. S. Stanley will be heard in a violin solo and in a humorous monologue. Another humorous monologue will be given by Miss Alvin England. Other items on the programme will be a whistling solo, a saxophone

solo, a ballet chorus by "Juvenile Ras-calls," a pianoforte solo and a duet, a mellowphone number, songs, and haka by the Hula Troupe.

Mr. Wreford Wade, who is a versatile entertainer, will, in addition to being heard in baritone songs, give a humorous number and a dramatic recitation.

The programme to be presented is an excellently arranged one, and should make an admirable broadcast entertainment.

Enthusiastic Children

THE concluding day of the Christchurch Radio Exhibition was the most successful of the season, the show being visited by crowds of people. The children's session was a great draw, to both young and old. Everyone was very anxious to see the uncles and aunts. One lady told Aunt Pat that she and her children had been in town all day and they would not go home till the children's session was finished. That meant that they would miss the last bus to Governor's Bay, and would have to walk several miles from the tram terminus, but they thought it well worth while.

Long Distance Telephony

A New Record

MR. R. LESLIE JONES, of Wellington, writes:—What is probably a record for radio telephony between Australia and England in respect to length of mileage covered and the shortness of message transmitted can be rightly claimed by station 2ME, Sydney. The operator at 2ME requested his confrere at station GBX (London) to say a few words to the Assistant Minister for Customs in the Federal Government (Australia). After Mr. Fisk had uttered a few words, the Assistant Minister for Customs said: "Hullo; as Mr. Fisk said, I am a member of the Federal Government; this is the first time I have spoken to London. Hullo, there are some static noises. Thank you. Good-bye." For brevity it would be hard to beat the foregoing; for mileage the distance covered with such a short message is also probably unbeaten; whilst the Assistant Minister of Customs has had the satisfaction of being able to say, "I spoke to London."

Strange though it may seem, the weather round about Sydney has been very troublesome of late, and very similar conditions to those recently experienced in Wellington have prevailed. Static has been very bad in both countries of late, and this similarity of conditions is probably due to the fact that the weather experienced has been, according to the reports, almost identical at time.

Present Development of Radiovision

Still in Experimental Stage

THERE has recently been much interest displayed the world over on the question of radiovision, and exaggerated reports on the stage of perfection reached in this science have been plentiful. In view of this, it is interesting to note the replies sent to cables dispatched to two well-known radio manufacturers in America on the question of the advisability of importing radiovision apparatus into New Zealand. The replies are given below.

"Future of radiovision still in laboratory. Static must first be overcome and controlled before commercial value is available."

The second cable reads:—"Present radiovision highly unsatisfactory for ordinary purposes. It is only efficient in laboratories. Recommend extreme caution in purchasing."

These cables definitely indicate that, for the time being at least, radiovision is still in the experimental stages of its development. Though its ultimate perfection and incorporation in broadcasting is inevitable. Until that time comes it would be advisable to exercise extreme caution before attempting any premature inclusion of radiovision into New Zealand broadcasting programmes.

Letters by Record**Japanese Stations****Wanganui Concert****An Appeal from America****3YA Broadcasts Novelty****Good Volume Available****Choral Society Broadcast****Station W9FO**

STATION 3YA broadcast a novelty recently in the form of what may be called a "letter-record" just received by the Broadcasting Company from an American firm. This record took the place of a typewritten letter.

The particular record related to broadcasting. It had been sent to New Zealand in reply to a communication from the general manager of the Broadcasting Company to the company's expert consultant in America, Mr. Edgar Felix, asking for information concerning special recordings of entertainment items suitable for broadcasting in New Zealand. Mr. Felix immediately communicated with firms which make records, and one firm replied to his letter by sending a recording of what it wanted to tell him. Mr. Felix in turn forwarded the "letter-record" on to the Broadcasting Company. The use of the gramophone in this way opens up great prospects of development in more personal communication than with the ordinary written letter.

The Broadcasting Company makes every effort to improve its programmes and for some time has been investigating the possibilities of securing from overseas special recordings of some feature attractions which will add novelty to the New Zealand programmes. If the present proposals materialise, listeners can look forward to enjoying not only the best of local talent, but also the performances of artists overseas. In this way additional new interesting features will be added to the programmes.

The "letter-record" was of aluminium and a fibre needle, not a steel one, was used.

Tourist Resorts

HOLIDAY time is rapidly approaching, and "Where shall we go, what shall we do?" is the topic of conversation these days. 4YA proposes to help in deciding the problem for holiday-makers, and accordingly introduces to radio listeners Mr. R. W. Marshall, Dunedin manager of the Tourist and Health Resorts Department, who will deliver a series of weekly talks, commencing on Tuesday, December 3. Mr. Marshall has previously spoken from the Dunedin station, and his interesting chats on the scenic wonders of New Zealand will be welcomed by

LATELY the Japanese stations JOHK and JOAK have been available on the loudspeaker from about midnight onward. Another Jap. clashes badly with 3LO, Melbourne, at a late hour. Some Wellington listeners have been blaming a howling valve for the whistle on top of 3LO, but if they listened intently they would notice a jingle-like mutilated speech (or at other times music) other than that from 3LO mixed up in the whistle. The Jap. is seemingly JOCK, Nagoya, 370 metres (310 k.c.); 3LO, Melbourne, is on 371 metres (308 k.c.), so a clash between the two stations is inevitable.

A Novel Meeting**Radio Bridges the Gap**

THE wide dissemination of knowledge is recognised as one of the greatest benefits of radio, and a striking instance of its utility in this regard is afforded in a lecturette arranged by 4YA to be delivered on Saturday, December 7, at 7.40. "Rabbits" is the subject, and the lecturer is Pastor W. D. More, who is well known throughout the South Island as an authority on the Angora and Chinchilla breeds. He recently adjudicated in this section at the Metropolitan Show in Christchurch. The Canterbury Rabbitkeepers' Association has decided to avail itself of the opportunity of learning something of the subject, and accordingly will call its members together on the evening, and they will be addressed per medium of radio from the other end of the island. A lecture without a lecturer, but radio bridges the gap! Listeners generally will find much of interest in this survey of a rapidly advancing industry.

2ZD on the Air

MR. W. D. ANSELL, owner and operator station 2ZD, Masterton, advises that his station will soon be on the air again. Listeners will remember that during October a disastrous fire destroyed this station. It has now been rebuilt and at 12 noon, Monday, November 25, it will again commence broadcasting. The sessions in future will be as follows:—Monday, Wednesday and Saturday, 12 to 2 p.m. Tuesday, Thursday and Friday, 7 to 9 p.m. The station operates on a frequency of 1180 kilocycles (254.1 metres), with a power of 2½ watts. The plate voltage for both oscillator and modulator are obtained from the A.C. supply. The aerial is 150 feet long and 50 feet high, situated over Mr. Ansell's radio shop in Masterton. The operator will be pleased to receive reports on the reception of his station.

THE broadcast which 2YA will carry out on Wednesday evening, December 4, will be a treat to all lovers of choral music. Though Wednesday is the usual silent day for the Wellington station, a relay is to be carried out from Wanganui, where the local choral society is to give its final concert for the 1929 season. This choir, which sings under the conductorship of Mr. F. Wentworth Slater, A.R.C.O., is a famed combination.

The programme which has been arranged will demonstrate to the full the wonderful capabilities of this choir. A wide range of subjects has been chosen, and the whole of the programme will be sung entirely from memory, neither the choir nor the conductor using written music.

In "The Lee Shore" listeners will be treated to a study in dynamics. The work is full of dramatic fire and intensity. The passages thrill, and provide full scope for choral effects on a grand scale and the expression of dynamic force and emotional colour. The music is magnificent, effects for the most part being broad and massive in character. Then will come a bright, happy part-song, reminiscent of the English countryside, "Like Apple Blossom, White and Red." The harmonies are simple and the effect is melodious and sweet.

The "Angelus" is a very popular extract from "Maritana." It provides ample opportunities for effective light and shade work. A religious atmosphere pervades throughout, and the whole structure is one of nobility and grandeur. Granville Bantock's "Grass of Parnassus" is a very difficult number and has frequently been used as a choral test piece at festivals in the Old Land. It contains beautiful music from beginning to end. Delightful pianissimos contribute to its charm.

Following on "The Challenge of Thor," from Sir Edward Elgar's "King Olaf," in which the mighty Norse god hurled defiance at the Christian religion, the choir will sing "Massa's in de Cold Ground." Plantation melodies are always popular and this favourite number, harmonised by the conductor, Mr. Slater, has provided scope for his genius. Banjo imitations and "bouche ferme" effects are introduced to give colour and atmosphere.

In "How Sweet the Moonlight Sleeps," the composer, Eaton Fanning, has struck his happiest vein. It is a delightful eight-part song of great beauty and delicacy.

Another part-song will be "Music, When Soft Voices Die." It is a very dainty cameo and is a type of part-song which needs careful following by listeners. Its beauty becomes more and

THE following letter from the headquarters of amateur short-wave station W9FO, America (address, 5316 Harper Avenue, Chicago) may be of interest to New Zealand amateur short-wave transmitters.

"Station W9FO is especially interested to know if any ZL amateurs have worked or are working any W stations on the 8500 k.c. telephone band. At an A.R.R.L. convention this past summer some W9 station claimed that a friend had established two-way communication with some ZL and VK amateurs, but so far no proof has been forthcoming. All W amateurs are allowed to use 1667—1765 k.c. and 3500—3600 k.c. for telephone work, and there are quite a few stations operating here. There are some well-designed and very efficient transmitters on the air here, including a few quartz controlled jobs.—Arthur Bates."

Shipping Olympia

SEVERAL devices of wireless interest were on display at the recent Shipping Exhibition at Olympia. A recently invented receiver which automatically gives the alarm when distress messages are received from ships in trouble occasioned much interest. Another noteworthy device exhibited was the Laryngophone noise-excluding telephone, which enables conversations to be carried on without interruption from the noisiest engine room. The microphone of the instrument is applied to the neck or cheek of the speaker, being actuated by the vibrations of the vocal chords.

more apparent as the piece progresses. The finish is particularly beautiful. The final number by the choir will be "Lullaby," composed by the conductor, Mr. F. W. Slater. It is a study in pianissimo which has been received with enthusiasm wherever sung. During its rendition the lights are dimmed.

The supporting artists for the evening will be Mrs. Wilfred Andrews (contralto), of Wellington, and Mr. Claude N. Tucker (flautist). Mrs. Andrews will sing "Tangi" and "Loreley." Mr. Tucker will play "Scherzo Capriccio," "The Brook" and "Butterfly," by Sabathil, Wetzger and Kohler respectively. Mr. Horatio Nelson, A.T.C.L., L.T.C.L., etc., will be the accompanist.

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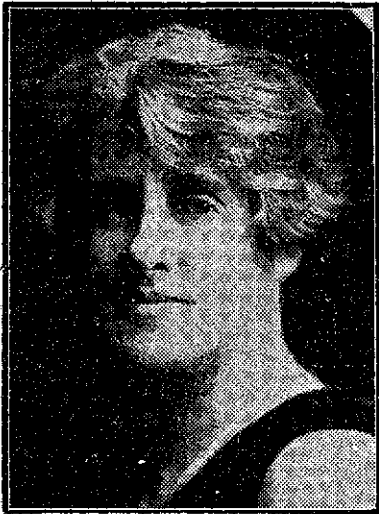
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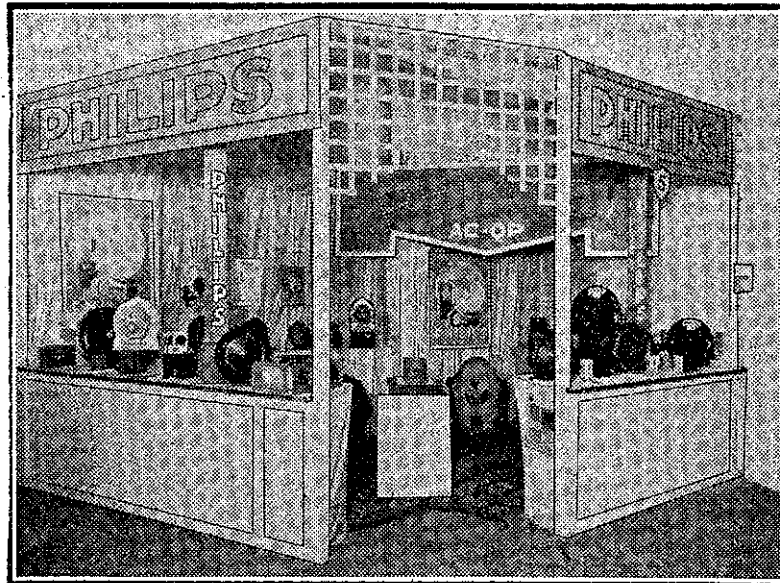
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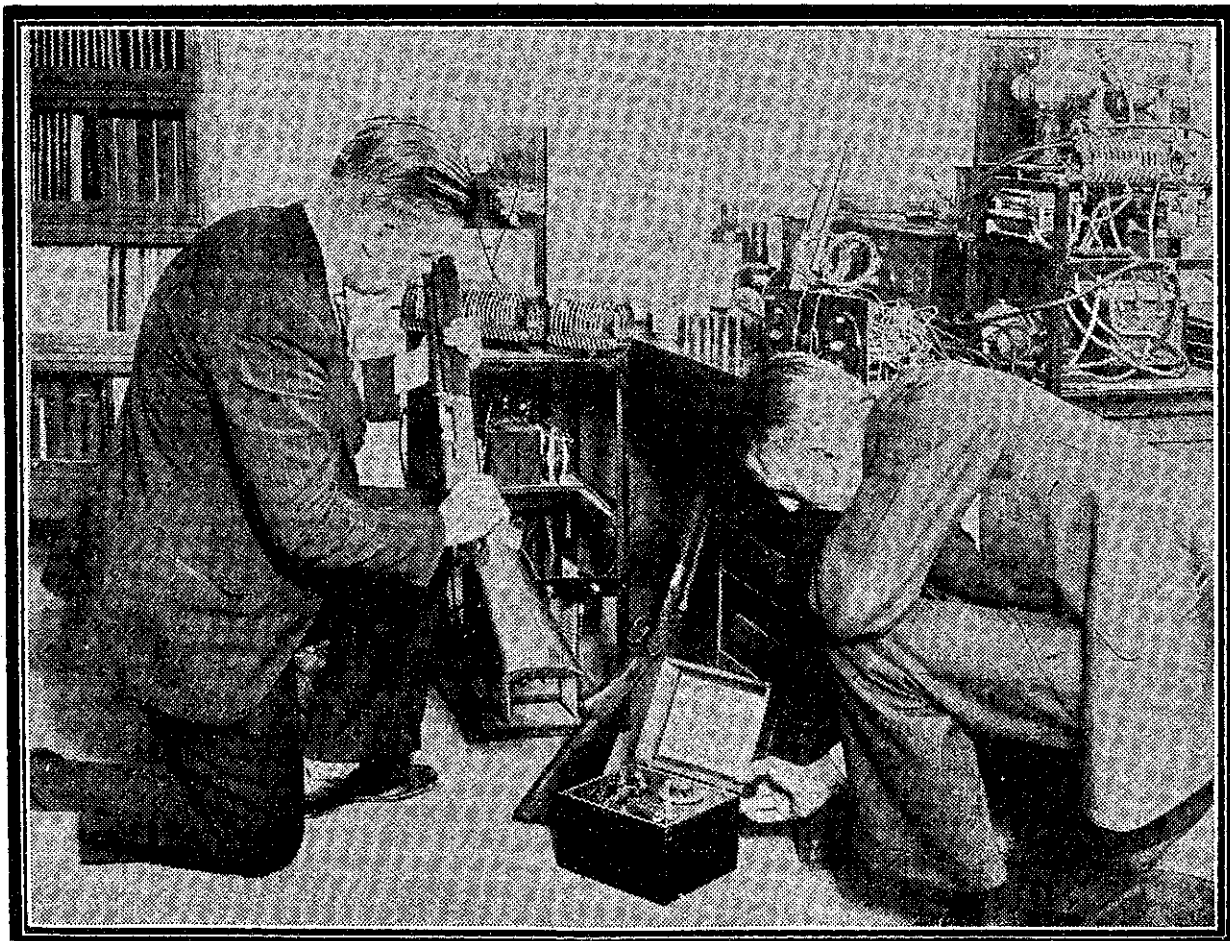
MISS NELLIE CASTLE,
Who is a member of a very talented musical family, is an artist who has performed very successfully at 2YA as well as on the concert platform. She is the possessor of a pleasing voice and a fine interpretative sense.
—S. P. Andrew, photo.



Stand of Philips Lamps (N.Z.) at the Auckland Exhibition.
—C. M. Walls, photo.



MISS NELLIE LINGARD,
A talented contralto, whose items are a feature from station 1YA.
—S. P. Andrew, photo.



Radio apparatus used by a gang of bootleggers, an account of which appears on page 4.

The British Radio Olympia

The Latest in Radio



THE sixth, and by far the most interesting and comprehensive, radio exhibition in England was held recently at Olympia. "If it's Radio, it's Olympia," was one of the snappy slogans used by the English Radio Manufacturers' Association, and from all accounts it is evident that, for once a slogan can be tabloid truth. As year by year the Radio Exhibitions succeeded one another, it is noticeable that each exhibition has some outstanding feature which perhaps may be termed a phase in development. For example, last year might well have been known as a screen-grid valve year, and the show preceding that undoubtedly served to emphasise the popularity of the moving coil loud-speaker.

It now seems evident that the modern trend in design of broadcast receiving apparatus is "all electric" sets. Next in order of importance comes the portable set, the design and performance of which have been improved immensely since last year's exhibition.

Features of Olympia.

Throughout the entire exhibition, a carefully toned colour scheme in blue and gold was employed. Twenty-five small theatres were housed under the Olympia roof, each sound-proofed from the others. These halls were for the purposes of receiving set demonstration, and it is the first time that such facilities providing for individual demonstrations, without fear of interference, have been available. To supply these halls, a specially constructed receiver and amplifier was installed, by means of which programmes were received and passed to each of the miniature theatres.

The main feature of the B.B.C. exhibit this year comprised a model

THE Mecca of English radio enthusiasts, for six years, has been the annual exhibition at Olympia. Each successive year sees new developments and these are invariably foreshadowed at Olympia. The greatest of exhibitions has just concluded and it has revealed the simple A.C. receiver, the dynamic speaker, and the portable.

diorama depicting the course taken by a typical programme from the microphone to the receiving aerial of the distant listener. A model of the latest type of broadcasting studio was also exhibited.

Considerable interest was taken in the demonstrations of radiovision which took place in a small building adjoining Olympia. The visitor was enabled to see, not only the radiovised images on the screen of the cabinet, but also the transmitter at work and the studio in which the radiovised performances were given. The transmitted pictures are reported to have been much clearer and larger than they were on the occasion of last year's exhibition.

The main characteristics of this year's exhibition at Olympia were the "all-electric" or mains operated receivers and both the electric and combined radio gramophones. In the case of the former, it is noticeable that not only that more firms are producing this class of set, but the models shown range from the modest but highly efficient two-valve set to the more luxurious five-valve sets, the prices being surprisingly reasonable. Screen-grid valves are employed in practically all of the modern multi-valve sets, with, in some cases, a choice of super-power or pentode valve in the output stage. Many eliminators that will enable less

up-to-date receivers to work from the electric supply mains were displayed.

The humble crystal set, once so popular, has now almost disappeared in England, and only one firm exhibited this type of receiver.

Among the more novel features displayed was a set which could be carried about in a car, and operated from the dash-board. Another was worked by a dial resembling that of an automatic telephone. The required number is dialed, and, it is claimed, the station connected to it is heard.

On the whole the general tendency in present-day receiver manufacture in England is towards fewer valves and more efficient sets. The almost complete absence of American-manufactured receivers at the exhibition was noticeable. This is probably because these sets are not adaptable to the conditions of wide wave-range which exist in England. Also, for the same reason, the one-dial controlled sets are not yet so popular in England.

Gramma-Radio and Portables.

ANOTHER marked development of the year has been the extension of radio gramophones and the perfecting of internal appliances and simplification of control. Combined radio-gramophone sets which are operated entirely from the mains, were displayed by many exhibitors. Considerable improvement was noticeable in the design and construction of the "pick-up" and tone arm. It is reported that several ingenious devices took the place of the old familiar tone-arm in the various instruments on view.

Probably the greatest development shown by the radio industry this year is in regard to portables, nearly two hundred types of which were shown. Four-valve sets appeared to be in the majority, the circuit including one, and occasionally two, screen-grid valves with a pentode in the output stage.

On their first introduction these sets were designed chiefly for outdoor use, and were put up in large-sized dispatch cases, but as they have become even more popular in the home the manufacturers are providing them with wooden cabinets, which, as well as being light enough to carry, have a very handsome appearance.

Many of these sets are entirely mains-operated, and as such are known as transportables. This type of receiver, which is completely self-contained, appears to be increasingly popular in England. Despite the fact that only a frame antenna is used, the efficiency of modern valves and circuits results in a very satisfactory range of reception.

Loudspeakers.

THIS year, as never before, the loudspeakers have come into their own, and many and varied models were on display. The types exhibited included moving-coil speakers, shown in chassis form and mounted both on baffle-boards and in cabinets; ordinary cone instruments in various mountings and driven by various types of reed and balanced armature units; linen diaphragm loudspeakers of all dimensions also actuated by a variety of drive units, and several examples of exponential horn speakers. With a few exceptions, it seems as though the old horn-type speaker has disappeared. One company exhibits as one of its novelties a new moving-coil loudspeaker which is said to give an improved balance to tone and a greater sensitivity.

While it is certainly true that each succeeding year sees a greater proportion of the exhibits clearly intended to interest the non-technical listener, there was, nevertheless, much exhibited at Olympia to appeal to the home-constructor. The "kit" idea, which involves the supply of all the necessary components, is rapidly growing in favour among manufacturers, and the plan has been extended to include various types of loudspeakers and power-supply units.

The conversion of an ordinary gramophone to an electric-reproduction model or the combining of gramophone mechanism with a wireless receiving set also offers great scope to the enthusiastic home-constructor. The components required, such as the pick-up and carrier, the electrically-driven turntable, moving-coil loudspeaker parts, etc., were all exhibited in variety. Other set-building components, such as condensers, transformers, chokes, coils, etc., were displayed in profusion. One point worthy of special mention is the gradually increasing number of American manufactured components which are finding their way on to the English market. Notable among these are amplifying units and moving-coil loudspeakers.

THAT this exhibition was a complete success, both as regards radio development and popularity, is exemplified by the record crowds which attended Olympia. Within fifteen minutes of the opening of the exhibition, over 1000 people had passed through the turnstiles. It is interesting to conjecture what new improvements future Olympic exhibitions will bring forth, especially as it seems apparent that an end in the progress of radio development, especially as regards reproduction, is in sight.

WANTED AND FOR SALE.

For column of casual advertisements see page 32.

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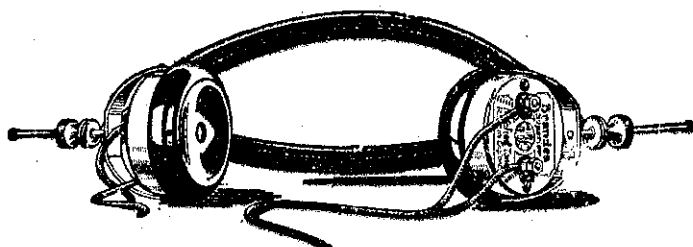
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OBTAINABLE FROM ALL RADIO DEALERS or
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Our Mail-Bag

Distortion from 4YA.

THE opening programme from this station was good, but since then we can only receive distorted signals. Is this likely to be the carrier rapidly oscillating due to earth wave interference, or has the American station KRLD anything to do with it? The two stations are on the same frequency.—J.B. (Murchison.)

(It is apparently your locality, we receive the station very well.—Tech. Ed.).

Power Interference.

JUST a line to let you know J.K. of Trentham is still alive. I have been away for some months, but did not miss much. I tuned in one Saturday a couple of months ago and heard the same old voices and the same old songs.

Your note of advice (viz. "Switch" to A. E. Martin, Temuka) to send another letter to what we radio friends call the dead-letter office. I have the latest in radio receivers. It has given me anything I tried for until the last two months, when I got power interruption, and so bad that I cannot get even Wellington clearly. I wrote the radio inspector 6/10/29, again 6/11/29, again 18/11/29. The usual stock card called "Will receive immediate attention"—so far nothing. I am bringing the matter under the notice of the Minister.

Perhaps Mr. Editor or "Switch" could use a little persuasion to get the radio inspector to stop, or try to, anyhow, the power leak and interference out here; it is unimaginable. I have tried a loop, counterpoise, inside shielded cage—it is just as bad. I can tell you it stings to spend over £100 on a set and not be able to get away from Wellington. It is not the set; I have had experts out from Wellington, and a friend who is chief for one of Auckland's biggest firms. They all say "Power; get in touch with the radio inspector.—J.K. (Upper Hutt).

owner, Mr. Meikelborough, stations as far distant as Perth have been worked. In connection with his outfit the owner writes:—Everything possible is made on the spot, being what the "Hams" call "home-brew." All power but the microphone battery is rectified alternating current (R.A.C.) and AC is used for the filaments. The circuit is a Master Oscillator Power Amplifier hook-up. The valves used up to the present are a modulated TBO4/10, and the power amplifier a pair of TBO4/10's modulated by a UX250 with two audio stages for the input amplifier using a A409 first and a C509. The rectifiers are a pair of UX281's with about 900 on each. The "C" Bias used in both the mod. and the PA is RAC using a UX 201A. An ordinary microphone is used for speech, and a pick-up for records. The usual receiver is det. and one audio, although there is a SG four to call on if wanted.

Radiovision in War—Across the Tasman Time

A RADIOVISION "eye" which could penetrate enemy territory in times of war has been perfected by Mr. Jenkins, the well-known research worker in matters pertaining to radiovision. This apparatus is shortly to undergo tests in a laboratory aeroplane of the United States Government. It consists in the main of a special radiovision transmitter installed in an aeroplane for broadcasting images of troop movements or layouts of fortifications to a ground station situated behind the lines.

Thus, the headquarters of an army would be shown a "moving-picture" of

ON the occasion of the ninth anniversary of broadcasting by KDKA, Pittsburg, America, Mr. E. T. Fisk, speaking from station 2ME, Sydney, conveyed a message of congratulation in which he remarked that the nine years that have elapsed have indeed been memorable ones in the history of broadcasting, and that few industries have achieved such progress in such a small space of time. The field of broadcasting has so expanded that it is to-day a vital factor in the social life of millions of people, while the range and magnitude of broadcasting stations have so increased that KDKA is listened to in many parts of Australia. Mr. Fisk's congratulatory message, together with a special musical programme, was transmitted from 2ME and rebroadcast by KDKA to millions of listeners in the United States and elsewhere.

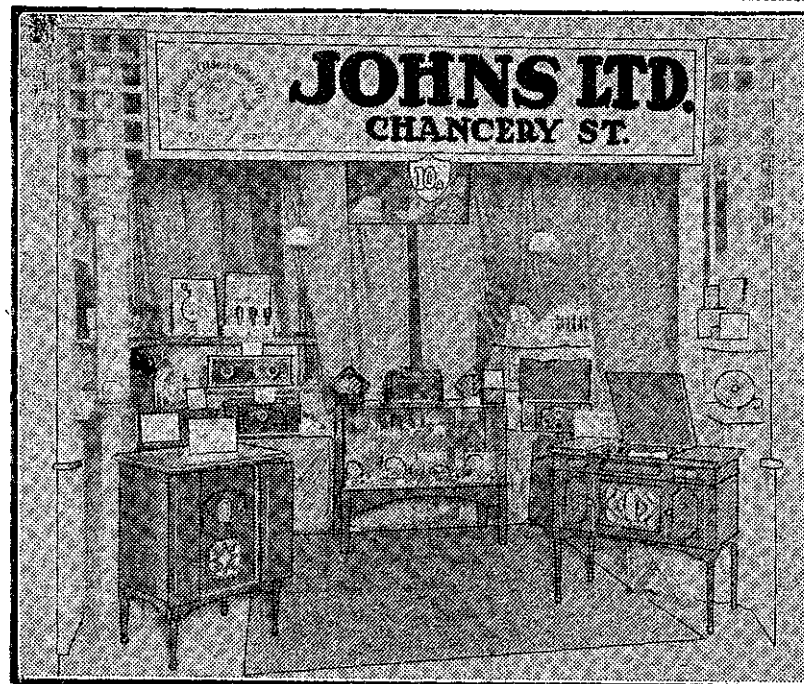
THE model broadcasting studio encased in glass is attracting a great deal of attention at the 1929 Radio Display in Sydney. For a few hours each day the A.B.C. transmit their programmes from this studio, and crowds of people are always present to watch the artists before the microphone. The Radio Display is a great centre of attraction, and several well-known firms are exhibiting the latest electrical appliances that are now in vogue in the wireless world of to-day.

SOME time ago 3LO made a special appeal for clothing for the Tasmanian flood sufferers. Recently the Australian Broadcasting Company received a letter from Gippsland urgently inquiring for a lost will. It appears that an old gentleman had sewed his will up in his overcoat for secrecy and safety—as he thought. During his illness his wife bundled the overcoat up with other clothes and sent them to 3LO in response to the appeal. Upon his recovery the old gentleman made a search for his will and was greatly perturbed when he learned that his "greatcoat" had been sent away to Tasmania. He is still searching for it.

Have you procured your copy of
"N.Z. Radio Listener's Guide?"

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

Now Available.



Johns Ltd. stand at the Auckland Exhibition.

—C. M. Walls, Ltd., photo.

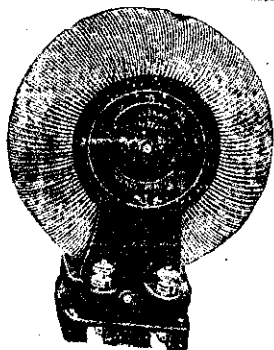
An Interesting Transmitter

'Phone Equipment of 1BC

DURING the Auckland Radio Exhibition, a considerable amount of interest centred round the large 'phone transmitter of ZLIBC. With this transmitter, which was made by the

The station has been off the air since the show, but will be on again in just over a week (this week). Being an experimenter, I am trying an improved circuit, and about three or four times the output. I am going to use TB1/50 in the MOPA, which will give me up to 100 watts output against the 25w I have had to date, so I should be able to cover far greater distances; anyway I am hoping to do so.—Op., ZLIBC.

below the 'plane would be recorded by enemy movements, and for this reason military officials will watch the tests with great interest. The panorama means of a lens, a scanning disc, and a light-sensitive cell, which would translate the light waves into electrical pulsations or vibrations. These would be used to modulate a standard aircraft radio transmitter.



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Cutting Current Consumption in the Portable

THE small size of the "B" batteries which can be accommodated in a portable receiver renders the problem of reducing the drain on them one of importance. An apparently small reduction in consumption will frequently mean quite a pronounced increase in the life of these small batteries, owing to the fact that the impracticability of rapid depolarisation makes them uneconomical for any considerable discharge rate.

Not much can be done in the direction of reducing the consumption of the last stage, since the successful operation of a speaker is dependent upon a fair current through the power valve. However, one can at least experiment with a slight increase in bias over that normally used, and it will not infrequently be found that the consumption of the stage can be reduced to 5 or 6 milliamperes without unduly affecting the quality of the output. It is possible, by using a push-pull final stage, to reduce the steady current to about 1 milliamp, this increasing automatically to accommodate loud passages. The valves are biased down to the centre of the curved portion of their characteristic curves, the push-pull arrangement still permitting operation without distortion. However, the adjustment must be rather precise and an output transformer or choke is practically a necessity, so that not every constructor will feel disposed to use two valves in this manner.

The first audio stage, if one is employed, may also be overbiased a trifle, though not so much as to introduce distortion. With 120 volts B supply most valves can be biased to at least $4\frac{1}{2}$ volts negative without any perceptible effect on results.

The commonly-used grid rectifier necessarily receives a positive bias. Something can be done, however, by reducing the "B" voltage applied to the plate of this valve, either by tapping lower down the battery, or, better still, by interposing a resistance of

about 50,000 or 60,000 ohms in the feed line to this particular valve.

The high-frequency valves, if of the ordinary three-electrode type, may receive a negative bias of 3 or $4\frac{1}{2}$ volts; stop short of sacrificing amplification, however. The screen-grid valve now more usually used for high-frequency amplification is normally used without any negative bias, under which conditions it draws about 4 milliamperes. Its high amplification factor renders it unsuited to the application of too high a negative bias, but if a 1½-volt flashlight or other cell is provided to bias this valve, a distinctly worthwhile reduction in current from 4 milliamperes to 1.5 milliamperes per valve will be effected, without any loss of amplification.

If these precautions are observed, it is usually a fairly easy matter to keep the current consumption of a four-valve portable under 10 milliamperes, a current which most of the small batteries suitable for portable work are capable of readily providing. In constant use, a life of about three months may be expected from these smaller-sized batteries with the drain mentioned, so that, considering how cheaply the batteries may be bought, the cost of the current cannot be deemed excessive.

Underground Antenna

Proof of Inefficiency

IN localities where the erection of an aerial is impracticable or impossible, and where an indoor antenna is undesirable, somewhat mediocre results may be obtained from a powerful receiver by the use of what is known as a "ground" aerial. This consists, in the main, of a wire buried underneath the surface of the ground, and well-insulated from the earth which surrounds it.

The resulting reception is very poor, and nowise justifies the grossly exaggerated claims made by several American firms marketing a device known as an "earth antenna," an apparatus which is stated to function efficiently as an aerial while buried underground.

In view of this, it is interesting to note the proceedings taken by the American postal authorities against some six companies who were marketing these devices per medium of the post.

The following facts developed by the Postal Department serve to illustrate the type of advertising favoured by these companies. "It has been found that certain companies are obtaining remittances of money through the mails upon representations to the effect that for such remittances they will furnish a so-called underground antenna; that when used with radio receiving sets as directed, such antenna causes a miraculous reduction in static and noisy interference and gives clear-toned reception on every station which can be found; that such device is the 'latest step' in radio progress; and that the price of the device will be refunded at once, in full, to purchasers thereof who find the same unsatisfactory and return it."

A so-called "earth antenna," together with the directions for use, were obtained from the promoters of the enterprise by the post office inspector who investigated this case. The device itself is cylindrical in shape, approximately thirteen inches in length and four inches in diameter, and is encased in cardboard at the sides and bottom. The top is sealed with a tar-like preparation, from which protrudes a wire approximately thirty-two inches long enclosed in a lead cable. Attached to the outside of the device and running its entire length is a metal bar one half-inch in width and approximately 1.64th of an inch in thickness. Inside the device is a hollow core about which are wrapped a number of windings of $\frac{1}{16}$ in. metal tape.

The earth antenna and the directions were forwarded to the United States Bureau of Standards for examination and report. An exhaustive series of tests was conducted over a period of three weeks with the assistance of various instruments for measuring with scientific accuracy the results obtained.

A report covering the results of these tests prepared by the expert was offered in evidence at the hearing and in addition he himself was present and testified. His testimony shows that the signals obtained by use of the earth antenna are inferior in strength to those secured from a vertical aerial in the ratio of from one to one hundred to one to several hundred. Results secured through use of the earth antenna were inferior in strength to those obtained by use of an ordinary two-inch pipe driven four feet into the ground in the ratio of one to fifteen.

According to the statements of this expert, while it is true that a certain reduction in static is obtained by use of the earth antenna, a directly proportionate reduction in general reception is concomitant thereto. Static was in fact present during certain of the tests when no other sound was audible. He stated in effect that any results

whatever obtained from use of the earth antenna are due to the fact that it acts in some slight degree as a grounding device.

He further stated that while in some instances, due to improper installation of overhead aerials, lack of proper tuning of the set or similar factors, use of the earth antenna may seemingly cause an improvement in reception, the fundamental fact remains that in passing through the earth electro-magnetic waves are greatly attenuated.

Summarising his testimony, the expert stated that the earth antenna does not cause a reduction in static and noisy interference; it does not give "clear-toned reception" on every station which can be found or cause any kind of broadcast to be more faithfully reproduced; and it is not the latest step in radio progress.

As a result of the proceedings instituted, a postal fraud order was issued by the Post Office authorities against the six companies involved. The above case should dissuade any radio amateur from installing a ground aerial in the hope that static will be reduced and reception improved.

A Request

I NOTICE that you have never printed a list of the Australian amateur radio transmitters like the much-appreciated list of New Zealand amateurs which was printed in the June 28.

Could you publish a list of the Australian amateurs or advise where I can obtain one? I notice also that you are printing lists of B class stations in New Zealand, and next week will be printed lists of stations heard in New Zealand. Well, I am sure these are and will be much looked forward to by the longwave DX hunter, but these persons should have purchased a "Listeners' Guide" with the necessary information in it. If it is impossible for the VK amateurs to be published could you tell me of a book that could be bought with the required data in it?—D.McW. (Westport).

(A list of Australian amateurs would involve more space than warranted. They are given in "Radio Amateur Call Book," September, 1929, obtainable from Te Aro Book Depot, Wellington. A full list of broadcast stations was published in "All About the All Electric.—Ed.)

ALL sorts of messages are received by broadcasting stations. An American station acknowledges the following telephone call, which at first greatly puzzled and then amused the technicians: "Say, mister, your station is playing too fast. How can I slow it down on my set?" (See page 32.)

RADIO LISTENERS' GUIDE—1929-30

A comprehensive yet elementary treatment of Radio, written for both Beginner and Experienced Constructor.

Radio in New Zealand;
Crystal Sets and Amplifiers;
Power Transformers;
The Browning-Drake Receivers;
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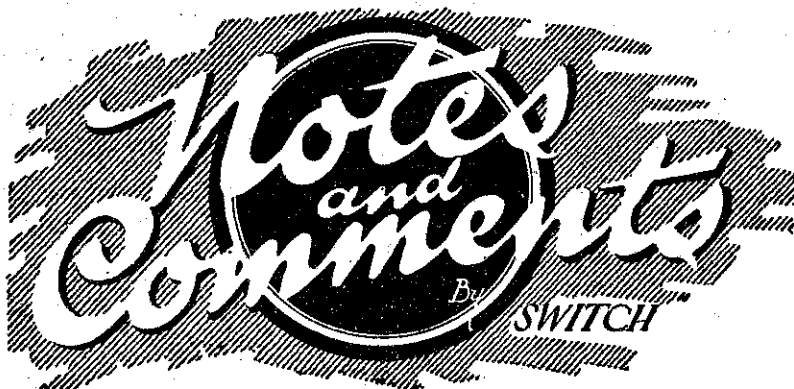
BEGINNERS frequently ask "Switch" what he regards as being a perfect aerial for broadcast reception. An inverted "L" aerial is the best type, and the wire should be single, either one piece of 14-gauge or stranded wire. An American radio writer says: "Radio experts are agreed that a single long wire, so placed as to be free from other wires or metal, makes the best aerial. This wire should run horizontally, and, in general, at right angles to and as far as possible from power lines, trolley lines, or other interference sources. For maximum signal in the broadcast band, a horizontal length of about 100 feet at a height of fifty feet is best. Such an aerial should be electrically shortened by a series condenser of, say, .0005 mf. to .0001 mf. to render it useable with modern receivers under modern receiving conditions, except in locations very remote from broadcast stations." The series condenser tends to give greater selectivity.

THOSE New Zealanders who picked up the relay from 2ME, Sydney, of the running description of the Melbourne Cup will be interested to learn that the voice describing the race was carried a distance of over 570 miles on a telephone line from the Flemington racecourse to 2ME, Sydney. The fact that the relay was over such a lengthy land-line placed 2ME at a disadvantage. This accounts for the fact that 3MB, Melbourne, though transmitting with much less power, was heard much better in Wellington.

THE latest American mail brings news that KNX, at Los Angeles, California, has been granted authority by the Federal Radio Commission to use 50,000 watts, the maximum power allowable for broadcasting. The commission approved the application of the station for a construction permit to install a 50,000-watt transmitter and to increase the power from 5000 watts to 25,000 watts, with an additional 25,000 watts for experimental purposes. All stations using 50,000 watts are authorized to broadcast on the same experimental basis. KNX, owned by the Western Broadcasting Co., will operate full time on the 1050 kilocycle channel (285.5 metres), which it now uses. Before long, KNX should be heard, on its increased power, by hundreds of New Zealand listeners.

THE Humphrey Bishop Musical Comedy Company which toured New Zealand some time ago was heard from 2FC, Sydney, and 3LO, Melbourne, on Wednesday evening, November 20. The manager of this artistic combination is a firm believer in broadcasting as a medium of advertising, and when in the Dominion permitted the shows to be broadcast. It is quite possible that the company will revisit New Zealand soon, and listeners may be able to hear them over the air from the "YA" stations.

A DESCRIPTION of the arrival at Melbourne on November 21 of the s.s. Malolo, the American tourist ship which is cruising around the Pacific under the auspices of the San Francisco Chamber of Commerce, was broadcast by 3LO recently. This station also broadcast the speeches at the luncheon on board the vessel. The vessel is due at Auckland shortly, and probably 1YA, Auckland, will be able to obtain something to broadcast from the Malolo during her visit to that port.



"ALWAYS" (Eltham) writes: "Don't you think that there is an excess of speech on the air each night from the Australian stations? Almost any night you can tune from one 'Aussie' to another and get either a lecture or a radio play from any of them. In former days there was less talk, and the 'Aussie' programmes were worth sitting up to hear. Also, when the talk 'barrage' is over nowadays we get dance music ad nauseam from the 'Aussies.'" To which "Switch" replies that there is abundant music from the New Zealand stations every evening, and the trans-Tasman stations' programmes need not worry "Always."

RADIO reception throughout the guests' rooms of hotels has not yet been taken up in New Zealand, but this innovation is certain to be adopted in time. In America the practice of employing a central radio receiver installation and then supplying a number of loudspeakers and headphones scattered throughout hotels and other buildings has been taken up by architects and builders throughout the country.

A WELLINGTON listener who operates a fairly good A.C. set informed "Switch" that he was unable to tune in the smaller distant stations like his friends, although he received the YA stations and also three or four of the Australian "A" class stations with excellent volume. He admitted, however, that he invariably closed down before 11 p.m. Apart from the latter disadvantage he showed, when he was asked for a demonstration, that he had no patience in tuning. He turned his dial almost as quickly as though he were winding a clock. To get low-power distant stations requires patience. Some years ago the American radio papers went so far as to state that success in DX work was 70 per cent. due to skill in tuning.

FOUR thousand radio enthusiasts, when answering a questionnaire from the Chicago Commonwealth Club, mustered only 106 votes for saxophone music. The brass calabash appears to be the least popular instrument amongst listeners. Major preference was shown for orchestral selections. 2916 votes being recorded in favour for this type of music. Men's voices came next, with 2373 votes, while organ music received 1652 votes. Only 36 per cent. wanted more jazz music, while 68 per cent. declared for more classical selections. Among the complaints concerning broadcasting were: Too much advertising, too much jazz, too many stations, mediocre announcers, woman

announcers, and too many preachers. Fifty-three per cent. stated that radio advertising annoyed them. The latter result has a very important significance, for the whole organisation of broadcasting throughout America depends solely upon the revenue derived from advertising per medium of radio.

NOT the least interesting exhibits at the late Wellington Radio Exhibition were the old-time wireless components, sets and valves, which were used when radio was in its infancy. At the recent Chicago Radio Show an interesting exhibit was a Baden-Powell kite, associated in the minds of everyone who knows radio, with the carrying aloft of the aerial at St. Johns, Newfoundland, on December 12, 1901, when Marconi first succeeded in trapping a trans-Atlantic wireless signal. Also to be seen was an exact replica of the apparatus on which the famous inventor first heard the three-dot signal.

nal, the letter "S," sent from Poldhu, England, while the Baden-Powell kite plunged about aloft. They were the three dots which changed a world.

NEW Zealanders must wait for a considerable time yet before they can purchase radiovision receiving sets really worth having. A Chicago exchange says: "The person who attends the Radio Show (held in Chicago last month) with the idea of buying a radiovision set is doomed to disappointment, inasmuch as there is not at the present time a complete radiovision receiver which may be bought and installed like the modern all-electric radio set. But the radiovision apparatus that is displayed is perhaps as near perfect as is possible with present apparatus."

"SWITCH" remembers seeing, not so long ago, employees in a clothing factory working while a gramophone supplied music for them. The Chicago "Herald" says: "The day is not far off when factory hands will work to the tune of radio music, one leading radio manufacturer believes. The effect of music on the worker is surprising, he says. Fatigue is reduced, the morale of employees is bolstered and production is increased, according to officials of a radio valve company where such an experiment was recently conducted. A public address system with several speaker outlets furnished stirring radio music to 1000 employees in that test."

WANTED AND FOR SALE.

For column of casual advertisements see page 32.

**Longest
Life,
Honest
Rated
Capacity**



Voltage	Capacity Amp.	Price
4	60	£3 10 0
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130 Broadway, Newmarket; Phone 45-540.
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BATTERIES FOR ALL PURPOSES
REPAIRING—LIGHTING—IGNITION EQUIPMENT

261-265 TUAM ST.

Between Madras and
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Telegrams: "Vesuvian,"
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Dunedin: J. & A. P. SCOTT LTD.

Corner Albany and Leith Streets, Dunedin.
P.O. Box 260.
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Telegrams: "Japscoot."

Next Week's Features

Notes from 1YA

DIVINE service on Sunday evening will be relayed from Beresford Street Congregational Church, Rev. Lionel Fletcher being the preacher and Mr. William Gemmell, the choir-master. Following the church relay a concert by the Auckland Municipal Band, under the baton of Mr. Christopher Smith, will be broadcast from the Town Hall.

A FURTHER talk on "Motoring" will be given by Mr. Geo. Campbell on Tuesday evening at 7.30. A brilliant modern comedy in three acts, "Four People," by Miles Mallison, will be presented by Mr. J. F. Montague and his Comedy Players on Tuesday evening. The presentation of one-act and three-act plays by the Comedy Players has been a feature of the programmes from 1YA, and it may be confidently anticipated that another delightful presentation will be given on this occasion. "Four People" is a modern comedy of the best class, but there is a strong dramatic element which should grip the listeners and hold their interest throughout. The play abounds in surprises, and the dialogue is always crisp and brilliant. Some of the players will be making their first appearance "on the air" on this occasion, and this should add considerably to the interest of listeners.

THE programme on Wednesday evening will be provided by the "Cornet School" Orchestra, under the baton of Mr. E. Patterson. Assisting the orchestra will be a number of artists new to 1YA, including Mrs. Frater, Miss E. Naughton, and Mr. Lucas. Other artists include Miss Phyllis Best and Mr. Rex Yates.

ON Thursday evening at 7.40 Dr. T. Harold Pettit will give another of his series of talks on life saving. He

will speak on "The Awards of the Life Saving Society and How to Obtain Them." On Thursday evening the main vocalists will be the Celeste Trio presenting trios and solos, including excerpts from "The Cingalee" (Monckton). The Studio Orchestra, under the direction of Mr. Eric Waters, will provide instrumental selections while Mr. T. T. Garland will be heard in humorous items. Another interesting "Topical Talk" will be given by Mr.

of popular and classical items that should appeal to all tastes. Dance music will be presented from 10 to 11 p.m.

Notes from 2YA

ON Sunday evening a relay of the service from St. John's Presby-

man (cello), and Mr. M. Dixon (piano). A vibraphone solo will be played by Mr. L. W. Probert. The assisting artists will be Mr. Stewart Nelson (tenor), Mr. Val Jones (baritone), and Mr. C. Browne (humorous recitals). Miss Lily Charles will be heard in several popular song numbers. The usual dance programme will commence at 9.30 p.m.

ON Wednesday, which is usually "Silent Day" for 2YA, a relay of the Wanganui Choral Society's final concert of the 1929 season will be carried out. Further particulars of this concert will be found in another column.

ON Thursday evening the Wellington Salvation Army Band, under the conductorship of Mr. H. Scotney, will give a studio concert with the assistance of the popular Melodie Four, Mrs. R. S. Allwright (soprano) and Miss Rose Carte (elocutioniste). The band items will comprise selections from some of the great masters as well as instrumental solos and other numbers of a less serious nature.

At 7.40 on Friday evening Mr. R. Howard Taylor will lecture on "Care of the Feet." Friday evening's programme will feature the Etude Quartet in vocal gems from the popular musical comedy "The Quaker Girl" as an overture, Meyerbeer's "Coronation



MISS MOLLY ATKINSON,
A 1YA artist with a fine mezzo-soprano voice.
—S. P. Andrew, photo.



MISS MAIDA DAVISON,
Contralto of the Minster Quartet, and a member of the 1YA choir.
—S. P. Andrew, photo.

A. B. Chappell, M.A. From 9.30 to 11 p.m. dance music will be presented.

ON Friday evening a concert will be relayed from Otorohanga.

THE Auckland Municipal Band will be broadcast on Saturday evening from the Auckland Town Hall, and, under the conductorship of Mr. Christopher Smith, will render a programme

terian Church will be carried out, the preacher being the Rev. J. R. Blanchard, B.A., and the organist and choir-master, Mr. G. W. Kerry. At the conclusion of the service a studio concert by the Port Nicholson Silver Band will be given. The band will have the assistance of the following artists: Miss Isabel Cooper (soprano), Miss Edith Buckmaster (contralto), and Mr. Harry Matthew (baritone).

MR. H. C. SOUTH'S fortnightly talk on "Books—Grave and Gay" will be given on Monday evening at 7.40. On Monday evening a programme that will meet the approval of all true Scots will be relayed from the Caledonian Hall, the occasion being a special concert in honour of Scotland's Patron Saint, St. Andrew. Mr. and Mrs. Geo. Stark and family will contribute to the programme, and the Chieftain of the Wellington Scottish Society, Captain R. H. Nimmo, will deliver a short address on St. Andrew. The Wellington Pipe Band will play suitable selections and altogether a "guid Scotch nicht" should be the result.

A TALK to the "Man on the Land" will be given on Tuesday evening at 7.40. Tuesday evening's programme will consist of light popular numbers, the instrumental items being played by the 2YA Salon Orchestra, under the conductorship of Mr. M. T. Dixon and an instrumental trio, comprising Messrs. W. Haydock (violin), S. Chap-



A Cooking Hint.

—One that means lighter, fluffier, more delicious scones and cakes—with higher food value and a much longer period of freshness.

Add a few spoonfuls of **ANCHOR SKIM MILK POWDER** to every mixture.

Ask your grocer for "**ANCHOR**" TO-DAY.

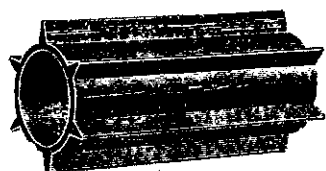
PRICE 1/2 PER TIN.

Free Recipe Folder—write to "Anchor," Box 844, Auckland.

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RIBBED AND PLAIN

For all types of coils for all circuits. Various sizes—but only one quality—THE BEST.



HARD-RUBBER PANELS

Any size cut to order

Send for List

L. B. SCOTT Ltd.

Manchester and Worcester Sts.,
CHRISTCHURCH

LO-LOSS from 5/- per foot.

March," Wieniawski's "Kuyawiak," a selection from "Rose Marie," and Roberts's arrangement of "Master Melodies from Famous Light Operas." Mr. Errol Muir, the winner of the elocutionary championship at the recent Competitions Festival at Wellington, will recite Robert Service's poem "The Song of the Pacificist" and a humorous number entitled "Bertram on Babies." Miss Mary Lennie, who is well known in Wellington as the pianist of the Wellington Amateur Theatrical Society, will on this occasion be heard as a solo pianist, her item being Chopin's "Ballade in A Flat."

ON Saturday evening at 7.40 there will be a lecture by Mr. A. Varney no the English cricket team. On Saturday evening the final concert of the 1929 season of the Wellington Harmonic Society will be relayed from the Town Hall. The society has arranged an attractive programme of part songs for the ladies of the choir and for the full choir, as well as several folk songs. The soloists for the evening will be Mr. J. M. Caldwell (bass) and Mr. Claude Tanner (cello). Prior to the commencement of the concert at the Town Hall the 2YA Salon Orchestra under Mr. M. T. Dixon will play as an overture Haydn Wood's "Clovertown Selection," and during the interval Ponchielli's "Dance of the Hours." At approximately 10 p.m. the usual dance programme will be given and the sporting summary will be presented at 10.45 p.m.

Notes from 3YA

ON Sunday afternoon a lecture on Christian Science by the Hon. Wm. E. Brown, C.S.B., of Los Angeles, will be relayed from the Civic Theatre.

The church service to be broadcast in the evening will be relayed from the Durham Street Methodist Church. The preacher will be the Rev. W. T. Blight. Following the church broadcast, 3YA will relay from 4YA a concert to be given by the St. Kilda Band.

"SOME Physical Culture Mistakes" will be discussed by Mr. Obas. Buckett, champion club-swinging and an expert on physical culture, at 7.30 on Monday evening.

The Woolston Band, under Mr. R. J. Estall, will supply a very attractive programme on Monday evening. Further instrumental numbers will be provided by the Broadcasting Trio. The vocalists for the evening will be Miss Sylvia Angus, Miss Betty Hilliard and

Mr. Cyril Rishworth. There will be recitations by Miss Mavis Kinsella.

WEDNESDAY evening's programme will include numerous operatic numbers, to be sung by Miss Thelma Ayres, Mrs. G. L. Bull, Mr. Arthur T. Couch and Mr. Finlay Robb. Recitations will be given by Miss Dorothy Jenkin. A fine instrumental programme has been arranged for the Studio Octet, under Mr. Harold Beck.

ON Thursday evening at 7.30 Mr. H. L. Darton, secretary of the Canterbury Horticultural Society, will speak on "New Zealand Native Plants." This is one of the lectures arranged by the 3YA Primary Productions Committee. A programme which will delight lovers of good music will be broadcast on Thursday evening. Numerous classical numbers will be included. The singers will be Miss Agnes Cunningham, Mrs. N. Bingham Puddey, Mr. C. R. Williamson and Mr. Clive Hindle. Instrumental music will be played by the Studio Octet, under Mr. Harold Beck. There will be recitations by Miss Winifred Smith.

THE second of the series of talks on quaint New Zealand birds will be given on Friday evening by Mr. Alec O'Donoghue, New Zealand Institute R.A.O.U. The subject will be "The Kakapo and Its Mysteries." The vocalists for Friday evening's concert will be the Valencia Quartet singing concerted and solo numbers. The concerted numbers will be "It was a Lover and His Lass," "The Long Day Closes" and "Come Where My Love Lies Dreaming." Humorous recitations will be given by Mr. J. P. Darragh. Dance music will be supplied by the Bailey-Marston Dance Orchestra and will continue till 11 p.m.

THERE will be a vaudeville and dance programme on Saturday evening, the vocalists being Miss Anita Graham, Mrs. D. W. Stallard, Miss Anne Stephenson, Mr. Leslie Stewart and Mr. W. J. Richards. Mr. Harold Shaw will recite, Mr. Harold Beck will play two cello solos, "On Wings of Song" and Squire's "Serenade," and there will be selections by the Broadcasting Trio. Dance music will continue till 11 p.m.

Notes from 4YA

THE service in First Church will be broadcast on Sunday evening. The Rev. Dr. Hunter will be the preacher. The relay of a concert to be given by the St. Kilda Band in the St. Kilda rotunda will follow.

ANOTHER lecturette by "The Radio Man" on wireless will be given on Monday evening at 7.40.

Excerpts from "The Bohemian Girl" will comprise the first half of Monday evening's programme. The vocalists will be the 4YA Harmonists—Miss Mae Matheson, Miss Mollie Andrews, Mr. H. A. Johnston and Mr. F. M. Tuohy. The supporting miscellaneous programme will include recitations by Miss Rona Scott and selections by the 4YA Broadcasting Trio.

THE band engaged for Tuesday evening is the Kalkorai Band, under Mr. T. J. Kirk-Burnham, presenting

a programme of variety. Mezzo-soprano solos by Miss Molly Vickers will be "Love in Spring," "By the Waters of Minnetonka" and "Love, Laughter and You." Mr. Arthur Alloo (baritone) will sing "Hindoo Song," "The Sands of Dee" and "The Eagle." Elocutionary items will be given by Miss Nellie Osborn.

WEDNESDAY will have a very bright studio concert, to be followed at 9.30 by a dance music session. The entertainment will open with a relay from the Empire Theatre, Mr. Leslie Harvey playing on the Christie Organ. Miss Mollie Fenton (contralto), Miss Nellie Warren (monologue entertainer), Mr. J. Swan (tenor), Mr. Buster Brown (Scottish comedian), and a novelty instrumental trio.

UNDER the direction of Miss Ethel Wallace, a brilliant Dunedin violinist, the Paramount Quintet will, on Friday evening, present items by Brahms, Tchaikowsky, Sibelius and Beethoven. This quintet is of exceptional merit as all the artists of which it is composed are outstanding soloists. For a violin solo, Miss Wallace will present two movements from Mendelssohn's "Violin Concerto in C Minor." This particular evening at 4YA should add still further to the enjoyment of "listeners-in." The assisting artists are Miss Mary Somerville (contralto), Mr. Mortley Peake (bass), and Miss Tui Northey, who obtained many prizes at the recent Dunedin Competitions.

ON Saturday evening 4YA will relay from 3YA.

Children's Sessions

AT 1YA.

TUESDAY, DECEMBER 3: More stories and birthday greetings from Uncle George and sketches and songs from Cousins Patty and Kathleen.

WEDNESDAY: Oh! Oh! for Uncle Tom. Some favourite records and cousins playing as well.

THURSDAY: Miss Blamires is bringing some more of her pupils and Peter Pan will have stories to tell.

FRIDAY: Listen for Aunt Jean's verses and for Nod's cheery stories. Of course there will be birthday greetings and visits from the Radio Postman.

SATURDAY: Sunny Jim with Cinderella once again, with many interesting things to tell, and perhaps a haka to finish up with.

SUNDAY: Children's Song Service, conducted by Uncle Leo, assisted by Mount Albert Baptist Sunday School.

At 2YA.

MONDAY, DECEMBER 2.—To-night we are to have once again a happy little party of children arranged by Cousin Eva. These girls sing, play and recite. Birthday messages and another new puzzle from Uncle Jeff.

TUESDAY.—Cousins Freda and Norma are coming again; also friend Jumbo with one of his happy stories and Mrs. Mildred Kenny's

Juvenile Band. Uncle Jim will send birthday greetings.

THURSDAY.—Cousin Meryl will be here and Cousin Roma, also the Mouth Organ Symphony Orchestra. Uncle George will have messages for the birthday folk.

FRIDAY.—A bright and cheery programme will be given by the pupils of Mrs. Theo. Hills. There will also be Robinson and his Master, Brother Jack, also the Story Book Lady.

SATURDAY.—A treat to-night. First, Lower Hutt Troop of Boy Scouts, under Mr. F. L. McKenzie, will be there; also Uncle Toby and Aunt Gwen, who will have many things to talk of.

SUNDAY.—The Children's Song Service will be conducted by Uncle George, assisted by St. Aiden's Sunday School Choir, under Mrs. C. E. Wahlers.

AT 3YA.

MONDAY, DECEMBER 2: To-night Scatterjoy is introducing us to old garden friends, through new eyes. Do you love wandering through a garden? Well, listen-in and come with us to-night. Songs by Cousins Kathleen and a merry night for all.

WEDNESDAY: Mother Hubbard and Uncle Frank singing the folk songs we all like, with stories for everyone.


THURSDAY: Uncle John, with a bevy of little friends, Joan, Beryl, Ray, Nina and Winston, in songs, recitations and music, to make this hour a happy one for you all.

FRIDAY: The boys from the Presbyterian Home are coming along to help Storyman to-night. You have not heard them before, so just get ready for 5 o'clock.

SATURDAY: Mr. "Chuckie," with some Maori songs and stories for you, as this is our New Zealand night. Miss Glider's pupils providing us with some fine music, solos, duets and trios.

SUNDAY: The Children's Song Service, conducted by the Moorhouse Avenue Church of Christ Sunday School.

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Sunday, December 1

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, DECEMBER 1.

- 3.0 : Afternoon session—selected studio items.
 4.0 : Literary selection by Announcer.
 4.8 : Studio items.
 6.0 : Children's session, conducted by Uncle Leo.
 6.55 : Relay of service from Beresford Street Congregational Church:—
 Preacher: Rev. L. B. Fletcher. Choirmaster: Mr. William Gemmell.
 8.30 (approx) : Relay from Auckland Town Hall of concert by the Auckland Municipal Band, under the conductorship of Mr. Christopher Smith.
 9.45 (approx) : Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, DECEMBER 1.

- 3 p.m. : Afternoon session, selected studio items.
 6.0 : Children's song service, conducted by Uncle George.
 7.0 : Relay of service from St. John's Presbyterian Church. Preacher, Rev. J. R. Blanchard, B.A.; organist and choirmaster, Mr. C. W. Kerry.
 8.15 (approx.) : Studio concert by the Wellington Boys' Institute Military Band, under the conductorship of Mr. A. Iremonger, and assisting artists:
 Hymn—Band, "Como" (Mendelssohn).
 March—Band, "Brigade of Guards" (Hawkins).
 Mezzo-soprano, Miss Mavis Castle, "A Prayer to Our Lady" (Ford).
 Violin—Mischa Elman, "Kaleidoscope" ("Orientale") (Cui), (H.M.V.).
 Baritone—Mr. S. E. Rodger, (a) "The Sweetest Flower that Blows" (Hawley); (b) "Easter Flowers" (Sanderson).
 Selection—Band, "Sanctuary of the Heart" (Ketelbey).
 Contralto—Miss Mona Castle, "Not Understood" (Houghton).
 Violin—Mischa Elman, "Souvenir" (Drdla), (H.M.V. DA1010).
 Overture—Band, "Morning, Noon and Night" (Suppe).
 Weather report.
 Vocal duet—Misses Mavis and Mona Castle, "Arise, O Sun" (Day).
 Organ—G. T. Pattman, "Humoreske" (Dvorak), (Col. 02686).
 Mezzo-soprano—Miss Mavis Castle, "Pokarekare" (Hill).
 Serenade—Band, "Land o' Dreams" (Schumann).
 Waltz—Band, "Tesoro Mio" (Becucci).
 Baritone—Mr. S. E. Rodger, "Captain Mac" (Sanderson).
 Sextet—Galli-Curci, Homer, Gigli, De Luca, Pinza, and Bada, "Chi Mi Frena" (What restrains me), ("Lucia di Lammermoor"), (Donizetti), (H.M.V. DQ102).
 Fantasia—Band, "Knight Errant" (Trussell).
 Contralto—Miss Mona Castle, "Spring Morning" (Fraser-Simpson).
 Quartet—Galli-Curci, Gigli, De Luca, and Homer, "Bella Figlia Dell Amore" ("Rigoletto"), (Verdi), (H.M.V. DQ102).
 Selection—Band, "Largo in G" (Handel).
 March—Band, "B.B. and C.F." (Ord Hume).
 Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, DECEMBER 1.

- 3.0 : Relay from Civic Theatre of a lecture on "Christian Science" by Hon. William E. Brown, C.S.B., of Los Angeles, California, Member of the Board of Lectureships of the Mother Church, the First Church of Christ Scientist, in Boston, Mass., U.S.A.
 4.0 (approx.) : Gramophone recital from studio.
 5.30 : Children's song service (Children of the Methodist Sunday Schools).
 6.15 : Chimes from studio.
 6.30 : Studio programme:
 Organ and trumpet—Paul Mania, (a) "Vision de Jeanne d'Arc" (Gounod), (b) "Hallelujah Chorus" ("Messiah"—Handel) (Parl. A4051).
 Berlin State Opera Orchestra, "Parsifal" (Wagner) (Parl. E10543).
 Bass-baritone—Peter Dawson, (a) "Bush Silence," (b) "Bush Night Song," (c) "Land of Who Knows Where" ("Australian Bush Songs"—James) (H.M.V. C1428).
 London Flute Quartet—(a) "Melody" ("Rosamunde"—Schubert), (b) "Bees' Wedding" (Mendelssohn) (Parlophone A4023).
 7.0 : Relay of service from Durham Street Methodist Church (Preacher, Rev. W. T. Blight; Organist and Choirmaster, Mr. Ernest Firth, F.R.C.O.).
 8.15 (approx.) : Rebroadcast of 4YA, Dunedin (relay from St. Kilda Band Rotunda of concert by the St. Kilda Band).

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, DECEMBER 1.

- 3.0 : Town Hall Chimes.
 3.1 : Selected gramophone items.

- 5.30 : Children's song service, conducted by Big Brother Bill.
 6.30 : Relay of service from First Church—Preacher: Rev. Dr. Hunter. Organist: Dr. V. E. Galway.
 7.55 : Weather report.
 8.5 : Relay from St. Kilda Band Rotunda of concert by the St. Kilda Band.
 9.15 : Close down.

Monday, December 2

1YA, AUCKLAND (900 KILOCYCLES)—MONDAY, DECEMBER 2. SILENT DAY.

2YA, WELLINGTON (720 KILOCYCLES)—MONDAY, DECEMBER 2.

- 3.0 : Chimes of the G.P.O. clock.
 3.1 : Afternoon session—selected gramophone items.
 4.30 and 4.50 : Sports results to hand.
 5.0 : Children's session, conducted by Uncle Jeff.
 6.0 : Dinner Session—"Columbia" Hour:
 March—H.M. Grenadier Guards, "Martial Moments" (arrgd. Winter).
 Waltz—Eddie Thomas' Collegians, "Missouri Waltz" (Logan).
 6.12 : Tacet.
 6.15 : Violin and Wurlitzer Organ—Marrnello, "Evening in the Desert" (Hermitte) (Regal G20420).
 Hawaiian—South Sea Islanders, "Dreamy Hilo Bay" (Heagney).
 Columbia Symphony Orchestra, "March of the Toys" (Herbert).
 Pianoforte—Percy Grainger, "Molly on the Shore" (Grainger).
 6.26 : Tacet.
 6.30 : Waltz—Eddie Thomas' Collegians, "Till We Meet Again" (Whiting).
 Waltz—Eddie Thomas' Collegians, "Beautiful Ohio" (Earl) (02651).
 Piccolo duet—Jean and Pierre Gennin, "Rippling Streams" (Gennin).
 6.41 : Tacet.
 6.45 : Violin and organ—Marrnello, "Once" (Saunders) (Regal G20420).
 Xylophone—W. W. Bennett, "Gee Whiz" (Byron) (02575).
 Hawaiian—South Sea Islanders, "Lei Lani" (Heagney) (01162).
 Denza Dance Band, "In the Shadows" (Finck) (Regal G20451).
 6.58 : Tacet.
 7.0 : News session, market reports and sports results.
 7.40 : Lecturette—Mr. H. C. South, "Books Grave and Gay."
 8.0 : Chimes of the G.P.O. clock.
 8.1 : Relay from Caledonian Hall of concert by the Wellington Scottish Society in honour of Scotland's Patron Saint—Saint Andrew.
 Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—MONDAY, DECEMBER 2.

- 3.0 : Afternoon session—selected gramophone items.
 4.25 : Sports results to hand.
 5.0 : Children's session, conducted by "Scatterjoy."
 6.0 : Dinner Session—"His Master's Voice" Hour:
 March—American Legion Band, "The Conqueror" (Teike).
 Selection—Savoy Orpheans, "Lido Lady" (Rodgers) (C1310).
 6.12 : Tacet.
 6.15 : New Light Symphony Orchestra, "Rustic Wedding Symphony" (Goldmark) (C1210).
 Victor Olof Sextet, "To a Water Lily" (Macdowell) (B2690).
 New Light Symphony Orchestra, "Spanish Dance" (Moszkowski).
 Wurlitzer organ—Reginald Foort, "Just Like a Darby and Joan" (Gilbert) (B2775).
 6.28 : Tacet.
 6.30 : Jack Hylton's Orchestra, "The Selfish Giant" (Coates) (C1253).
 Victor Olof Sextet, (a) "To a Wild Rose" (b) "In Autumn" (Macdowell) (B2690).
 Violin and Wurlitzer organ—De Groot and Terence Casey, "Parted" (Tosti) (B2920).
 6.44 : Tacet.
 6.45 : Victor Symphony Orchestra, "Dance of the Hours" (Ponchielli).
 Wurlitzer organ—Reginald Foort, "Love Lies" (Kellard) (B2775).
 March—American Legion Band, "Iowa Corn Song" (arrgd. Beeston).
 6.58 : Tacet.
 7.0 : News session.
 7.30 : Talk—Mr. Chas. Buckett, "Some Physical Culture Mistakes."
 8.0 : Chimes.
 Studio programme by the Woolston Band, under the conductorship of Mr. R. J. Estall, and assisting artists:
 8.1 : March—Band, "Washington Greys" (Trafulla).
 Selection—Band, "Honey" (Simons).
 8.10 : Mezzo-soprano—Miss Betty Hilliard, "Crossing the Bar" (Jarman).
 8.14 : Instrumental—Christchurch Broadcasting Trio, "Rondo Finale" (Reisiger).

Week-all Stations-to Dec. 8

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Tuesday, December 3

1YA, AUCKLAND (900 KILOCYCLES)—TUESDAY, DECEMBER 3.

- 3.0 : Afternoon session—Selected studio items.
 4.0 : Literary selection by the Announcer.
 4.8 : Studio items.
 4.25 : Sports results to hand.
 5.0 : Children's session, conducted by Uncle George.
 6.0 : Dinner session—"Columbia" Hour:
 Milan Symphony Orchestra, "La Tosca—Prelude Act 3" (Puccini).
 Milan Symphony Orchestra, "Cavalleria Rusticana—Intermezzo"
 (Mascagni) (02841).
 6.13 : Tacet.
 6.15 : Lucerne Kursaal Orchestra, "Orpheus in the Underworld" (Offenbach).
 6.15 : Lucerne Kursaal Orchestra, "Orpheus in the Underworld" (Offenbach).
 Pianoforte—Harriet Cohen, "Prelude and Fugue No. 9 in E Major"
 (Bach) (04278).
 6.27 : Tacet.
 6.30 : Selection—Plaza Theatre Orchestra, "The Belle of New York" (Kerker,
 arrgd. Godfrey) (Regal G30016).
 Guitar—Len Fillis, (a) "The Blue Room" (Rodgers); (b) "Mountain
 Greenery" (Rodgers) (01010).
 6.42 : Tacet.
 6.45 : Vocal quintet—Singing Somphomores, "Slow River" (Rodgers) (0794).
 Selection—Drury Lane Theatre Orchestra, "Rose Marie" (Friml).
 6.57 : Tacet.
 7.0 : News session and market reports.
 7.15 : Talk—Mr. George Campbell, "Motoring."
 7.30 : News session.
 8.0 : Chimes.
 8.1 : Overture—New Light Symphony Orchestra, "Spanish Dances," Nos. 1
 and 2 (Granados) (H.M.V. C0553).
 8.9 : Presentation of a three-act comedy, "Four People" (Mallison), by the
 Auckland Comedy Players, under the direction of Mr. J. P. Montague:
 Act 1.
 Entr'acte—New Light Symphony Orchestra, "Spanish Dance" (Granados)
 (H.M.V. C1554).
 Act 2.
 Entr'acte—New Light Symphony Orchestra, "Triana" (Albeniz).
 Act 3.
 Instrumental—Symphony Orchestra, "La Vida Breve" (Spanish Dance)
 (De Falla) (H.M.V. C1453).
 10.0 : Close down.

2YA, WELLINGTON (720 KILOCYCLES)—TUESDAY, DECEMBER 3.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1 : Selected gramophone items.
 4.30 and 4.50 : Sports results to hand.
 5.0 : Children's session, conducted by Uncle Jim.
 6.0 : Dinner session—"His Master's Voice" Hour:
 Overture—Berlin State Opera Orchestra, "The Magic Flute" (Mozart).
 Royal Opera Orchestra, "Hungarian Dance No. 5 in F Sharp Minor"
 (Brahms) (C1415).
 Grand organ solo—Arthur Meale, "Simple Aven" (Thome) (Zono. 5162)
 6.13 : Tacet.
 6.15 : New Light Symphony Orchestra, "Peer Gynt Suite" (Grieg) : 1 Ingrid's
 Lament; 2 Arabian Dance (C1571).
 Violin—Erica Morini, "Romanza Andaluza" (Sarasate) (D1445).
 6.27 : Tacet.
 6.30 : New Light Symphony Orchestra, "Peer Gynt Suite" (Grieg) : 1 Return
 of Peer Gynt; 2 Solveig's Song (C1572).
 Violin—Erica Morini, "Introduction and Tarantelle" (Sarasate).
 6.42 : Tacet.
 6.45 : Marek Weber's Orchestra, "Vienna by Night" (Komzak) (C1507).
 'Cello—Lauri Kennedy, "Hungarian Rhapsody" (Popper) (C1595).
 6.57 : Tacet.
 7.0 : News session, market reports and sports results.
 7.40 : Lecturette—Representative, Agricultural Department, "For the Man
 on the Land."
 8.0 : Chimes of the G.P.O. clock.
 8.1 : Overture—2YA Salon Orchestra, under the conductorship of Mr. Mat
 Dixon, "Ballet Russe" (Luigini).
 8.11 : Tenor—Mr. Stewart Nelson, (a) "Eyes that Used to Gaze in Mine"
 (Lohr); (b) "In Time of Violets" (Lohr).
 8.18 : Baritone—Mr. Val Jones, (a) "Slumber on, my Little Gipsy Sweet-
 heart" ("The Fortune Teller") (Herbert); (b) "Ol' Man River"
 ("The Show Boat") (Kern).

4YA, DUNEDIN (650 KILOCYCLES)—MONDAY, DECEMBER 2.

- 3.0 : Town Hall chimes.
 3.1 : Selected gramophone items
 4.25 : Sports results to hand.
 5.0 : Children's session, conducted by Uncle Allan.
 6.0 : Dinner Session—"His Master's Voice" Hour:
 Overture—National Symphony Orchestra, "Light Cavalry" (Suppe).
 Waltz—Chicago Symphony Orchestra, "Roses of the South" (Strauss).
 'Cello—Pablo Casals, "Moment Musical" (Schubert) (DA776).
 6.13 : Tacet.
 6.15 : Hilo Hawaiian Orchestra, (a) "Kawaihau Waltz" (Kelakai), (b) "My
 Hula Love" (B2799).
 Medley waltz—The Troubadours, "Popular Songs of Yesterday."
 'Cello—Pablo Casals, "Le Cygne" (Saint-Saens) (DA776).
 6.27 : Tacet.
 6.30 : Waltzes—International Concert Orchestra, (a) "The Merry Widow"
 (Lehar), (b) "Luxembourg Waltz" (Lehar) (Zonophone EF9).
 Violin and guitar—Guilietta Morino, (a) "Harlequin's Serenade"
 (Drigo); (b) "Could I" (Poggles) (Zonophone EE134).
 6.44 : Tacet.
 6.45 : New Light Symphony Orchestra, (a) "The Dancing Doll" (Poldini);
 (b) "At Dawning" (Cadman) (B2629).
 Wurlitzer organ—Jesse Crawford, "Carolina Moon" (Davis) (EA536).
 Royal Opera Orchestra, "The Sleeping Beauty" (Tchaikowsky).
 6.58 : Tacet.
 7.0 : News session.
 7.40 : Lecturette by the "Radio Man" on "Wireless"
 8.0 : Town Hall chimes.
 8.1 : Selection—4YA Broadcasting Trio, "The Bohemian Girl" (Balfe).
 8.11 : Presentation of "The Bohemian Girl" Act 1 (Balfe) by the 4YA Har-
 monists Quartet.
 8.31 : Instrumental—4YA Broadcasting Trio, "Iphigenia in Aulis" (Gluck).
 8.41 : Presentation of "The Bohemian Girl" Act 2 and Act 3 (Balfe) by the
 4YA Harmonists Quartet.
 9.2 : Weather report.
 9.4 : Selection—Edith Lorand Orchestra, "The Dollar Princess" (Fall)
 9.12 : Violin—Mr. Frank Parsons, (a) "Hebrew Lullaby" (Achron), (b)
 "Horn Pipe" (Purcell).
 9.18 : Recitals—Miss Rona Scott, (a) "How to Accept Him" (Anon.), (b)
 "Billy" (Anon).
 9.27 : Selection—Berlin State Opera Orchestra, "Iris Dances" (Mascagni).
 9.31 : Tenor—Mr. H. A. Johnston, "Ah, Moon of My Delight" (Lehmann).
 9.36 : Instrumental—4YA Broadcasting Trio, "Trio in G Minor—1st. Move-
 ment" (Schumann).
 9.44 : Mezzo-soprano—Miss Mollie Andrews, (a) "Hedge Roses" (Schubert),
 (b) "I Know a Bank" (Shaw).
 9.48 : Cembale—Anna Linde, (a) "Le Coucou" (Daquin), (b) "Le Tambou-
 rin" (Rameau) (Parlophone E10514).
 9.52 : Baritone—Mr. Fred. M. Tuohy, "A Requiem" (Horne).
 9.54 : Recital—Miss Rona Scott, "The Highwayman" (Noyes).
 10.0 : Selection—Berlin State Opera Orchestra, "Die Rantzau" (Mascagni).
 10.4 : Close down

- 8.25: Instrumental trio—Messrs. W. Haydock, S. Chapman and M. Dixon, "A La Bien Aime" (Schutt).
Vibraphone solo with orchestral accompaniment, Mr. L. W. Probert, "The Desert Song" (Romberg).
- 8.35: Recital—Mr. C. Browne, "Eccles Soliloquy" (Robertson).
- 8.42: Popular songs—Miss Lily Charles, (a) "I Wonder if You're Thinking of Me" (Walker); (b) "Lady Divine" (Shilkret).
- 8.49: Tenor—Mr. Stewart Nelson, "Lolita" (Chaminade).
- 8.53: Selection—2YA Salon Orchestra, "Three Eastern Sketches" (Pratt).
- 9.1: Weather report.
- 9.3: Baritone—Mr. Val Jones, "O Flower Divine" (Haydn).
- 9.7: Song selection—2YA Salon Orchestra, "Guy D'Hardelot's Songs."
- 9.15: Humour—Mr. C. Browne, "Home Troubles" (Moran).
- 9.22: Popular song—Miss Lily Charles, "Think of Me Thinking of You" (Marvin).
- 9.26: Instrumental—2YA Salon Orchestra, Request Number.
- 9.30: "Columbia" Dance Programme:
Foxtrot—Palais Royal Orchestra, "Louise" (Whiting) (Regal G20527).
Foxtrot—Ambassadors' Band, "My Man" (Channing) (01566).
Foxtrot—Willie Crenger's Orchestra, "On Top of the World Alone" (Whiting) (Regal G20527).
Foxtrot—Ambassadors' Band, "Second Hand Rose" (Clarke) (01566).
- 9.42: Hawaiian—Milford's Hawaiian Players, "Hawaiian Hotel" (Nainas).
Foxtrot—The Harmonians, "When My Dreams Come True" (Berlin).
Foxtrot—Paul Whiteman's Orchestra, "China Boy" (Winfree).
Foxtrot—Stellar Dance Band, "This is Heaven" (Yellen).
Waltz—Gil Dech's Syncopators, "Old Timer" (Rose) (01686).
- 9.57: Soprano—Marie Burke, "I'd Rather be Blue Over You" (Rose).
Foxtrot—Paul Whiteman's Orchestra, "I'm in Seventh Heaven" (De Sylva) (07023).
Foxtrot—Paul Whiteman's Orchestra, "Oh, Miss Hannah" (Deppen).
Foxtrot—Paul Whiteman's Orchestra, "Little Pal" (de Sylva).
Foxtrot—Rhythmic Troubadours, "You're the Cream in My Coffee" (de Sylva) (Regal G20555).
- 10.12: Hawaiian—Milford's Hawaiian Players, "Honeymoon Chimes" (Brown) (Regal G20550).
Foxtrot—Royal Canadians, "This is Heaven" (Yellen) (01632).
Foxtrot—Royal Canadians, "I Get the Blues When it Rains" (Weaver).
Waltz—Milford's Hawaiian Players, "Kawaihau" (Hawaiian Air).
- 10.24: Soprano—Marie Burke, "You Kiss My Hand, Monsieur" (Erwin).
Foxtrot—Rhythmic Troubadours, "Jericho" (Robin) (Regal G20532).
Foxtrot—Gil Dech's Syncopators, "The Toymaker's Dream" (Golden).
Foxtrot—Ray Starita's Ambassadors, "Ever so Goosey" (Wright).
Foxtrot—Rhythmic Troubadours, "Do Something" (Green).
Foxtrot—Ipapa Troubadours, "To be in Love" (Turk) (01660).
- 10.42: Hawaiian—Milford's Hawaiian Players, "Aloha Land" (Herzer).
Foxtrot—All-Star Trio, "Dream Mother" (Burke) (01630).
Foxtrot—Rhythmic Troubadours, "To Know You is to Love You" (de Sylva) (Regal G20553).
Foxtrot—Corona Dance Band, "Olaf" (Baer) (Regal G20519).
Waltz—All-Star Trio, "Evangeline" (Jolson) (01630).
- 11.0: Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—TUESDAY, DECEMBER 3. SILENT DAY.

4YA, DUNEDIN (650 KILOCYCLES)—TUESDAY, DECEMBER 3.

- 3.0: Town Hall chimes.
- 3.1: Selected gramophone items.
- 4.25: Sports results to hand.
- 5.0: Children's session, conducted by Uncle George.
- 6.0: Dinner Session—"Parlophone" Hour:
Selection—Edith Lorand Orchestra, "La Boheme" (Puccini).
Waltz—Edith Lorand Orchestra, "La Serenade" (Mietra) (E10522).
Violin—Tosy Spiwakowsky, "Turkish March" (Beethoven) (A2561).
- 6.12: Tacet.
- 6.15: Waltz—Edith Lorand Orchestra, "Venetian Barcarolle" (Leoncavallo).
Dajos Bela Instrumental Trio, (a) "Traumerei" (Schumann), (b) "Chant D'Automne" (Tschalkowsky) (E10573).
'Cello—Gregor Platigorsky, "The Swan" (Saint-Saens) (A2623).
- 6.28: Tacet.
- 6.30: Fantasia—Dajos Bela Orchestra, "La Traviata" (Verdi) (A4027).
Waltzes—Royal Music Makers, (a) "Kiss Me Again" (Herbert), (b) "Ah, Sweet Mystery of Life" (Herbert) (A2722).
- 6.44: Tacet.
- 6.45: Suite—Paris Opera Comique Orchestra, "Ballet Egyptien" (Luigini).
- 6.57: Tacet.
- 7.0: News session.
- 7.40: Lecturette by Mr. R. W. Marshall (Manager Tourist and Health Resorts Department)—"Southern Tourist Resorts."
- 8.0: Town Hall chimes.
Studio concert by the Kalkorai Band, under the conductorship of Mr. Thos. J. Kirk-Burnand, and assisting artists:
- 8.1: March—Band, "Old Comrades" (Teike).
Selection—Band, "Creation Hymn" (Beethoven).
- 8.8: Baritone—Mr. Arthur W. Alloo, "Hindoo Song" (Bemberg).
- 8.12: Violin and organ—Elsie Southgate "I Hear You Calling Me" (Marshall (Zonophone 5109)).
- 8.16: Air and variations, Band, "Simeon" (Rimmer).
- 8.23: Mezzo-soprano—Miss Molly Vickers, (a) "Love in Spring" (Gounod), (b) "By the Waters of Minnetonka" (Lieurance).

- 8.30: Bass and chorus—Stuart Robertson, (a) "There is a Tavern in the Town" (trdtl), (b) "John Peel" (trdtl), (H.M.V. B2992).
- 8.34: Musical comedy selection—Band, "The Country Girl" (Monckton).
- 8.45: Recital—Miss Erana Newbold, "At the Photographers" (Leacock).
- 8.52: Concerted—Light Opera Company, Gems from "Hit the Deck" (Youmans) (H.M.V. C1433).
- 9.0: Weather report.
- 9.2: Grand Contest Selection—Band, "Schubert" (Schubert).
- 9.14: Baritone—Mr. Arthur W. Alloo, (a) "The Sands of Dee" (Clay); (b) "The Eagle" (Busch).
- 9.21: Violin and organ—Elsie Southgate, "Roses in the Bud" (Forster).
- 9.24: Concert March—Band, "The Conquerors" (Moorhouse).
- 9.31: Mezzo-soprano—Miss Molly Vickers, "Love, Laughter and You" (Mongues).
- 9.35: Recitals—Miss Erana Newbold, (a) "Aunt Tavitha" (Holmes); (b) "Little Nellie Cassidy" (Letts).
- 9.42: Valse de Concert, Band, "The Choristers" (Dodwell).
- 9.52: Bass with chorus—Stuart Robertson, (a) "Clementine" (Montrose); (b) "Solomon Levi" (Seaver) (H.M.V. B2992).
- 9.55: March—Band, "The Southlanders" (Lithgow).
- 10.1: Close down.

Wednesday, December 4

1YA, AUCKLAND (900 KILOCYCLES)—WEDNESDAY, DECEMBER 4.

- 3.0: Afternoon session—Selected studio items.
- 4.0: Literary selection by the Announcer.
- 4.8: Studio items.
- 4.25: Sports results to hand.
- 5.0: Children's session, conducted by Uncle Tom.
- 6.0: Dinner session—"Columbia" Hour:
Band of the Garde Republicaine de France, "Le Bombardier" (Pares).
Madrid Symphony Orchestra, "The Three-Cornered Hat" (de Falla):
(1) Dance of the Neighbours, (2) The Miller's Dance" (02848).
- 6.12: Tacet.
- 6.15: Madrid Symphony Orchestra, "The Three-Cornered Hat"—Final Dance (de Falla) (02849).
'Cello—W. H. Squire, "Sarabande" (Sulzer) (04283).
- 6.27: Tacet.
- 6.30: J. H. Squire Celeste Octet, "Memories of Mendelssohn" (arrgd. Sear).
Band of the Garde Republicaine de France, "March Indienne" (Sellenick) (01504).
- 6.42: Tacet.
- 6.45: 'Cello—W. H. Squire, "Ave Verum" (Mozart—arrgd. Squire) (04283).
Madrid Symphony Orchestra, "Noche de Arabia" (Arbos) (02923).
- 6.57: Tacet.
- 7.0: News session and market reports.
- 8.0: Chimes.
- 8.1: Presentation of concert by the "Cornet School Orchestra" under the conductorship of Mr. E. Patterson:
- 8.1: Overture—The Orchestra, "Health and Wealth" (Weidt).
- 8.6: March—The Orchestra, "Optimist" (Weidt).
- 8.11: Vocal solo—Mrs. J. Frater, "Fat Little Fellow" (Sheridan).
- 8.16: Instrumental—The Orchestra, "Gems from Overtures" (arrgd. Patterson).
- 8.24: Humour—Mr. Rex Yates, "Comic Cuts."
- 9.34: Waltz—The Orchestra, "Over the Waves" (Rosas).
- 9.42: Vocal solo—Mr. W. Lucas, "Bell o' Dunoon" (Lander).
- 9.52: March—The Orchestra, "Happy Hawaii" (Fantlon).
- 9.58: Violin—Miss Phyllis Best, "Romance" (Wehliem).
- 9.6: Selection—Orchestra, "Belle of New York" (Kerker).
- 9.23: Pianoforte—Miss E. Naughton, "Impromptu" (Schubert).
- 9.33: March—The Orchestra, "Our Director" (Schlow).
- 9.39: Humour—Mr. Rex Yates, "More Comic Cuts."
- 9.49: Vocal solo—Mr. W. Lucas, "Wee Deoch an' Doris" (Lander).
- 9.55: Instrumental—The Orchestra, "Round the World" Medley (arrgd. Beyer).
- 10.1: Close down.

2YA, WELLINGTON (730 KILOCYCLES)—WEDNESDAY, DECEMBER 4.

- 3.0: Chimes of the G.P.O. clock.
- 8.1: Relay from Opera House, Wanganui, of the Wanganui Choral Society's final concert of the 1929 season.
Musical Director: Mr. F. Wentworth Slater, A.R.C.O.
Accompaniment: Mr. Horatio Nelson, A.T.O.L.

CHOIR ITEMS.

- "The Lee Shore" (Coleridge Taylor).
- "Like Apple Blossom, White and Red" (Lloyd).
- "Angelus" ("Maritana") (Wallace, arrgd. Dicks).
- "Grass of Parnassus" (Granville Bantock).
- "The Challenge of Thor" ("King Olaf") (Elgar).
- "Massa's in De Cold Ground" (Arranged and harmonised by the conductor, Mr. F. W. Slater).
- "How Sweet the Moonlight Sleeps" (Eaton Fanning).
- "Music, When Soft Voices Die" (Parry).
- "Lullaby" (composed by the conductor, Mr. F. W. Slater).

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The supporting artists will be Mrs. Wilfred Andrews, contralto, of Wellington, who will contribute:—

"Tangi" (Alfred Hill).

"The Loreley" (Liszt),

and Mr. Claude N. Tucker, of Wellington, flautist, who will render:—

"Scherzo Capriccio" (Sabathil),

"The Brook" (Wetzger),

"Butterfly" (Kohler).

3YA, CHRISTCHURCH (980 KILOCYCLES)—WEDNESDAY, DEC. 4.

- 8.0 : Afternoon session—Selected studio items.
 4.25 : Sports results to hand.
 5.0 : Children's session, conducted by Mother Hubbard and Uncle Frank.
 6.0 : Dinner session—"His Master's Voice" Hour:
 Overture—National Symphony Orchestra, "Orpheus in Hades" (Offenbach) (Zonophone EF16).
 San Francisco Symphony Orchestra, "Caprice Viennois" (Kreisler).
 6.12 : Tacet.
 6.15 : New Light Symphony Orchestra, (a) "Spring Song" (Mendelssohn); (b) "Narcissus" (Nevin) (Zonophone EE111).
 San Francisco Symphony Orchestra, "Coppelia Ballet" (Delibes).
 Violin—Fritz Kreisler, "Tango Albeniz" (arrgd. Kreisler) (DA1009).
 6.28 : Tacet.
 6.30 : Philadelphia Symphony Orchestra, "Invitation to the Waltz" (Weber).
 San Francisco Symphony Orchestra, (a) "Serenade" (Moszkowski); (b) "Oriental" (Auber) (ED6).
 6.42 : Tacet.
 6.45 : San Francisco Symphony Orchestra, "Liebeslied" (Kreisler) (ED6).
 6.57 : Tacet.
 7.0 : News session.
 7.30 : Addington Stock Market Reports.
 8.0 : Chimes.
 8.1 : Overture—Studio Instrumental Octet, under the conductorship of Mr. Harold Beck. (a) "Cavatina" (Raff); (b) "Valse" (O'Neill).
 8.9 : Mezzo-soprano—Mrs. G. L. Bull, "Softly Awakes My Heart" ("Samson and Delilah") (Saint-Saens).
 8.13 : Cello solo—Pablo Casals, "Melody in F" (Rubinstein) (H.M.V.).
 8.17 : Tenor—Mr. Arthur T. Couch, "The Flower Song" ("Carmen") (Bizet).
 8.21 : Studio Instrumental Octet, "Three Dances from Nell Gwynn" (German): (1) Country Dance, (2) Pastoral Dance, (3) Merry-makers' Dance.
 8.31 : Soprano—Miss Thelma Ayers, "Waltz Song" ("Romeo and Juliet") (Gounod).
 8.35 : Organ—Edward O'Henry, "Faust Waltz" (Gounod) (H.M.V. B2873).
 8.39 : Recital—Miss Dorothy Jenkin, "Her Letter" (Bret Harte).
 8.44 : Studio Instrumental Octet, "Reminiscences of Grieg" (arrgd. Godfrey).
 8.52 : Bass—Mr. Finlay Robb, "The Wanderer" (Schubert).
 8.56 : Grand organ and cornet—R. Arnold Grier, "The Lost Chord" (Sullivan) (Zonophone A309).
 9.0 : Weather report.
 9.2 : Studio Instrumental Octet, "Incidental Music—The Beggar's Opera" (Austin).
 9.10 : Mezzo-soprano—Mrs. G. L. Bull, (a) "In the Dusk" (Tate); (b) "Waltz Song" ("Merrie England") (German).
 9.15 : Cello—Pablo Casals, "Traumerei" (Schumann) (H.M.V. DB1083).
 9.18 : Tenor—Mr. Arthur Couch, (a) "She is Far From the Land" (Lambert); (b) "Hine E Hine" (Te Rangipai).
 9.24 : Studio Instrumental Octet, (a) "Largo" (Handel); (b) "Pavane" (Saint-Saens).
 9.32 : Soprano—Miss Thelma Ayers, (a) "Come While the Twilight Closes" (Gluck); (b) "Should He Upbraid" (Bishop).
 9.38 : Organ—Edward O'Henry, "Minuet in G" (Beethoven) (H.M.V.).
 9.41 : Recitals—Miss Dorothy Jenkin, (a) "Your Back Against the Wall" (Hill); (b) "Vivid Description of a Midnight Episode" (MS.).
 9.47 : Male quartet—The Revellers, "Was it a Dream?" (Coslow) (H.M.V.).
 9.50 : Bass—Mr. Finlay Robb, (a) "The Heart Worshippers" (Holst); (b) "If My Songs were only Winged" (Hahn).
 9.56 : National Military Band, "Ballet Egyptian" (Luigini) (Zono. A354).
 10.0 : Close down.

4YA, DUNEDIN (650 KILOCYCLES)—WEDNESDAY, DECEMBER 4.

- 8.0 : Town Hall chimes.
 8.1 : Selected gramophone items.
 4.25 : Sports results to hand.
 5.0 : Children's session, conducted by Big Brother Bill.
 6.0 : Dinner Session—"Columbia" Hour:
 Overture—Basle Symphony Orchestra, "Der Freischutz" (Weber).
 6.12 : Tacet.
 6.15 : J. H. Squire Celeste Octet, (a) "The Grasshoppers' Dance" (Bucalossi); (b) "The Butterfly" (Bendix) (3608).
 Musical Art Quartet, "To a Wild Rose" (McDowell) (01506).
 Violin—Yvonne Curti, "Madrigale" (Simonetti) (01529).
 6.27 : Tacet.
 6.30 : J. H. Squire Celeste Octet, (a) "I Love the Moon" (Rubens); (b) "Two Eyes of Grey" (McGeoch) (01213).
 J. H. Squire Celeste Octet, (a) "Amoureuse" Valse (Berger); (b) "Valse Bleue" (Margis) (3643).
 6.42 : Tacet.

- 6.45 : J. H. Squire Celeste Octet, "Valse Caprice" (Rubinstein) (02581).
 Cello—W. H. Squire, "Sarabande" (Seitzer) (04283).
 J. H. Squire Celeste Octet, "Perpetuum Mobile" (Weber, arrgd. Crooks).
 6.57 : Tacet.
 7.0 : News session.
 8.0 : Town Hall Chimes.
 8.1 : Relay from Empire Theatre of Christie Organ Solos, played by Mr. Leslie V. Harvey.
 8.16 : Contralto—Miss Mollie Fenton, (a) "Good Morning, Brother Sunshine" (Lehmann); (b) "Three" (Aylward).
 8.20 : Monologue—Miss Nellie Warren, "Greetings" (Wallace).
 8.26 : Instrumental—Novelty Trio, (a) "I Lift up my Finger and Say Tweet Tweet" (Saroni); (b) "Walking With Susie" (Gottler).
 8.36 : Tenor—Mr. J. Swan, "Old County Down" (Pascoe).
 8.40 : Waltz—Symphony Orchestra, "Doctrien" (Strauss) (Col. 02529).
 8.44 : Scottish comedian—Buster Brown, "Bonnie Maggie Tamson" (Lauder).
 8.50 : Contralto—Miss Mollie Fenton, (a) "Baby" (Mallinson); (b) "Song of the Little Folk" (Coates).
 8.56 : Instrumental—Novelty Trio, "I Kiss Your Hand, Madame" (Erwin).
 9.1 : Weather report.
 9.7 : Tenor—Mr. J. Swan, (a) "It's Quiet Down Here" (O'Reilly); (b) "Sleep and the Roses" (Bowles).
 9.13 : Recital—Miss Nellie Warren, "Types at the Play" (Anon.).
 9.18 : Instrumental—Novelty Trio, (a) "That's Her Now" (Yellen); (b) "Breakaway" (Gottler).
 9.24 : Scottish comedian—Buster Brown (a) "I Like My Old Home Town" (Lauder); (b) "When I Was Twenty-one" (Lauder).
 9.31 : "Brunswick" Dance Programme:
 Foxtrots—Ray Miller's Orchestra, (a) "Let's Sit and Talk About You" (Fields); (b) "In a Great Big Way" (Fields) (4223).
 Foxtrots—The Clevelanders, (a) "I'm Thirsty for Kisses, Hungry for Love" (Davis); (b) "A Little Town Called Home Sweet Home" (Donaldson) (4252).
 9.43 : Wurlitzer organ—Eddie Dunstedter, (a) "Parade of the Wooden Soldiers" (Jessel); (b) "Ah, Sweet Mystery of Life" (Young).
 Foxtrot—Bob Haring's Orchestra, "S'posin'" (Razuf) (4382).
 Foxtrot—Colonial Club Orchestra, "You and I in the Moonlight" (Jerome) (4382).
 Foxtrots—The Captivators, (a) "I Used to Love Her in the Moonlight" (Lewis); (b) "Step by Step and Mile by Mile" (Silver) (4308).
 Waltz—Thematics Orchestra, "Giovanna" (Kountz) (4297).
 Waltz—Thematics Orchestra, "Lady Divine" (Kountz) (4297).
 10.13 : Solo and chorus—Vernon Rickard with Hatch's Melody Makers, "One Golden Hour with You" (Pollack) (4262).
 Foxtrot—Fred Hamm's Collegians, "True Blue" (Garland) (4294).
 Foxtrots—Bob Haring's Orchestra, (a) "Down Among the Sugar Cane" (Tobias); (b) "Because I Know You're Mine" (Berickson) (4283).
 Waltz—Colonial Club Orchestra, "Why Don't You Love Me?" (Mason).
 10.30 : Male chorus—Famous Forty Elks Chorus, "Sweet and Low" (Barnby).
 Soprano—Elizabeth Rethberg, "By a Lonely Forest Pathway" (Chapman) (15146).
 Foxtrots—Bob Haring's Orchestra, (a) "Deep Night" (Vallee); (b) "Wedding Bells" (Kahal) (4246).
 10.42 : Organ with trumpet and drum—Lew White, "My Tonia" (De Sylva).
 Vocal duet—Frank Luther and Carson Robison, (a) "Old Kentucky Cabin" (Robison); (b) "Blue Lagoon" (Robison) (4222).
 Waltz—Hotel Roosevelt Orchestra, "Till We Meet" (Davis) (4284).
 11.0 : Close down.

Thursday, December 5

1YA, AUCKLAND (900 KILOCYCLES)—THURSDAY, DECEMBER 5.

- 8.0 : Afternoon session—programme presented by Messrs. Lewis Eady Ltd.
 5.0 : Children's session, conducted by Peter Pan.
 6.0 : Dinner Session—"Parlophone" Hour:
 Orchestra of the Concerts Colonne, Paris, "Symphonie Fantastique" (Berlioz) (1023).
 Grand Symphony Orchestra, "Polonaise No. 1 in A" (Chopin) (4089).
 6.13 : Tacet.
 6.15 : Dajos Bela Orchestra, "Moonlight on the Alster" (Fetras) (4110).
 Pianoforte—Rale Da Costa, "When Day is Done" (De Sylva) (4041).
 Dajos Bela Orchestra, "Schatz" waltz (Strauss) (4110).
 6.28 : Tacet.
 6.30 : Violin—Tosky Shvakovsky, "Cavatina" (Raff) (10417).
 Julian Fuh's Symphony Orchestra, "Rhapsody in Blue" (Gershwin).
 6.42 : Tacet.
 6.45 : Mendel's Mishpoche Band, "A Kosher Foxtrot Medley" (2769).
 Dajos Bela Orchestra, "Gypsy Love" (Lehar) (4080).
 6.57 : Tacet.
 7.0 : Book Review.
 7.15 : News and market reports.
 7.40 : Talk—Dr. T. Harold Pettit, "The Awards of the Royal Life Saving Society and How to Obtain Them."
 8.0 : Chimes.
 8.1 : Overture—1YA Orchestral Octet, under the conductorship of Mr. Eric Waters, "William Tell" ballet music (Rossini).
 8.11 : Vocal trio—Celeste Trio, Excerpts from "The Cingalese" (Monckton): 1. Trio, "Tea, Tea, Tea"; 2. Mezzo-soprano, "Sloe Eyes"; 3. Soprano, "Pick It Up."

- 8.22: 1YA, Orchestral Octet, (a) "Valse Des Alouettes" (Drigo); (b) "Spinning Chorus" ("The Flying Dutchman" (Wagner)).
- 8.31: Humour—Mr. T. T. Garland, Comicalities.
- 8.36: Vocal trios—Celeste Trio, (a) "La Carita" (Rossini); (b) "The Galway Piper" (trdlt.).
- 8.43: 1YA Orchestral Octet, (a) "Marie" (Berlin); (b) "A Room With a View" (Coward).
- 8.53: Talk—Mr. A. B. Chappell, M.A., Topical Talk.
- 9.8: Weather report.
- 9.10: Selection—1YA Orchestral Octet, "Firefly" (Friml).
- 9.19: Novelty—Mr. T. T. Garland, "A Fireside Chat" (original).
- 9.24: Vocal—Celeste Trio, (a) "Ma Curly Headed Babby" (Clutsam); (b) "Goodnight, Beloved" (Pinsuti).
- 9.30: "His Master's Voice" dance programme:
Foxtrot—Jack Shilkret's Orchestra, "I Want Someboy to Cheer Me Up" (Kahn) (EA388).
Foxtrot—Connecticut Yankees, "I'm Just a Vagabond Lover" (Vallee).
Foxtrot—Waring's Pennsylvanians, "My Sin" (de Sylva) (EA592).
Waltz—Connecticut Yankees, "Undernneath the Russian Moon" (Kendis) (EA565).
Waltz—The Troubadours, "Love Dreams" (Harris) (EA475).
- 9.45: Kinema organ—Charles W. Saxby, "For My Baby" (Kahal).
Foxtrot—McKinney's Cotton Pickers, "Shim-Me-Sha-Wabble" (EA467).
Foxtrot—Rhythmic Eight, "There's a Rickety Rackety Shack" (Tobias) (Zonophone EE97).
Foxtrot—George Olsen's Music, "I'm in Seventh Heaven" (Jolson).
Tango foxtrot—Hamp's Kentucky Serenaders, "Mia Bella Rosa" (Koehler) (EA545).
Novelty—Jack Hylton's Orchestra, "Bogey Wail" (Myers) (EA572).
- 10.3: Violin—Charles Williams, "Somewhere a Voice is Calling" (Tate).
Waltz—International Concert Orchestra, "Gold and Silver" (Lehar).
Waltz—Bert Firman's Dance Orchestra, "Sunset Down in Somerset" (Evans) (Zonophone EE96).
Foxtrot—Jack Shilkret's Orchestra, "In Your Green Hat" (Yellen).
Foxtrot—Nat Shilkret's Orchestra, "I'm Crazy Over You" (Sherman).
Foxtrot—Waring's Pennsylvanians, "When My Dreams Come True" (Berlin) (EA592).
- 10.22: Hawaiian—Jim Miller and Charlie Farrell, "Blue Hawaii" (Baer).
Foxtrot—Connecticut Yankees, "The One That I Love Loves Me" (Turk) (EA565).
Foxtrot—Leo Reisman's Orchestra, "Josephita" (Klages) (EA545).
Foxtrot—Jack Hylton's Orchestra, "Um-Tcha-Um-Tcha, Da, Da, Da" (Hart) (EA572).
Waltz—International Novelty Orchestra, "Emperor" (Strauss).
Waltz—The Troubadours, "Pagan Love Song" (Freed) (EA558).
- 10.40: Violin and organ—Chas. Williams, "Melody in F" (Rubinstein).
Foxtrot—Rudy Valee's Connecticut Yankees, "Every Moon's a Honey-moon" (EA581).
Foxtrot—Leo Reisman's Orchestra, "Mean To Me" (Turk) (EA548).
Foxtrot—Geo. Olsen's Music, "Break-Away" (Gottler) (EA534).
Foxtrot—Leo Reisman's Orchestra, "That's What I Call Heaven" (Solman) (EA548).
Foxtrot—Geo. Olsen's Music, "Big City Blues" (Gottler) (EA534).
Waltz—Leo Reisman's Orchestra, "When You Come to the End of the Day" (Kahn) (EA581).
- 11.0: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, DECEMBER 5.

- 3.0: Chimes of the G.P.O. clock.
- 3.1: Afternoon session—Concert of selected "H.M.V." and "Brunswick" gramophone records and "Mastertouch" Player Rolls by Messrs. Hamilton Nimmo and Sons, Ltd.
- 4.30 and 4.50: Sports results to hand.
- 5.0: Children's session, conducted by Uncle George.
- 6.0: Dinner Session—"Parlophone" Hour:
Selection—Edith Lorand Orchestra, "The Vagabond King" (Friml).
Waltz—Dajos Bela Orchestra, "The Swallows" (Strauss) (A4010).
- 6.12: Tacet.
- 6.15: Selection—Frank Westfield's Orchestra, "Chu Chin Chow" (Norton).
Piano and orchestra—Raie da Costa, "When Day Is Done" (de Sylva).
Wurlitzer organ—Leslie Harvey, "Absent" (Metcalfe) (A2728).
- 6.29: Tacet.
- 6.30: Waltzes—Dajos Bela Orchestra, "Oh, Spring, How Fair Thou Art" (Lancke); (b) "Songe D'Amour Apres Le Bal" (Czibulka).
Dajos Bela Orchestra, "Humoresque" (Dvorak) (E10559).
- 6.42: Tacet.
- 6.45: Dorsey Brothers' Dance Orchestra, "Was it a Dream?" (Coslow).
Wurlitzer organ—Leslie Harvey, "Until" (Sanderson) (A2728).
Waltz—Dajos Bela Orchestra, "Faust" (Gounod) (A4010).
- 6.55: Tacet.
- 7.0: News session, market reports and sports results.
- 7.40: Lecturette—Mr. A. E. Wilson, of the Tourist Department, "Holiday and Tourist Resorts."
- 8.0: Chimes of the G.P.O. clock.
Studio concert by the Wellington City Salvation Army Band, under the conductorship of Mr. H. Scotney, and assisting artists:
- 8.1: March—Band, "Deliverance" (Twitchen).
Selection—Band, "International Strains" (Hawkes).
- 8.14: Vocal quartet—Melodie Four, "Louise" (Whiting).
- 8.18: Tenor—Mr. Sam Duncan, "Laughareema" (Eisdell).

- 8.22: Recital—Miss Rose Carte, "When She Explained Higher Thought" (Fisk).
- 8.29: Euphonium solo with band accompaniment—Deputy Bandmaster W. Craven, "The Village Blacksmith" (arrgd. Hawkes).
- 8.37: Baritone—Mr. R. S. Allwright, "My Dreams" (Tosti).
- 8.41: Vocal duet—Mrs. R. S. Allwright and Mr. Frank Bryant, "Venetian Song" (Tosti).
- 8.45: Mandolin—Mario de Pietro, "Concert Mazurka" (Calace).
- 8.48: Vocal quartet—Melodie Four, "Carry Me Back to Old Virginny" (Bland).
- 8.52: Selection—Band, "Gems from Beethoven" (arrgd. Hawkes).
- 9.0: Weather report.
- 9.3: Tenor—Mr. Frank Bryant, "Bid Me To Love" (Bonheur).
- 9.7: Organ—F. Rowland Tims, (a) "At Dawning" (Cadman); (b) "Shepherd's Lullaby" (Hewitt) (H.M.V. B3021).
- 9.13: Soprano and quartet—Mrs. R. S. Allwright and Melodie Four, "Clinging Vine" (Grosvenor).
- 9.17: Meditation—Band, "Harlan" (Kitching).
- 9.25: Recitals—Miss Rose Carte, (a) "The Little High Chair" (Benton); (b) "On Going Home for Christmas" (Guest).
- 9.32: Bass—Mr. W. W. Marshall, "A Hundred Fathoms Deep" (Jude).
- 9.36: Selection—Band, "Warriors of the Cross" (Kitching).
- 9.44: Soprano—Mrs. Doris Allwright, "Be Still, Blackbird" (Sanderson).
- 9.48: Vocal quartet—Melodie Four, "Only a Year Ago" (Fox).
- 10.2: Air and variations—Band, "Adeste Fideles" (Goldsmith).
- 10.4: Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—THURSDAY, DECEMBER 5.

- 3.0: Afternoon session—selected studio items.
- 4.25: Sports results to hand.
- 5.0: Children's session, conducted by Uncle John.
- 6.0: Dinner session—"Columbia" Hour:
Intermezzo—Milan Symphony Orchestra, "Cavalleria Rusticana" (Mascagni) (02841).
Selection—Herman Finck's Orchestra, "Schubertiana" (Arrgd. Finck).
- 6.12: Tacet.
- 6.15: Selection—Herman Finck's Orchestra "Schubertiana" (Arrgd. Finck).
Rio Marimba Orchestra—"Three O'clock in the Morning" (Robledo).
- 6.27: Tacet.
- 6.30: Bayreuth Festival Orchestra, "Siegfried—Prelude Act 3" (Wagner).
Waltz—Eddie Thomas' Collegians, "Moments With You" (Shilkret).
Waltz—Eddie Thomas' Collegians, "Moonlight on the Danube" (Gay).
Wurlitzer organ—Stanley MacDonald, "La Rosita" (Dupont) (Regal).
- 6.43: Tacet.
- 6.45: Selection—Regal Orchestra, "Pagliacci" (Leoncavallo) (Regal).
Rio Marimba Orchestra, "My Isle of Golden Dreams" (Blaufuss).
- 6.57: Tacet.
- 7.0: News session.
- 7.30: Lecture arranged by 3YA Primary Productions Committee—"New Zealand Native Plants," by Mr. H. L. Darton, Secretary Canterbury Horticultural Society.
- 8.0: Chimes.
- 8.1: Overture—Studio Instrumental Octet, under the conductorship of Mr. Harold Beck, (a) "Minuet from G Symphony" (Mozart); (b) "Valse Triste" (Sibelius).
- 8.9: Mezzo-contralto—Mrs. L. Bingham Puddey, "A Fairy Went A'Market-ing" (Goodhart).
- 8.13: Violin—Erica Morini, "Russian Folk Song" (Kreisler (H.M.V. EDS)).
- 8.16: Tenor—Mr. C. R. Williamson, "Destiny" (Furrell).
- 8.20: Studio Instrumental Octet, (a) "Gavotte," (b) "Bouree," (c) "Air," (d) "Gigue" (Bach).
- 8.33: Soprano—Miss Agnes Cunningham, "Qui Te Falt" ("Thais") (Massenet).
- 8.37: Black Diamonds Band, "Gipsy Dance" (George) (Zonophone 5753).
- 8.41: Recital—Miss Winifred Smith, (a) "The Chimney Seat" (Hennequin); (b) "Dickens in Camp" (Bret Harte).
- 8.46: Studio Instrumental Quartet (2 violins, cello and harp)—"Minuet in G" (Beethoven).
- 8.51: Baritone—Mr. Clive Hindle, (a) "The Last Song" (Rogers); (b) "Still in Dreams" (Chenkerbutty).
- 8.57: Duet and chorus—Florence Austral and Browning Mummery, "Miserere" ("Il Trovatore") (Verdi) (H.M.V. D1302).
- 9.0: Weather report.
- 9.2: Studio Instrumental Octet—(a) "Londonderry Air" (Harty); (b) "Mock Morris Dance" (Grainger).
- 9.10: Mezzo-contralto—Mrs. Bingham Puddey, (a) "The String of Pearls" (Phillips); (b) "All Joy be Thine" (Sanderson).
- 9.16: Violin—Erica Morini, "Adagio from Concerto" (Viotti, arrgd. Hoffmann). (H.M.V. EDS).
- 9.20: Tenor—Mr. C. R. Williamson, (a) "The Sweetest Flower that Blooms" (Hawley); (b) "The Garden of Your Heart" (Dorel).
- 9.27: Studio Instrumental Octet—"Entr'acte and Valse" (Delibes).
- 9.35: Soprano—Miss Agnes Cunningham, (a) "Songs my Mother Taught Me" (Dvorak); (b) "Love, I Have Won You" (Landon Ronald).
- 9.41: Pianoforte—Benno Moisevitch, "Polonaise in B Flat Major" (Chopin).
- 9.44: Recital—Miss Winifred Smith, "Bannerman of the Dandenong" (Lawson).
- 9.49: Baritone—Mr. Clive Hindle, "Blow, Blow Thou Winter Wind" (Sargeant).

9.53: Selection—Berlin Philharmonic Orchestra, "Carnival Romain" (Berlioz) (H.M.V. D1365).
10.1: Close down.

4YA, DUNEDIN (650 KILOCYCLES)—THURSDAY, DECEMBER 5.
SILENT DAY.

Friday, December 6

1YA, AUCKLAND (900 KILOCYCLES)—FRIDAY, DECEMBER 6.

3.0 : Afternoon session—selected studio items.
4.0 : Literary selection by the Announcer.
4.8 : Studio items.
4.25: Sports results to hand.
5.0 : Children's session, conducted by Nod and Aunt Jean.
6.0 : Dinner session—"His Master's Voice" Hour:
Vienna Philharmonic Orchestra, "Symphony No. 6 in F Major—1st. Movement, Allegro Ma Non Troppo" (Beethoven) (D1473).
Organ—Arthur Meale, "Pilgrim's Song of Hope" (Bafiste) (C1277).
6.13: Tacet.
6.15: Piccadilly Orchestra, "Songs My Mother Taught Me" (Dvorak).
Virtuoso String Quartet—"Mignon—Gavotte" (Thomas) (B2784).
Royal Opera Orchestra, "Berceuse" (Jarnefeldt) (B2618).
San Francisco Symphony Orchestra, "Liebeslied" (Kreisler) (ED6).
6.27: Tacet.
6.30: Organ—Arthur Meale, "March on a Theme by Handel" (Guilmant).
Berlin State Opera Orchestra, "Mignon" (Thomas) (D1246).
6.42: Tacet.
6.45: Violin—Fritz Kriesler, "La Vida Breve" (de Falla) (DA1009).
Berlin State Opera Orchestra, "Second Polonaise" (Liszt) (D1625).
6.57: Tacet.
7.0 : News and market reports.
8.0 : Chimes.
8.1 : Relay from Town Hall, Otorohanga, of concert arranged by Mr. Wreford Wade (accompaniste, Mrs. A. E. Cooke, L.T.C.L.).
Overture—Otorohanga Symphony Orchestra under the conductorship of Mr. Wreford Wade, "Hortensia" (Bendix).
Mezzo-soprano—Miss D. Briggs, "The Joy Bird" (Barnes).
Saxophone solo—Mr. P. O'Rourke, "Kiss Me Again" (Berlin).
Baritone—Mr. Wreford Wade, "The Song of Hybrius the Cretan" (Elliot).
Violin—Captain P. S. Stanley, "Salut d'Amour" (Elgar).
Whistling solo—Mr. W. Swift, "The Mocking Bird."
Humorous monologue—Miss Alvin England, "The Girl in the Shoe Store."
Chorus ballet—Jouvenille Rascals, "The Toymaker's Dream" (Golden).
Pianoforte duet—Misses D. and A. Liddy, "Marche Militaire" (Schubert).
Soprano—Mrs. C. Corboy (late of 3LO, Melbourne), "Love's a Merchant" (Molly Carew).
Humorous monologue—Captain P. S. Stanley, "Having It Out."
Instrumental novelty—Otorohanga Symphony Orchestra, "Echoes of the South" (Klohr).
Interval.
Overture—Otorohanga Symphony Orchestra, "Merchant of Venice" Suite (Rosse).
Baritone—Mr. G. Corboy, "Mountain Lovers" (Squire).
Mellowphone solo—Mr. Chas. Day, "The Lost Chord" (Sullivan).
Native item—Huia Troupe.
Violin—Mr. C. Anderson, "Ave Maria" (Schubert).
Soprano—Mrs. R. V. Garrett, "My Prayer" (Squire).
Monologue—Mr. Wreford Wade, "The Shooting of Dan McGrew" (Service).
Pianoforte solo—Miss J. McGittagen, "Scherzo" (Chopin).
Vocal solo—Miss Gladys Wade (aged 12 years), "Big Lady Moon" (Coleridge-Taylor).
Saxophone—Mr. P. O'Rourke, "Valse Vanite."
Humour—Mr. Wreford Wade, "My Word" (Bennett).
Soprano—Mrs. C. Corboy, "I Love the Moon" (Rubens).
Finale—Otorohanga Symphony Orchestra, Jazz Medley.
God Save the King.

2YA, WELLINGTON (720 KILOCYCLES)—FRIDAY, DECEMBER 6.

3.0 : Chimes of the G.P.O. clock.
3.1 : Selected gramophone items.
4.30 and 4.50: Sports results to hand.
5.0 : Children's session, conducted by Big Brother Jack.
6.0 : Dinner Session—"His Master's Voice" Hour:
Selection—Kauffman's Orchestra, "The Gipsy Baron" (Strauss).
Waltz—La Vittoria Orchestra, "Wedding of the Winds" (Hall).
6.12: Tacet.
6.15: Piccadilly Orchestra, (a) "If Only I Had You" (Davies); (b) "Lolita" (Ferrete) (B2713).
Hawaiian—Kolomoku's Honoluluans, "Aloha Oe" (Liliuokalani).
Piccadilly Orchestra, "Charmaine" (Rapee) (B2528).
6.27: Tacet.

6.30: Selection—New Mayfair Orchestra, "This Year of Grace" (Coward).
Waring's Orchestra, "Ah! Sweet Mystery of Life" (Herbert) (EB37).
Hawaiian—Kolomoku's Honoluluans, "Three O'Clock in the Morning" (Robledo) (Zonophone EF23).
6.42: Tacet.
6.45: Victor Concert Orchestra, "Minuet in G" (Paderewski) (EA240).
Victor Concert Orchestra, "Amaryllis" (Ghys) (EA240).
Piccadilly Orchestra, "Bird Songs at Eventide" (Coates) (B2528).
International Concert Orchestra, "Blue Danube" waltz (Strauss).
6.57: Tacet.
7.0 : News session, market reports and sports results.
7.40: Lecturette—Mr. R. Howard Taylor, "Care of the Feet."
8.0 : Chimes of the G.P.O. clock.
Programme featuring vocal excerpts from "The Quaker Girl" (Monckton) presented by the Etude Quartet:
8.1 : Overture—2YA Orchestra, under the conductorship of Signor A. P. Truda, "The Quaker Girl" (Monckton).
8.9 : Soprano—Miss Gretta Stark, "O Time, Time" (Monckton).
8.13: Pianoforte—Miss Mary Lennie, "Ballade in A Flat" (Chopin).
8.20: Vocal quartet—The Etude Quartet, "A Runaway Match" (Monckton).
8.24: Recital—Mr. Errol Muir, "Song of the Pacific" (Service).
8.31: March—2YA Orchestra, "Coronation March" ("The Prophet") (Meyerbeer).
Selection—2YA Orchestra, "Kuyawiak" (Wieniawski).
8.39: Contralto—Mrs. Ray Kemp, "A Quaker Girl" (Monckton).
8.43: Vocal duet—Mr. and Mrs. Ray Kemp, "The Bad Boy and the Good Girl" (Monckton).
8.47: Violin and Wurlitzer Organ—De Groot and Terence Casey, "Cavatina" (Raff) (H.M.V. B2920).
8.50: Baritone and chorus—Mr. Ray Kemp and Etude Quartet, "Just as Father Used To Do" (Monckton).
8.54: Musical comedy selection—2YA Orchestra, "Rose Marie" (Friml).
9.2 : Weather report.
9.4 : Soprano—Miss Gretta Stark, "The Little Grey Bonnet" (Monckton).
9.8 : Violin and Wurlitzer Organ—De Groot and Terence Casey, "Parted" (Tosti) (H.M.V. B2920).
9.11: Tenor and chorus—Mr. W. Hancock and Etude Quartet, "Come to the Ball" (Monckton).
9.15: Selection—2YA Orchestra, "Master Melodies from Famous Light Operas" (arrgd. Roberts) (Part 1).
9.23: Contralto—Mrs. Ray Kemp, "Petticoats for Women" (Monckton).
9.27: Humour—Mr. Errol Muir, "Bertram on Babies" (Rutherford).
9.34: Valse—2YA Orchestra, "Vienna Beauties" (Ziehrer).
9.42: Vocal duet—Miss Gretta Stark and Mr. W. Hancock, "A Wilderness and Thou" (Monckton).
9.46: National Military Band, "March—Tannhauser" (Wagner).
9.50: Vocal quartet—Etude Quartet, "Tip Toes" (Monckton).
9.54: Selection—2YA Orchestra, "Master Melodies from Famous Light Operas" (arrgd. Roberts) (Part 2).
10.2 : Close down.

***3YA, CHRISTCHURCH (980 KILOCYCLES)—FRIDAY, DECEMBER 6.**

3.0 : Afternoon session—Selected studio items.
4.25: Sports results to hand.
5.0 : Children's session conducted by "Storyman."
6.0 : Dinner session—"Columbia" Hour:
Selection—H.M. Grenadier Guards Band, "Merrie England" (German) (02804).
Bournemouth Municipal Orchestra, "Idylle Bretonne" (Gennin) (02809).
6.12: Tacet.
6.15: Waltz—Jacque Jacobs Ensemble, "L'Estudiantina" (Waldteufel).
Plaza Theatre Orchestra, (a) "A La Gavotte" (Finck), (b) "Minuet" (Finck) (01439).
March—H.M. Grenadier Guards Band, "Old Panama" (Alford) (01535).
6.27: Tacet.
6.30: Ketelbey's Concert Orchestra, "The Sacred Hour" (Ketelbey) (01528).
Sandler's Orchestra, "Someday, Somewhere" (Rapee) (01521).
Bournemouth Municipal Orchestra, "Fluttering Birds" (Gennin).
6.43: Tacet.
6.45: Musical Art Quartet, (a) "Mighty Lak a Rose" (Nevin), (b) "To a Wild Rose" (McDowell) (01506).
Sandler's Orchestra, "Sonny Boy" (De Sylva) (01521).
March—H.M. Grenadier Guards, "Dunedin" (Alford) (01535).
6.57: Tacet.
7.0 : News session.
7.30: Lecturette—Mr. Alec O'Donoghue, N.Z. Inst. R.A.O.U., "The Kakapo and Its Mysteries" (being the second of a series of talks on quaint New Zealand birds).
8.0 : Chimes.
8.1 : Overture—Grand Symphony Orchestra, "Raymond" (Thomas) (Parlophone A4005).
8.9 : Vocal quartet—Valencia Quartet, "It was a Lover and His Lass" (Curwen).
Soprano—Mrs. Lucy O'Brien, "Here in the Quiet Hills" (Carne).
8.16: Organ—Leslie Harvey, "Absent" (Metcalfe) (Parlophone A2728).
8.19: Tenor—Mr. T. G. Rogers, "A Little Dream of You" (Fletcher).
8.22: Dance music—Bailey-Marston Dance Orchestra, (a) "The Desert Song" (Romberg), (b) "The Toymaker's Dream" (Golden).
8.26: Contralto—Miss Mary Taylor, (a) "In Sweet Content" (Trottere), (b) "I've Been Roaming" (Rutter).
8.31: Novelty—Arnold Johnson's Orchestra, "Radio Impressions" (Brunswick 4358).

- 8.34: Vocal quartet—Valencia Quartet, "The Long Day Closes" (Sullivan).
 8.38: Humour—Mr. J. P. Darragh, "Guy de Vere's Night Out" (own arrangement).
 8.42: Dance music—Bailey-Marston Dance Orchestra, (a) "Old Man Sunshine" (Warren), (b) "Querida" (Warren).
 8.50: Baritone—Mr. E. J. Johnson, "The Sergeant of the Line" (Squire).
 8.54: Hawaiian—Tubize Royal Hawaiian Orchestra, "Wabash Blues" (Memken) (Parlophone A2736).
 9.0: Weather report.
 9.2: Dance music—Bailey-Marston Dance Orchestra, (a) "The Wedding of the Painted Doll" (Turk), (b) "Blossoms" (Deitrick).
 9.10: Soprano—Mrs. Lucy O'Brien, "Boat Song" (Ware).
 9.13: Organ—Leslie Harvey, "Until" (Sanderson) (Parlophone A2728).
 9.16: Tenor—Mr. T. G. Rogers, "The Sailor's Grave" (Sullivan).
 9.20: Contralto—Miss Mary Taylor, "The Silver Ring" (Chaminade).
 9.28: Dance music—Bailey-Marston Dance Orchestra, (a) "One Alone" (Romberg), (b) "Don't Be Like That" (Warren).
 9.31: Male choruses—Famous Forty Eiks Chorus, (a) "Annie Laurie" (Douglas), (b) "Sweet and Low" (Barnby) (Brunswick 3973).
 9.37: Humour—Mr. J. P. Darragh, "Guy de Vere's Mixup" (own arrangement).
 9.42: Dance music—Bailey-Marston Dance Orchestra, (a) "Sweethearts on Parade" (Lombardo), (b) "Laughing Marionette" (Collins).
 9.50: Baritone—Mr. E. J. Johnson, "The Lute Player" (Allitsen).
 Vocal quartet—Valencia Quartet, "Come Where My Love Lies Dreaming" (Foster).
 9.57: Dance Music—Bailey-Marston Dance Orchestra: "Break Away" (Conrad), "That's My Baby" (Conrad), "When Summer is Gone" (Whitely), "Dream Mother" (Burke), "I'm Just a Vagabond Lover" (Vallee), "Louise" (Robin).
 Dance music by the Bailey-Marston Dance Orchestra until 11 p.m.
 11.0: Close down.

4YA, DUNEDIN (650 KILOCYCLES—FRIDAY, DECEMBER 6.

- 3.0: Town Hall chimes.
 3.1: Selected gramophone items.
 3.15: Lecturette by Miss Bueckleuch, of the D.S.A. Ltd. "Fashions."
 3.30: Studio items.
 4.25: Sports results to hand.
 5.0: Children's session, conducted by Aunt Sheila.
 6.0: Dinner Session—"His Master's Voice" Hour:
 Royal Albert Hall Orchestra—"Carmen—Prelude Act 1" (Bizet).
 National Symphony Orchestra, "Sylvia Ballet—Cortege de Bacchus" (Delibes) (EB24).
 Organ—Reginald Foort, "Schon Rosmarin" (Kreisler) (B2664).
 6.12: Tacet.
 6.15: Selection—Marek Weber's Orchestra, "La Tosca" (Puccini) (EB24).
 National Symphony Orchestra, "La Traviata" Prelude (Verdi) (EB24).
 6.27: Tacet.
 6.30: Selection—National Symphony Orchestra, "Bohemian Girl"
 Royal Albert Hall Orchestra, "Carmen—Prelude Act 2" (Bizet).
 Organ—Reginald Foort, "A Brown Bird Singing" (Haydn) (B2664).
 6.42: Tacet.
 6.45: Selection—National Symphony Orchestra, "Aida" (Verdi).
 Selection—H.M. Coldstream Guards, "H.M.S. Pinafore" (Sullivan).
 6.57: Tacet.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Instrumental—Paramount Quintet, "Suite of Waltzes" (Brahms).
 8.17: Soprano—Miss Evelyn Shepherd, (a) "Gretchen at the Spinning Wheel" (Schubert), (b) "As Through the Street" (Puccini).
 8.21: San Francisco Symphony Orchestra, "Caprice Viennois" (Kreisler).
 8.22: Recital—Miss Tui Northey, "Hermione's Defence" (Shakespeare).
 8.27: Instrumental trio—Misses Wallace, Baker and Smith, "Trio in C Minor—Allegro con Brio" (Beethoven).
 8.34: Bass—Mr. Mortley Peake, "The Secret" (Scott).
 8.38: Violin—Miss Ethel Wallace, "Violin Concerto in C Minor—Andante and Allegro Molto Vivace" (Mendelssohn).
 8.49: Contralto—Miss Mary Somerville, (a) "The Silver Ring" (Chaminade), (b) "Sapphic Ode" (Brahms).
 8.50: Selection—Band of H.M. Coldstream Guards, "Softly Awakes My Heart" ("Samson and Delilah") (Saint-Saens) (H.M.V. B2878).
 9.0: Weather report.
 9.2: Instrumental—Paramount Quintet, "Chant Elegiaque" (Tchaikowsky).
 9.12: Soprano—Miss Evelyn Shepherd, "Dreary the Stepps" (Rachmaninoff).
 9.16: San Francisco Symphony Orchestra, "Coppelia Ballet" (Delibes).
 9.20: Recitals—Miss Tui Northey, (a) "Sherwood" (Noyes), (b) Monologue, "Comfort" (Service).
 9.25: Violin—Miss Ethel Wallace, "Legende" (Wieniawski).
 9.31: Bass—Mr. Mortley Peake, (a) "The Smugglers' Song" (Sanderson); (b) "One Little Hour" (Carse).
 9.38: Instrumental trio—Misses Wallace, Baker and Smith, (a) "Danse Macabre" (Saint-Saens), (b) "Liebestraume" (Liszt).
 9.45: Contralto—Miss Mary Somerville, "Life and Death" (Coleridge Taylor).
 9.48: Chorus—Royal Opera Chorus, "Spinning Chorus" ("The Flying Dutchman") (Wagner) (H.M.V. D1517).
 9.52: Instrumental—Paramount Quintet, "Romance" (Sibelius).
 10.0: Close down.

Saturday, December 7

1YA, AUCKLAND (900 KILOCYCLES)—SATURDAY, DECEMBER 7.

- 3.0: Afternoon session—selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 5.0: Children's session, conducted by Cinderella.
 6.0: Dinner Session—"His Master's Voice" Hour:
 H.M. Coldstream Guards Band, "A Musical Switch" (Alford) (C1580).
 Royal Albert Hall Orchestra, "Pomp and Circumstance" (Elgar).
 6.13: Tacet.
 6.15: Concerted—Light Opera Company, "Songs of the Past" (C1049).
 Flonzaley String Quartet, "Quartet in A Minor"—Scherzo, (Schumann) (DB249).
 Organ—F. Roland-Timms, "Shepherd's Lullaby" (Hewitt) (B3021).
 6.27: Tacet.
 6.30: Victor Symphony Orchestra, "Dance of the Hours" (Ponchielli).
 Concerted—Light Opera Company, "Songs of the Past" (C1049).
 6.42: Tacet.
 6.45: Hilo Hawaiian Orchestra, "My Hula Love" medley march, (B2799).
 Instrumental trio—De Groot, Bor and Calve, "I Zingari" (Leoncavallo) (B3028).
 Selection—Piccadilly Orchestra, "The Waltz Dream" (Strauss).
 6.57: Tacet.
 7.0: News and market reports—sports results to hand.
 7.40: Talk by Mr. D. G. Rutter on "Gladioli."
 8.0: Chimes.
 8.1: Relay from Auckland Town Hall of concert by the Auckland Municipal Band, under the conductorship of Mr. Christopher Smith.
 10.0: "Brunswick" Dance Programme:
 Foxtrot—The Captivators, "I'm Marching Home to You" (Silver).
 Foxtrot—The Jungle Band, "Paducah" (4309).
 Foxtrot—Bob Haring's Orchestra, "A Night in May" (Simon) (4310).
 Waltz—Regent Club Orchestra, "Dear, When I Met You" (4314).
 Waltz—Bob Haring's Orchestra, "By and Bye, Sweetheart" (Yellen).
 10.16: Choral—Forbes Randolph's Kentucky Jubilee Choir, "My Old Kentucky Home" (Collins-Foster) (4285).
 Waltz—Eight Radio Stars, "The Dream Girl of Pi K.A." (Shields).
 Foxtrot—Bob Haring's Orchestra, "My Cairo Love" (Zamecnik).
 Foxtrot—Bob Haring's Orchestra, "Huggable, Kissable You" (Bibo).
 10.29: Organ—Lew White, "If I Had You" (Shapiro) (4310).
 Foxtrot—Roosevelt Orchestra, "Till We Meet" (Davis) (4284).
 Foxtrot—The Captivators, "I Used to Love Her in the Moonlight" (Lewis) (4308).
 Waltz—Eight Radio Stars, "I Found Happiness" (Rapee) (4272).
 Waltz—Regent Club Orchestra, "Underneath the Russian Moon" (Kendall) (4314).
 10.45: Vocal duet—Luther and Robison, "Old Kentucky Cabin" (Robison).
 Foxtrot—The Clevelanders, "What a Girl! What a Night!" (Sanders).
 Foxtrot—Katzman and Brunswick Orchestra, "I'd Rather Be Blue" (Rose) (4213).
 Foxtrot—Ray Miller's Orchestra, "Cradle of Love" (Wayne) (4233).
 Foxtrot—Stafford's Orchestra, "All A'Twitter" (Whiting) (4250).
 11.0: Close down.

2YT, WELLINGTON (720 KILOCYCLES)—SATURDAY, DECEMBER 7.

- 3.0: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.50: Sports results to hand.
 5.0: Children's session, conducted by Uncle Toby and Aunt Gwen.
 6.0: Dinner Session—"Columbia" Hour:
 Medley—H.M. Grenadier Guards Band, "Sir Harry Lauder" medley (Lauder) (02750).
 Waltz—Symphony Orchestra, "Doctrinen" (Strauss) (02520).
 6.12: Tacet.
 6.15: Pianoforte—Gil Dech, "Wedding of the Painted Doll" (Freed) (01549).
 Piano—Constance Mering, "So Dear" (Caesar) (01224).
 Waltz medley—Eddie Thomas' Collegians, (02904).
 Saxophone—Rudy Wiedoeft, "Minuet" (Beethoven) (01176).
 6.26: Tacet.
 6.30: Mandoline Band—Circo Mandolinistico, "La Traviata—Prelude Acts 1 and 4" (Verdi) (02566).
 Waltz—Symphony Orchestra, "When the Lemons Bloom" (Strauss).
 6.42: Tacet.
 6.45: Musical Art Quartet, "Mighty Lak a Rose" (Nevin) (01506).
 Saxophone—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft) (01176).
 Pianoforte—Gil Dech, "I Kiss Your Hand, Madame" (Erwin) (01549).
 Instrumental—Eddie Thomas' Collegians, "Beautiful Ohio" (Earl).
 6.57: Tacet.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. A. Varney (Hon. Secretary, Wellington Cricket Association), "The English Team."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—2YA Salon Orchestra, under the conductorship of Mr. Mat Dixon, "Clovertown" selection (Wood).
 8.9: Relay from the Concert Chamber, Town Hall, of the Wellington Harmonic Society's final concert of the 1929 season:
 Part-song, choir, "Vagabonds" (Fanning).
 Bass solo—Mr. J. M. Caldwell, "Young Diedrich" (Henschell).

- Part-song, choir, "Night Whispers" (Von Moellendorff).
 Part-song, choir, "Nightfall in Skye" (Robertson) (a song without words).
 'Cello—Mr. Claude Tanner, (a) "Air" (Mattheson), (b) "Andaluzza" (Granados).
 Part-song, choir, "Love" (Elgar).
 Male quartet—Harmonic Quartet, "Come, Gentle Night" (Baynon).
 Part-song, choir, "A Morning Madrigal" (Fletcher).
 Part-song, choir, "Tender Sleep Enfold Thee" (Markham Lee).
 From the Studio:
 Weather report and announcements.
 Instrumental—2YA Salon Orchestra, "Dance of the Hours" (Ponchielli).
 Continuation of relay from Concert Chamber, Town Hall:
 Madrigal—Choir, "The Silver Swan" (Gibbons).
 Folk song—Choir (soloist Mr. R. R. Orr), "The Turtle Dove" (arrgd. Vaughan Williams).
 Part song—Ladies Choir, "Oh Where, Tell Me Where?" ("The Blue Bells of Scotland") (arrgd. Robertson).
 Bass—Mr. J. M. Caldwell, (a) "Border Ballad" (Cowen), (b) "Kirkconnell Lea" (trdfl.).
 Part song—Choir, "The Death of Morar" (Bantock).
 'Cello—Mr. Claude Tanner, (a) "Berceuse" (Faure), (b) "Spinning Wheel" (Popper).
 Chorus—Choir, "Promised Joys" (Mendelssohn).
 10.0 (approx): "Brunswick" Dance Programme:
 Foxtrot—Bob Haring's Orchestra, "Louise" (Robin) (4350).
 Foxtrot—Colonial Club Orchestra, "Peace of Mind" (Dyrenforth).
 Foxtrot—Bob Haring's Orchestra, "Huggable, Kissable You" (Bibo).
 Foxtrot—Al Goodman's Orchestra, "Yours Sincerely" (Rodgers).
 Foxtrot—Colonial Club Orchestra, "The One in the World" (Little).
 Waltz—Colonial Club Orchestra, "My Heart is Bluer Than Your Eyes" (Bryan) (4364).
 10.18: Male trio—Earl Burnett's Biltmore Trio, "Love Me or Leave Me" (Kahn) (4336).
 Foxtrot—Bob Haring's Orchestra, "Fiorella" (Romilli) (4288).
 Foxtrot—Ray Miller's Orchestra, "In My Garden of Memory" (Buckley) (4352).
 Novelty foxtrot—Anglo Persians, "Dance of the Paper Dolls" (Tucker).
 Foxtrot—Ray Miller's Orchestra, "Moonlight and Roses" (Lemare).
 Waltz—Bob Haring's Orchestra, "Dream Boat" (Henry) (4288).
 10.36: Violin—Fredric Fradkin, "Nola" (Arndt) (4318).
 Foxtrot—Pleasure Bound Orchestra, "Just Suppose" (Silvers) (4357).
 Waltz—Regent Club Orchestra, "Just Another Kiss" (Davis) (4357).
 10.45: Sporting summary.
 11.0: Close down.
- 3YA, CHRISTCHURCH (980 KILOCYCLES)—SATURDAY, DECEMBER 7.**
- 3.0: Afternoon session—selected studio items.
 4.25: Sports results to hand.
 5.0: Children's session, conducted by Chuckle and Aunt Pat.
 6.0: Dinner Session—"Parlophone" Hour:
 Fantasia—Edith Lorand Orchestra, "Johann Strauss" Fantasia (Strauss) (A4044).
 Piano and orchestra—Raie da Costa, "When Day is Done" (De Sylva).
 6.12: Tacet.
 6.15: Hawaiian—David Kaili, "Honolulu March" (A2464).
 Kinema organ—Leslie Harvey, "Where the Shy Little Violets Grow" (Warren) (A2695).
 Waltz—Dajos Bela Orchestra, "The Grenadiers" (Waldteufel).
 Saxophone—Arnold Brillhart, "Fascination" (Bernie) (A2676).
 6.28: Tacet.
 6.30: Waltz—Dajos Bela Orchestra, "Polish Life" (Nedbal) (A4008).
 Piano and orchestra—Raie da Costa, "Sweetheart, I'm Dreaming of You" (Carter) (A4041).
 Dajos Bela Orchestra, "Dancing Demoiselle" (Fall) (A4008).
 6.42: Tacet.
 6.45: Selection—Edith Lorand Orchestra, "Dollar Princess" (Fall).
 Waltz—Dajos Bela Orchestra, "Casino Tanze" (Gungi) (A4081).
 6.57: Tacet.
 7.0: News session.
 7.30: Sports results.
 8.0: Chimes.
 8.1: Overture—Mandolin Band, "Semiramide" (Rossini) (Columbia 02667).
 8.9: Mezzo-soprano—Miss Anita Graham, "Twickenham Ferry" (Marsials).
 8.13: 'Cello—Mr. Harold Beck, "On Wings of Song" (Mendelssohn).
 8.17: Popular songs—Mr. Leslie Stewart, (a) "A Thousand Years From Now" (Ball), (b) "Pal of My Dreams" (Roat).
 8.24: Christchurch Broadcasting Trio, (a) "April's Lady" (Ancliffe), (b) "Cradle Song" (Schubert), (c) "Hungarian Dance No. 11" (Brahms).
 8.28: Contralto—Mrs. D. W. Stallard, "My Ain Folk" (Lemon).
 8.32: Xylophone—A. W. Bennett, "Dancer of Seville" (Grimow).
 8.38: Recital—Mr. Harold Shaw, "The Waxwork Watchman" (Frank).
 8.44: Solo at piano—Miss Anne Stephenson, "Lucky in Love" (De Sylva).
 8.48: Baritone—Mr. W. J. Richards, "Old Barty" (Grand).
 8.52: Selection—Debroy Somers' Band, "The Singing Fool" (arrgd. Connelly) (Columbia 02920).
 9.0: Weather report.
 9.2: Mezzo-soprano—Miss Anita Graham, (a) "The Love Nest" ("Mary") (Hirsch), (b) "The Kerry Dance" (Molloy).
 9.8: 'Cello—Mr. Harold Beck, "Serenade" (Squire).
 9.12: Popular song—Mr. Leslie Stewart, "Sally Horner" (Carey).
 9.16: Christchurch Broadcasting Trio, "Trio No. 6" (Carl Bohm).
 9.24: Contralto—Mrs. D. W. Stallard, (a) "Lochnagar" (trdfl.), (b) "The Spinning Wheel" (Lees).
 9.31: Organ—Stanley McDonald, "Nicolette" (Batten) (Regal G20401).
 9.34: Recital—Mr. Harold Shaw, "Wedding Day Speeches" (MS.).
 9.41: Solos at piano—Miss Anne Stephenson, (a) "This Little Teddy Bear" (Levi); (b) "A Room with a View" (Coward).
 9.46: Baritone—Mr. W. J. Richards, (a) "A Sail in a Piping Breeze" (Petries); (b) "You'll Get Heaps o' Lickens" (Clarke).
 9.51: Band of Garde Republicaine de France, "Carmen entr'acte" (Bizet).
 10.0: "Columbia" Dance Programme:
 Foxtrot—Ipapa Troubadours, "Building a Nest for Mary" (Greer).
 Slow Foxtrot—Piccadilly Players, "Bogey Wail" (Wallace) (01567).
 Foxtrot—Ipapa Troubadours, "I Used to Love Her in the Moonlight" (Florito) (01617).
 Waltz—Rhythmic Troubadours, "My Irish Paradise" (Tilsley).
 10.12: Vocal duet—Layton and Johnstone, "Lady Divine" (Shilkret) (01658).
 Foxtrot—Piccadilly Players, "I'll Always Be Mother's Boy" (Green).
 Foxtrot—Paul Whiteman's Orchestra, "When My Dreams Come True" (Berlin) (07024).
 Foxtrot—Picadilly Players, "There'll Be You and I" (Green) (01639).
 Foxtrot—Picadilly Players, "I'm Tickled to Death I'm Me" (Butler).
 10.27: Cinema organ—Regal Cinema Organ, "Long Ago" (Elliott) (Regal).
 Foxtrot—Lou Gold's Orchestra, "Walking with Susie" (Gottler).
 Foxtrot—Paul Whiteman's Orchestra, "Reaching for Someone" (Leslie) (07024).
 Foxtrot—Bert Lown's Loungers, "Big City Blues" (Gottler).
 Waltz—Cafe Royal Band, "Forever" (Yellen) (Regal G20551).
 Waltz—The Cavaliers, "My Dear" (Kahn) (01646).
 10.45: Vocal solo—Ruth Etting, "You're the Cream in My Coffee" (de Sylva).
 Foxtrot—Paul Whiteman's Orchestra, "S'posin'" (Razaf) (07027).
 Foxtrot—Picadilly Players, "My Mother's Eyes" (Baer) (01646).
 Foxtrot—Paul Whiteman's Orchestra, "Laughing Marionette" (Collins).
 Foxtrot—Lou Gold's Orchestra, "Breakaway" (Gottler) (Regal).
 11.0: Close down.
- 4YA DUNEDIN (650 KILOCYCLES)—SATURDAY, DECEMBER 7.**
- 3.0: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 5.0: Children's session, conducted by Big Brother Bill.
 6.0: Dinner session—"Columbia" Hour:
 March—National Military Band, "National Emblem" (Bagley).
 'Cello—W. H. Squire, "The Broken Melody" (Van Biene) (04180).
 Albert Sandler's Orchestra, "I Kiss Your Hand, Madame" (Erwin).
 Cinema organ—G. T. Pattman, "Cherie Waltz" (Valentine) (01344).
 6.12: Tacet.
 6.15: Selection—Court Symphony Orchestra, "The Gondoliers" (Sullivan).
 Paul Whiteman's Orchestra, "Gypsy" (Gilbert) (07505).
 6.27: Tacet.
 6.30: Sandler's Orchestra, "Charlita" (Scherzinger) (01467).
 Marimbas—Rio Marimba Serenaders, "Paree" (Padilla).
 Pianoforte—Gil Dech, "Sometimes I'm Happy" (Youmans) (01205).
 Royal Serbian Tambouritzza Orchestra, "Serbian Melody" (01490).
 6.42: Tacet.
 6.45: Intermezzo—Ketelbey's Orchestra, "Bells Across the Meadows" (Ketelbey) (02695).
 Marimbas—Rio Marimba Serenaders, "Dolores" Waltz (Waldteufel).
 Cinema organ—G. T. Pattman, "Worryin'" Waltz (Fairman) (01344).
 March—National Military Band, "Stars and Stripes" (Sousa) (01153).
 6.57: Tacet.
 7.0: News session.
 7.40: Lecturette by Pastor W. D. More, "Rabbits."
 8.0: Relay of 3YA, Christchurch (Vaudeville Programme).
 10.0: "His Master's Voice" Dance Programme:
 Medley waltz—The Troubadours, "Popular Songs of Yesterday."
 Foxtrot—Nat Shilkret's Orchestra, "Dusky Stevedore" (Razaf).
 Foxtrot—Shilkret's Orchestra, "Just a Sweetheart" (Shilkret).
 Foxtrot—Shilkret's Orchestra, "When Sweet Susie Goes Steppin' By" (Kaufman) (EA452).
 10.13: Tenor—Lewis James, "Roses of Yesterday" (Berlin) (Zono. EE122).
 Hawaiian—Hilo Hawaiian Orchestra, "Honolulu Sweetheart of Mine" (Davis) (EA415).
 Waltz—The Troubadours, "Was it Love?" (Caesar) (EA464).
 Foxtrot—Goldkertes' Orchestra, "That's what put the Sweet in Home Sweet Home" (Lowry) (EA487).
 10.25: Tenor—Barrington Hooper, "For You Alone" (Geehl) (Zono. 5204).
 Foxtrot—Goldkertes' Orchestra, "Sweethearts on Parade" (Lombardo).
 Waltz—The Troubadours, "Another Kiss" (Scherzinger) (7A489).
 Foxtrot—Jack Hylton's Orchestra, "In the Woodshed She Said She Would" (Johnson) (EA480).
 10.38: Male trio—Melody Three, "Remember Me to Mary" (Green).
 Foxtrot—Shilkret's Orchestra, "Jimmy Valentine" (Madden) (EA475).
 Selection—New Mayfair Orchestra, "This Year of Grace" (Coward).
 10.48: Bass with chorus—Paul Robeson, "Plantation Songs" (C1585).
 Foxtrot—Rhythm Band, "Teach Me to Dance Like Grandma" (Coward) (EA471).

Foxtrot—Shilkret's Orchestra, "Gotta Be Good" (Schertzingler).
 Foxtrot—Rhythm Band, "A Room with a View" (Coward) (EA471).
 Foxtrot—Jack Hylton's Orchestra, "In the Shadows" (Finck) (EA480).

11.0 : Close down.

Sunday, December 8

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, DECEMBER 8.

- 3.0 : Afternoon session—selected studio items.
 4.0 : Literary selection by the Announcer.
 4.8 : Studio items.
 5.0 : Children's session, conducted by Uncle Leo.
 6.55 : Relay of service from St. David's Church:—Preacher: Rev. D.-C. Heron. Organist: Mr. E. S. Craston.
 8.30 (approx.) : Studio Concert:
 Choral—Royal Opera Chorus, "Boris Godounov—Polonaise, Act 3" (Moussorgsky) (H.M.V. C1568).
 Instrumental—Studio Trio, "Andante Religioso (Thome).
 Contralto—Sigrid Onegin, "Che Faro Senza Euridice" (Gluck).
 Pianoforte—Mr. E. Waters, "Rustling Woods" (Liszt).
 Tenor—Joseph Hislop, "Addio Alla Madre" ("Cavalleria Rusticana") (Mascagni) (H.M.V. DB1230).
 'Cello—Miss Molly Wright, "Adagio" (Bargiel).
 Soprano—Dusolina Giannini, "Margaret at the Spinning Wheel" (Schubert) (H.M.V. DB1265).
 Violin—Miss Ina Bosworth, "Melodie" (Tchaikowsky).
 Vocal duet—Walter Glynn and Stuart Robertson, "The Moon Hath Raised Her Lamp Above" (Benedict) (H.M.V. B2979).
 Instrumental—Studio Trio, "Reve Angelique" (Rubinstein).
 Selection—Eighteenth Century Orchestra, "The Beggar's Opera" (Gay) (H.M.V. D699).
 9.30 : Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, DECEMBER 8.

- 3.0 : Afternoon session—selected studio items.
 6.0 : Children's song service, conducted by Uncle George.
 7.0 : Relay of service from St. Paul's Pro-Cathedral, Wellington: Preacher: Canon Percival James. Organist and Choirmaster: Mr. Robert Parker.
 8.15 (approx.) : Studio concert by the Wellington Municipal Tramways Band under the conductorship of Mr. E. Franklin, and assisting artists:
 Hymn—Band, "Nearer My God to Thee" (trdtl.).
 March—Band, "B.B. and C.F." (Ord Hume).
 Soprano—Miss Nora Gray, "Sing, Break Into Song" (Mallinson).
 Baritone—Mr. C. Wilkie, "The Lord is My Light" (Speaks).
 Vocal duet—Mrs. A. Murie and Miss Hilda Chudley, "Greeting" (Mendelssohn).
 Cornet solo with band accompaniment, Bandsman W. Stevenson, "Tintania" (Rimmer).
 Contralto—Miss Hilda Chudley, Negro Spiritual, "There's a Little Wheel A'Turning" (arrgd. Burleigh).
 Chorus—Band, "Hallelujah Chorus" (Handel).
 Weather report.
 Soprano—Miss Nora Gray, "On Wings of Song" (Mendelssohn).
 Instrumental trio—De Groot, Bor and Calve, (a) "Londonderry Air" (arrgd. Coleman); (b) "Le Cygne" (Saint-Saens) (B2943).
 Baritone—Mr. C. Wilkie, (a) "With Myrtle and Roses" (Schumann); (b) "Thou'rt Lovely as a Flower" (Rubinstein).
 Selection—Band, "William Tell" (Rimmer).
 Vocal duet—Mrs. A. Murie and Miss Hilda Chudley, "I Would That My Love" (Mendelssohn).
 Violin—Marjorie Hayward, (a) "Meditation" ("Thais") (Massenet); (b) "Poem" (Fibich) (H.M.V. B2938).
 Contralto—Miss Hilda Chudley, "Slumber, Dear Maid" (Handel).
 Waltz—Band, "Thoughts" (Alford).
 March—Band, "Australasian" (Rimmer).
 Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, DECEMBER 8.

- 3.0 : Afternoon session—Selected studio items.
 5.30 : Children's song service (Children of the Church of Christ Sunday Schools).
 6.15 : Hymn tunes from studio.
 6.30 : Studio concert:
 Piano and orchestra—Alfred Cortot and London Symphony Orchestra, "Variations Symphoniques" (Cesar Franck) (H.M.V. DB1069/70).
 Negro Spirituals—(a) Paul Robeson, "Scandalize My Name" (arrgd. Burleigh); (b) Paul Robeson and Lawrence Brown, "Hear de Lambs A'Crying" (Arrgd. Brown) (H.M.V. B2771 and B2838).
 Grand organ and orchestra—Victor Symphony Orchestra, (a) "Kamenoi Ostrow" (Cioister Scene) (Rubinstein); (b) "Liebestraum" (Liszt) (H.M.V. EB10).
 7.0 : Relay of service from Church of Christ, Moorhouse Avenue—Preacher: Rev. A. E. Tebay; Organist: Miss E. Hepburn; Choirmaster: Mr. H. Ames.
 8.15 (approx.) : Rebroadcast of 4YA Dunedin (Relay from St. Kilda Band Rotunda of Concert by the St. Kilda Band).
 Close down.

THE D.X. CLUB

Views and News.

Identification Wanted

ON the evening of November 16 at 7.45 I heard an American station on approximately 245 metres (1220 k.c.) broadcasting a variety programme. I thought at first this station was KPQ, Seattle, but later made out the call to be KPKP. "On the air everywhere." Also, could any reader tell me if WLW was in the air about 7.45 p.m. on November 16?—"New Chum" (Morrinsville).

ON Saturday evening about 7.40 o'clock I tuned in an American station just above 22Z, Napier. The call sign sounded like KTAT, and the slogan was "In the air, on the air, through the air." The programme was a request one, "Coquette" being one of the numbers played. Could this station be KTNT, Iowa?—D. J. (Ohingaiti).
 [Probably station KTAT, Fort Worth, Texas, transmitting on 242 metres (1240 k.c.). Power, 1k.w.—Ed.]

COULD any short-wave listener identify a station on 49 metres, which was transmitting on the evening of November 16. The following items were heard:—8.1 p.m., "God Save the King." 8.5: March by band. 8.8: Song by male. 8.15: Closed down. The strength was R4. At times fading marred reception.—C. MacFarlane (Dunedin).

COULD anyone identify an American station which transmits, I think, on 925 kilocycles (823 metres)? I tuned this station in at about 8.10 p.m. on November 16, and the announcer, who sounded like an American, said

after each item, "Wurlitzer organ recording." At 8.16 p.m. I heard him say, "My Dream's Memory," and at 8.30 p.m. the station faded away. This station's wave-length is between that of 1YA and that of 2YA.—J.T.S. (Napier.)

DX Topics

I THINK Mr. MacSherry is mistaken in claiming that he is the first to log station WLW (Cincinnati, Ohio). Mr. Morley Stafford, of Gisborne, was earlier (October 17, 1928), as shown by the following letter from the Crosley Radio Corporation, the owners of this station.—C. Gowland (Gisborne.)

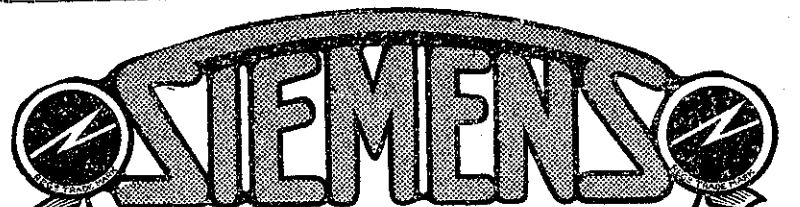
"We thank you for your letter of October 17, and note the excellent results you have secured from our experimental station. As you probably know, station WLW is now on the air regularly on 50 k.w. and we presume that you will be able to secure programmes from it regularly.—Charles J. Hopkins, manager Foreign Department."

[WLW transmits on a wave-length of 428 metres (700 kilocycles).—Ed.]

IN my letter published in the D.X. notes, of issue dated November 8, I think I am in error re advice to listeners about 2ZF, Palmerston North. What I meant to convey was that 2ZF's wave-length, 285 metres (1050 k.c.) is approximately the same as that of station KSKV., Geographical Centre, U.S.A. Thus any listeners to 2ZF would perhaps be able to tune in the latter station as we did (about 11.30 p.m.).—C. Gowland (Gisborne.)

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, DECEMBER 8.

- 3.0 : Town Hall chimes.
 3.1 : Selected gramophone items.
 5.30 : Children's song service, conducted by Big Brother Bill.
 6.30 : Relay of service from St. John's Anglican Church. Preacher, Archdeacon Fitchett.
 7.55 : Weather report.
 8.5 : Relay from St. Kilda of concert by the St. Kilda Band, under the conductorship of Mr. James Dixon.
 9.15 : Close down.



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Aerials for Portables

Préferable to Loops

THE use of a loop antenna for portable receivers is restricted to the larger type set. It is necessary when using smaller receivers, and it is advisable when using larger receivers that are stationed in one place for some time, to erect an improvised aerial.

The most popular temporary aerial for outdoor use is a length of insulated wire thrown over the branch of a tree. It is one of the simplest to erect as a tree with a suitable branch is not very difficult to find. There are occasions, however, when trees are not available, and in these cases it is usually possible to find some high structure in which to suspend the aerial. Get it up as high as possible and let both ends hang freely. Make certain that the end distant from the set is not contacting with any conductor otherwise a leakage will occur and the benefit of the aerial be lost.

For the tree supported aerial a length of insulated wire 30 to 50 feet will be required. This takes up very much less room than the 100 feet, and it is usually very difficult to get an aerial 50 feet high. Heavily insulated wire has very great advantages from the point of view of insulation, but it is difficult to carry. A roll of 24 or 26 double cotton-covered wire with a piece of rubber-covered flex in the middle forms quite an effective aerial wire. The advantage of this is that it may be carried conveniently in any small receiver. The end of this should be secured to an ordinary big reel so that this can act as a weight to carry the wire over its support. The reel should be provided with a screw for a handle and a pencil or stick through the hole to form a winding axis. Once over the branch the wire is so arranged that only the piece of rubber-covered flex touches the tree. The aerial wire is easily wound up again if held by the axis.

In a few isolated places it is not possible to find a tree or high structure. In cases such as these a kite aerial may be used. Unless one is experienced in flying kites it is better to use a moderately-sized high-flying one of the aeroplane type, making the aerial wire only a portion of the total length of the kite line. Two or three hundred feet of strong cord will be required and to the end of this attach 100 feet of strong wire such as 20 gauge enamel or electron wire. The kite should be flown so that the aerial wire is suspended in the air as nearly vertical as possible. Once the kite is flying properly the aerial wire should be anchored by means of an insulator attached to a stake in the ground, leaving a few feet free to attach to the receiver.

An ordinary wire fence may be used as an aerial, but a variable condenser should be interposed between it and the set. Another form of aerial reception is by using two earths. This consists of two earth contacts spaced some thirty to forty feet apart connected by wires to the receiver. Signals are then picked up from the earth waves and a careful choice of position often results in very good recep-

tion. Two sets of earth spikes will be required together with some 40 or 50 feet of insulated wire. Ordinary 22 or 24 d.c.c. wire will do.

The earth connection will be the same whatever form the aerial may take and the easiest system is to lay a length of insulated wire underneath the aerial. This acts as a kind of counterpoise earth and gives very good results, certainly better than those obtained by a poor earth contact.

A contact which is less bulky for transport is an earth spike. The handiest is a piece of thin copper or brass rod. A piece the length of a stair rod will be about right. A short lead should be soldered to one end and a terminal head should be soldered or screwed into position so as to make insertion or withdrawal easy. Other convenient earths are a piece of netting laid on the ground or thrown into a stream. A spike driven into a tree is very effective.

Elaborate aerials and earths should not be used, but there is no reason why an efficient system should not be improvised. If you cannot get good results examine first this part of the outfit, for it is likely that a change of position of either aerial or earth may make all the difference.

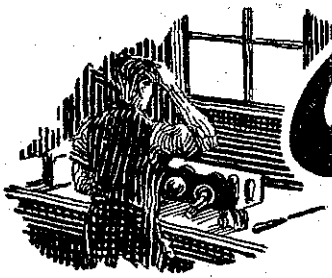
Tips and Jottings

Mounting Variable Condensers.

WHEN a variable condenser with one-hole fixing is mounted on a panel, the top end plate is usually pressed flat against the back of the panel. The condenser is then held rigidly in position, the friction between the end plate and the panel assisting the fixing nut. It sometimes happens that the ends of the rods on which the vanes are mounted project slightly beyond the top end plate. When this is the case, care must be taken in tightening up the fixing nut, or the centre of this plate will be pulled in towards the panel, distorting the whole component and probably causing the fixed and moving vanes to make contact. If it is preferred to have the end plate flat against the panel, the ends of the rods should be filed down flush with the plate, or alternatively, shallow depressions may be made in the back of the panel where the ends of the rods are to rest.

A Home-made Blowpipe.

SMALL repairs to the soldered connections in a receiver may often be carried out more quickly with a blowpipe than with a soldering iron. The iron takes a few minutes to heat up, while the blowpipe is ready at any moment. A piece of petrol piping a few inches long, drawn or hammered down at the end, so that there is only a small hole, is suitable for the pipe. A length of rubber tubing on the other end of the pipe leads to the mouthpiece, which may consist of an old cigarette holder or pipe mouthpiece. A candle may be used for the operation of the blow-pipe, though a methylated spirit flame is preferable, as it is less sooty. The flame is held an inch or less from the work, the blow-pipe inserted in the flame, and the jet of flame is directed on the work. Long and steady "blasts" are better than sharp puffs of breath. A chip of solder and a little flux are put on the joint, and the heating is continued until the solder has run into the joint.



Questions and Answers



Short-wave Adapter.

I HAVE a Browning Drake with three stage of R.C. audio amplification. I have tried to fit a short-wave adapter, but it will not work from the detector socket. It works O.K. from the first audio. G.H.C. (Fisher-ton).

A.: It appears that there is some fault causing an open in the detector circuit. There is no apparent reason why the adapter should not work from the detector socket. Take a connection from each of the short-wave adapter leads and place one on the plate and one on the filament return of the detector socket. If this will not work, then it is difficult to conceive of the set working when the short-wave adapter is not used. There is probably a faulty connection.

Short Wave Troubles.

WHY is there a slight whistle when the shield of the first audio transformer is touched? writes H.W.Y. (Herekino).

A.: It appears as if there is audio frequency feed-back through the body. Earth the core and shield of the transformer.

2. What is a safe distance for the secondary coil from the variable condenser?

A.: There is no minimum distance so long as regeneration is used. If a little damping occurs it can be made up for by regeneration.

3. I cannot open the detector rheostat than a very short distance unless I get a squeal.

A.: Try the following remedies:—(1) A quarter of a megohm grid leak in series with the grid leak from the first audio frequency transformer.

(2) A half-megohm grid leak across the secondary of the first A.S. transformer. (3) A .0001 mfs. condenser across the second audio frequency transformer secondary.

Measuring Inductance and Capacity.

"Q" FORMER (Auckland) asks the following questions:—

1. How many turns primary, secondary and tickler and gauge of wire will I require on a 2in. former for the following wavelength? 100 to 250 metres, 250-400 metres, 400-550 metres, using a .00025 condenser to control the tickler and a .0001 to tune the secondary.

A.: It will be necessary in order to get reasonably sized coils to use 24 gauge D.S.C. wire. For the first coil which will tune between 100 and 200 metres wind 100 turns unspaced, for the second, tuning between 200 and 375 metres, 140 turns, tuning between 350 and 500, 200 turns. The tickler in each case will have to be experimented with; try the following numbers: First band, 20 turns; second band, 25 turns; third band, 30 turns. The primary may in each case be about the same as the tickler and if anything a little less.

2. In the formula for calculating the capacity of variable condensers (a) does distance between them mean the distance when the plates are full in or when they are out?

A.: The distance between the plates when full in, if the maximum capacity is to be calculated.

(b) How could I find the area of one plate when the two are of different sizes?

A.: Take the size of the smaller, in your case the moving plate.

Set Goes Dead.

I HAVE a five-valve set the valves of which lost their emission. I replaced them by Continental valves, and the set went dead. What valves should I use?—New Chum (French Pass).

A.: It is a mistake to replace American valves by any other make. American sets have resistances designed to suit only American valves, and when others are introduced not only is the neutralisation interfered with but quite frequently the set, as in your case, goes dead, due usually to the valves not receiving their quota of battery current.

Voltage Divider Problem.

"FAN" (Oamaru) asks the following questions regarding a voltage divider for an eliminator:—

1. What value resistors will be required?

A.: You may work these out yourself as follows:—Decide what voltage taps you require and how many milliamperes will be drawn from each. Allow 10-20 mas. waste current. The value of the intervening resistances may be calculated by Ohm's law as follows:—Find the voltage drop and the number of milliamperes passing through each resistance. For example, suppose your eliminator will deliver 325 volts maximum, and you want to break your first tap down to 150 and pass, say, 18 mills. at this tap, 4 at the next, 2 at the next and 4 at the next. The 80 mills. will not pass through the voltage divider, but all the rest will. Add this together, and divide it into the voltage drop (175), multiply it by 1000. Subtract the output of each tap from the total and then treat in the same manner. Between the B plus detector and earth or B minus put a high resistance between 5000 and 10,000 ohms. In parallel with this put a variable resistance ranging up to a megohm. Take the B detector tapping from the movable arm.

2. Is it practicable to use a high voltage separately on the power valve while the other voltages are not in use or vice versa to use the lower voltages when the high voltages are not in use?

A.: If the eliminator is properly designed, yes. There may be a slight alteration in the voltage.

3. What will be the total voltage out-

put from the 280 rectifier with 375 volt on the plate?

A.: As you suggest, from 315 to 325 volts. Note.—The values you have denoted in ohms are very nearly correct, but you have not been allowing sufficient waste current. This is necessary in order to keep the voltage on the others more steady. Do not use B405 except in last stage. We shall devote an article on this subject as soon as possible.

Renewal of "B" Batteries.

MY "B" batteries have fallen below half strength. Could I install one new battery and by coupling the three together bring the batteries up to strength?—J.A.C. (Ngapara).

A.: Under no circumstances is it advisable to couple a new "B" battery with those already in use, if they have fallen to 2-3rds of their original voltage. The reason is that the resistance of the old batteries has increased to such an extent that unwanted noises would be created in the receiver.

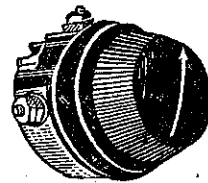
2. Could I increase my plate voltage above 90 to get better results without any serious effect?

A.: The leaflets enclosed in the valve carton should be studied and the voltage adjusted to the maximum permissible amount. If for a power valve you will be well advised to increase the voltage above that already used. High voltage should not be applied to detector, medium voltage is required by the radio and the detector valves, but the power or last stage valve requires fairly high voltage if anything like reasonable results are to be anticipated.

Use of Chokes

For Short-Wave Work

IN a set intended particularly for short-wave reception, it is advisable to use high-frequency chokes which are specially wound for this purpose. The average constructor might find it a little difficult to wind a choke which would perform efficiently on both broadcast bands, but the construction of a short-wave choke should present no difficulties. The materials required are a piece of ebonite tube 7-8in. in diameter and 2½in. long and an ounce of 36's single silk-covered wire. Drill a small hole half an inch from the end of the tube and fasten the wire by threading it through. Another method of fastening is to place a small terminal in the hole with the wire, scraped clean, under it. Wind on a hundred turns close together and fasten the other end in the same way as the first. Ordinary plug-in coils of about 25 to 35 turns can be used to serve the purpose of a short-wave choke; but they are not so compact as those outlined above, while owing to the larger "field" they need careful placing in the set to obviate interaction.



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The Trumper's Two

For Picnic, Beach and Tramping Parties

(By the Technical Editor)

IN ENGLAND and the Continent, two-valve portable receivers are by no means uncommon, for they find their way into almost every picnic party in which there is an ardent listener; but in this country the case is different. Due to our isolation and to the scarcity of powerful stations, our receivers are necessarily bigger. One and two-valve sets are uncommon, especially as portables.

There is, however, a demand for a small and compact portable receiver that will be economical to assemble, relatively economical to run, and easy to construct. This receiver must be capable of receiving the New Zealand stations on the phones, and, where close enough, to provide loud-speaker reception from the local station.

A receiver of this type need not necessarily use the loop antenna; in fact, its use would be most unsatisfactory, for it would limit considerably the use of the receiver. It would be necessary to design this receiver so that the maximum regeneration could be used, and this would involve coupling the grid of the detector tightly to the antenna system; this in itself would not be an objection, for oscillation would be limited to a very small area, but the signal strength would even then be most unsatisfactory. The net result would be that there would exist a strong temptation to couple an aerial to the grid and so increase the range of the receiver, but at the same time it would convert it to a very strong oscillator, and this, beside contravening the regulations of the P. and F. Department, would render the receiver a menace to neighbouring listeners.

Further, most New Zealand picnic parties favour the bush for picnics, and camp so that the provision of an

aerial is no great difficulty. There are few places where neither a fence nor tree exist that are frequented by holiday makers. The subject of aerials has been discussed in another section of this issue.

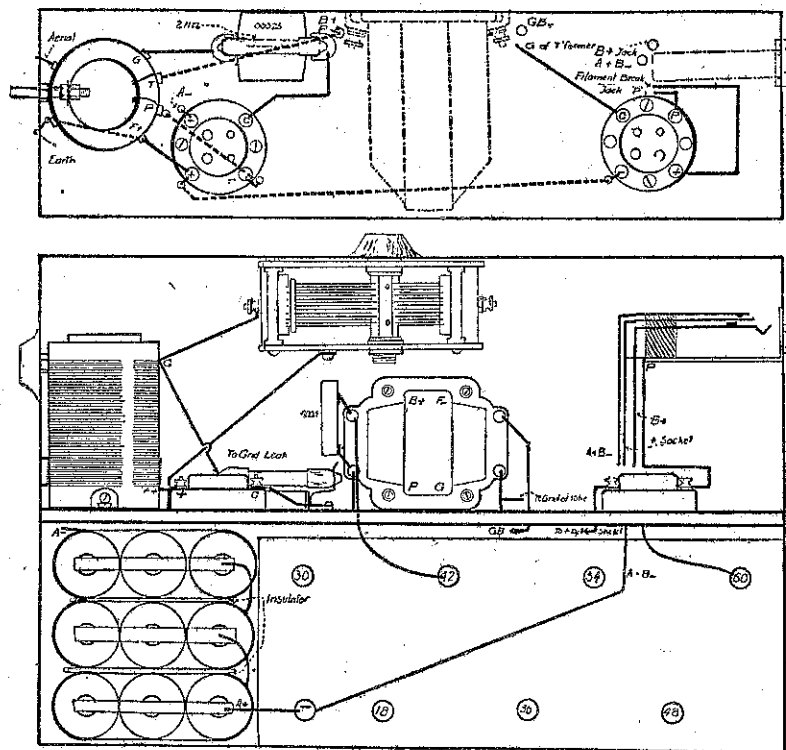
With all these points in view the writer has designed the Trumper's Two, a receiver which accompanies him on all his tramps, week-end excursions and picnics; it is a faithful companion and has never yet failed, but, of course, it is well looked after, and batteries are supplied when wanted. The compactness of this receiver is much in its favour, for it can be easily packed away in the rucksack and is little extra weight.

It is built into a small attache case, in which the batteries are, and the aerial wire can be secluded. Ample provision has been made for battery current, but if higher voltages and consequent better quality are desired, further space must be provided. The writer has not dwelt on this point, for the addition of extra batteries means extra weight, and for a light receiver this is not desired. The "A" battery presents a problem. The relatively high consumption of the filament will soon exhaust the supply of a small cell, and the provision of the No. 6 cell is undesirable owing to its size. This has been overcome by the special circuit, which allows for two low filament consumption valves being used in series. The net result of this is that the consumption is that of the greatest valve,

but the voltage is that of their sum. Single torch cells arranged in series parallel may now be used as an "A" battery. Two-valve valves supplied by nine torch cells make an excellent combination which will last several weeks on moderate use. These cells are easy to carry, and a replace stock is always available. A small difficulty exists in connecting the cells, but those who prefer can use "C" batteries, two in parallel. As the design of the set calls for particular care, the writer has specifically stated certain sizes and these must not be ex-

cellent for the purpose. The case used by the writer was one of the standard 14in. sizes frequently used by school children. The inside dimensions should be at least 13½in. long by 3½in. deep by 9in. wide. This allows for the provision of a 60-volt Lissen "B" battery or a 50-volt Hellenen, two grid bias batteries to be used in parallel, or nine small 1½in.-volt torch cells, series parallel, for an "A" battery. If higher anode voltage is required for the last valve, three Hellenen batteries should be used. Under such circumstances the case should be a depth of 16in. This will allow two number 6 cells to be used as "A" battery.

It is necessary to partition off the case, making a battery container of the lower half and a component container for the other half. Out a partition of three-ply to fit the case, as shown in the diagram. If the 14in.



LAYOUT OF "THE TRUMPER'S TWO."

The diagram shows the interior of the case, lower, and a plan of the partition. In the latter all the wiring that is to be done before it is placed within the case is indicated. The heavy dotted lines indicate that the wire passes underneath the panel. Both diagrams are strictly to scale.

ceeded. Some variations can be made, and these have been mentioned.

The constructor should not expect too much from the set, for a casual examination will reveal this is not a powerful set, its main attributes being that it is a set that will go and will not take up much room. On the local station it will work a loudspeaker and to meet the need for a portable speaker the writer has described one elsewhere.

The Carrying Case.

A SUITABLE carrying case may be built from light timber, say three-ply, or an attache case may be used. This latter is by far to be preferred, and a good pressed composition one is

carrying case is used the dimensions will be 13½in. by 3½in. This partition should be drilled before being mounted. The plan of the partition shows these points indicated by small circles. Mount the two valve sockets as shown, placing the detector socket 3½in. from the end. These may now be wired with glazite, using 20-gauge double cotton-covered wire between battery and valve socket. Leave a fairly long piece of this to connect A— of the detector socket to A—.

WANTED AND FOR SALE.

for column of casual advertisements see page 32.

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Making the Coil.

OBTAIN about 3in. of 2in. diameter coil former, and measure on this a distance of 2½in. Double perforate each extremity thus measured. In the diagram the extremities are shown separated—either position might be used. Thread one end of the 24 double silk-covered wire through one of these holes, and double it back through the other hole alongside. The wire is thus held tightly. Wind on as many turns as will go into the measured distance, and finish off by threading through the second hole, as was done in the first. This is the grid coil (L2, schimatic diagram). Over the last few turns wind a piece of insulated tape or other insulating material half an inch wide. On the opposite side from the perforations for the grid coil make another pair of holes and secure another piece of 24 D.S.C. wire. Wind now in the same direction as for the grid coil as many turns as will go on the overlaid pieces of insulating material.

When this is finished performate the former by making a slit with a pocket-knife between two of the turns of the grid coil. This slit should be above and to the side of the beginning of the primary winding and on the opposite side from the ends of the grid coil (see diagram). This wire is now brought out by means of another slit. Altogether there should be about 20 turns wound on this overlaid wiring

tickler former. The lugs of this coil should be on the same side as the beginning and end of the grid coil. To make a neat job finish off all grid and tickler wires with lugs, and label P and T (tickler), G (upper grid), and F+ (lower grid). A regenerative of a Browning-Drake may be used here, but the coil should be two inches diameter. The primary is disregarded and another primary, the aerial coil, overwound as previously described. Mount brackets such as those for a Meccano set on the coil, secure it to the partition.

This completes the coil, and it may now be secured to the partition. Its position is indicated in the lay-out sketch. The short threaded bar attached to the tickler should point to the outside of the case.

Fitting the Components.

A FEW more connections remain before the partition is fitted into the case. Mount the grid leak and condenser in the position indicated in the diagram; join the lower end of the grid coil (F+) to the lower end of the aerial coil (E) to A+ on the valve socket; connect the top of the grid coil (G) to one side of the grid leak and condenser, and the other side to G of the valve. Join P of the valve to one of the tickler lugs. Connect by passing a wire under the partition and up the side of the coil. Attach another wire to G of the coil to make a

Law Relating to Portables

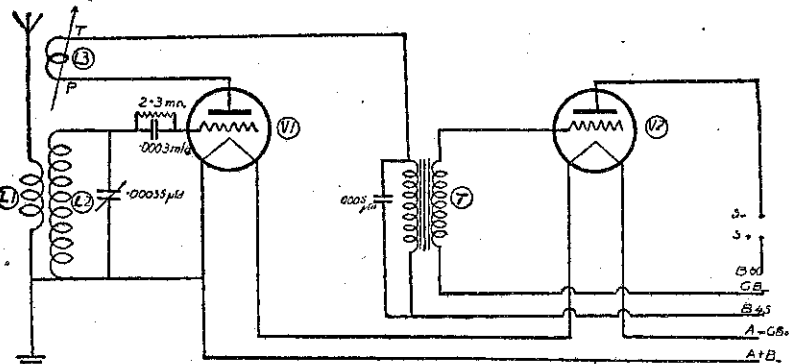
WITH the advent of summer very many listeners will be wishing to purchase or construct portables to take with them on their holidays. Some may even desire to take their home receiver, and the problem naturally occurs as to what the position is with the Post and Telegraph Department. If the home receiver is taken out to act as a portable, all that is necessary is a statement to this effect to be lodged with the District Radio Inspector in any one of the four centres. Where a separate receiver is to be used and the home receiver is still used a separate license for the period covered by the use of the portable must be obtained.

Those who design their own portables must make certain that they comply with the regulations of the Department. It must be shown that the receiver is not capable of causing interference with other receivers; in other words, there must be proper and adequate regeneration control. Users of portable receivers with frame antenna are particularly warned about connecting the aerial directly into the grid of the first valve, unless there is a fixed condenser in series with it. Violation of either of these two laws may mean cancellation of the license.

Useful Hints

GOOD quality cannot be obtained from a loudspeaker unless a sufficiently high supply of "B" battery voltage is used. The ideal at which to aim is to supply the maximum permissible voltage to the plate of the power valve in use. It should be noticed that an extra 10 or 20 volts will be necessary when connecting up to the "B" terminal of the last valve, because a voltage drop invariably takes place across the loudspeaker or the output filter.

PROBABLY the greatest difficulty to overcome when working on the very high frequencies is the presence of hand-capacity effects, especially on the earthed portions of the circuit such as the filament wiring and the spindle of the tuning condenser. In such circumstances relief can usually be obtained by disconnecting the earth altogether, or using instead a few yards of wire on the floor as a counterpoise. Another expedient which often works is to connect the earth merely to the bottom of the primary coil, and to remove the usual connection with that point to the filament circuit. We then have the usual circuit from the aerial down through the primary coil to earth but the rest of the set is unearthed.



SCHEMATIC DIAGRAM.

Note that the filaments are in series to reduce the total consumption, and that the jack is not shown.

and this is the primary which connects with aerial and earth (L1). It remains now to construct the tickler (L3).

Procure a piece of former that will rotate within the former of the grid coil. Drill one side to allow the end of a long bolt to pass through. Better than a bolt is a threaded bar such as that used for the tickler coils for the Browning Drake. This may be obtained from local dealers, or failing these, Fear and Co., Wellington. A hole is then made in the main former at the opposite end to the aerial coil, and on the same side as the beginning and end of the primary coil. The hole will just clear the winding (see diagram). On the piece of small former wind with 30 s.w.g. wire, either enamelled or double silk, 25 or 30 turns, half on either side of the former. A little set-cotline will keep these in place. Secure the ends through slits in the former, and take out to lugs or slits on the grid coil former.

It is better to make the connection from tickler to main former by flexible wire rather than by the thin wire which comprises the tickler. A soldered connection could be made on the

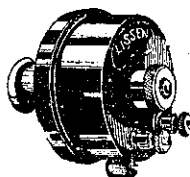
connection with the fixed plates of the condenser when the partition is in position. A long connection is left to join A+ to the moving plates of the condenser.

Returning to the carrying case, drill a hole half-way between the points joining the handle with the case. This should be a distance of 6½in. from the end of the case. Affix a variable condenser. 00035 mfd. capacity. Move the partition in place, first by measuring the position of the tickler shaft and making a hole where necessary. The low compartment should be 3½in. deep. Thrust the shaft through the hole and then screw the partition in place. Manipulate the audio transformer so that it will come somewhat in the position indicated, clear of the condenser and clear of the valve. In the original model this was 7½in. from the coil end.

The partition is now in place ready for the wiring, and at this point the article will be suspended until next week, when the final constructional details and operating hints will be given.

For Sale or Exchange.

See page 48 for column of casual advertisements.



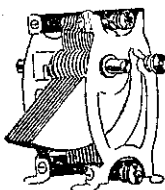
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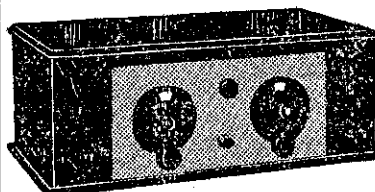
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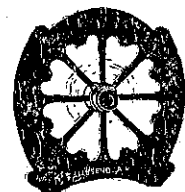
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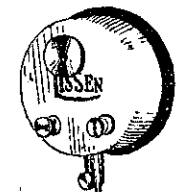


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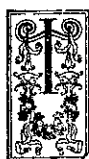
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A Companion Receiver for the Holidays

(By "CATHODE")



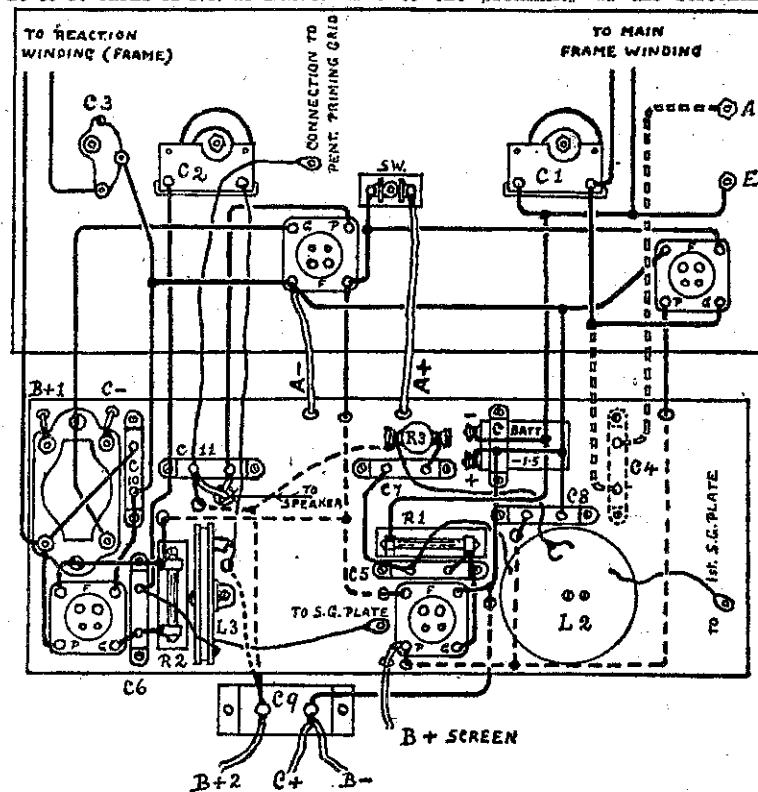
Our preliminary description published in last week's "Radio Record" the cabinet and frame antenna of this remarkable set was described. Without reiterating, we continue from where we left off.

IN the case of the first or fixed tune transformer, the primary winding, which is put on first, consists of 45 turns of No. 40 D.S.C., and the secondary winding (separated from the primary by a couple of layers of dry paper or silk) of 100 turns of No. 28 D.S.C. Both windings are put on in the same direction, and the inner ends of primary and secondary are soldered together, the combined lead then being taken to one side of the resistance R3, when a connection is made to "B+." The outer, or free, end of the primary is connected to the plate (or top terminal in the case of English and Continental valves), of the first screen grid valve, and the outer, or free, end of the secondary goes via the condenser C5 to the grid terminal of the valve-holder for the second screen-grid valve. The tuned transformer accommodates

in its slot, first, a primary winding of 20 turns of No. 40 D.S.C., and, second, wound in the same direction over a couple of layers of paper or silk, a secondary winding of 64 turns of No. 28 D.S.C. The inner ends of the two windings are again joined by a drop of solder close to the transformer, but in this instance both ends are left long, one being taken to "B+," and the other to the moving plates of the second tuning condenser. The outer or free end of the primary is taken to the plate of the second screen-grid valve, while the outer end of the secondary goes via the grid condenser C6 to the grid terminal of the detector valve-holder. This transformer will have to accommodate a reaction winding in addition if this is not placed on the frame; this winding can be wound over the secondary

(separated from it by a couple of layers of paper or silk) and may consist of 20 to 30 turns of No. 40 D.S.C. The

to present itself was between, firstly, an apparently efficient design involving a considerable amount of screening, and, secondly, a reduction of efficiency (by reducing the primary turns on the transformer) until a satisfactory degree of stability was secured. In practice the efficiency of the screened receiver was not found to be nearly so great as was expected, due, no doubt, to very heavy absorption losses due to the proximity of the screening to



PRACTICAL WIRING DIAGRAM.

Showing lay-out of components; dimensions of baseboard: 15in. by 5½in. direction of winding is immaterial the frame antenna and the coils. Therefore, as in the case of the winding on the frame, the connections to the winding may be reversed if this is found necessary in order to obtain a proper reaction effect.

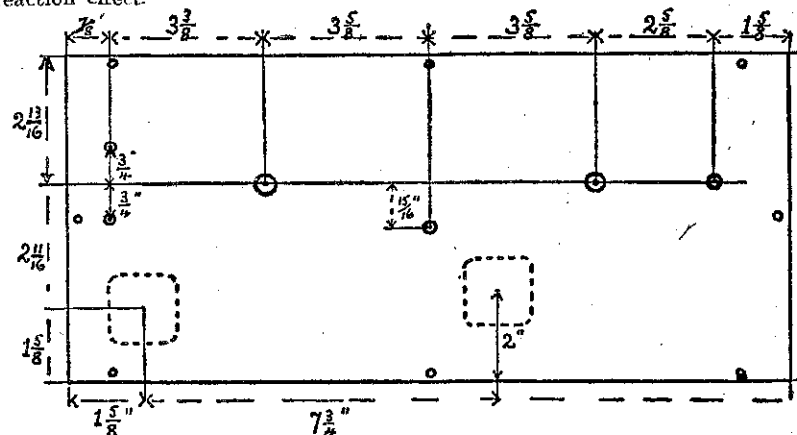


DIAGRAM FOR DRILLING PANEL.

Overall dimensions of panel 15½ inches by 7½ inches.

It may be a matter for comment that specified, in combination with the natural stabilising effect of the high-reformers seem too small to match the distance fixed-tune stage interposed between the two more efficient stages, valves. As a matter of fact they provides a very satisfactory degree of stability. If, by any chance, a ten-

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1-6

endency to oscillate is encountered in any particular case, it can readily be quelled by connecting a resistance of a few hundred ohms in the lead to the control grid of the first screen-grid valve; it is very unlikely that this will be necessary, however.

Mounting the Components.

THE routine work of mounting components and wiring up does not call for much comment, as a complete wiring diagram is reproduced. It is necessary to duplicate the placement of components fairly accurately, space being at a premium; in particular, great care must be taken not to mount any baseboard components where they will interfere with the insertion of the first screen-grid valve or the pentode or other power valve, which are mounted horizontally.

A word of comment is also called for in regard to the choice of components. The variable condensers must

dotted in the diagram; light dotted lines show the optional connections for use with an outdoor aerial. Tags are provided for connection to the plates of the two screen-grid valves and the priming grid of the pentode, and these tags are clearly shown. The leads to the speaker lead through a hole in the baseboard just alongside the condenser C11, as shown. With the additional remark that wiring is, wherever possible, "point to point"—that is, taken by the most direct route between connections—the very complete wiring diagram should enable anyone to complete the wiring correctly.

Power Supply.

BATTERIES have been already dealt with. The maker's directions as to voltages to be applied to the valves should be followed as far as possible. With the Mullard P.M. 12 (screen-grid), P.M. 2DX, and P.M. 22 (pentode), used in the original receiver, the full 120 volts was applied to the plates of all valves except the detector, to which 70 volts was applied, the full potential being, of course, also applied to the primary grid of the pentode, since this is connected to the common B+2 connection. The screening grids of the H.F. valves were given 80 volts, and the control grid of the pentode $7\frac{1}{2}$ volts negative bias. Any 2-volt valves of the proper type may be used, the maker's recommendations as to plate and screen voltages being followed as far as possible. An ordinary power valve may be used in place of the pentode if desired, with some loss of magnification; it will probably be necessary to increase the negative bias voltage if this change is made; the tag which normally connects to the priming grid of the pentode will, of course, be unused.

With all wiring thoroughly checked over, the batteries may be connected and the valves inserted for a trial. Do not forget to connect the tags to the extra terminals of the three valves to which they belong. Do not forget, either, to reverse the connections to the reaction winding if necessary, as explained above. The directional properties of the frame antenna may be a trifle disconcerting at first. However, it will soon be learnt that rotation of the receiver has a very definite bearing on results. A note has already been made on the method of coping with unwanted oscillation; it may also be borne in mind that an earth connection, even of the most makeshift kind, is of benefit, not only in increasing the range, but in attaining complete stability.

This article has already run to some length, and space does not permit of any further details of adjustment and operation. If the number of inquiries merit it, a further short article may possibly be prepared to clear up any little difficulties which individual constructors may encounter with their particular versions of the receiver. In order to forestall one possible inquiry, it may be mentioned here that the American UX 222 screen-grid valve is unsuited for use in the present receiver, even though a 4-volt accumulator be used, unless a substantial modification of wiring is made. The reason for this is that the UX 222 has the control grid connected to the top terminal instead of the plate; all English and Continental screen-grid valves have the plate connection at the top.

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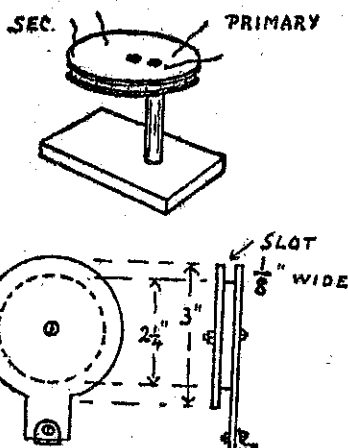
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R.R.1



Top.—Mounting the fixed-tune, high-frequency transformer horizontally with the aid of a short piece of dowelling.

Lower.—Dimensions of formers for high-frequency transformers, showing also the method of mounting the tuned transformer.

be of fairly small dimensions, there being several English makes, notably the Formo and the Utility "Mite," of sufficiently diminutive size. As to transformers, if quality is a consideration, as well as small size and weight, one is practically limited to the Igranite type J or the Mullard "Permacore," both these instruments using a special core material. A little difficulty may be experienced in obtaining a single cell mounted on the baseboard just back of the panel and supplying bias to the screen-grid valves; therefore it is well to mention that a couple of springy clips may be made to contact with an ordinary flashlamp cell strapped down to the baseboard, the zinc container of the cell being the negative terminal.

Wiring should be carried out with No. 18 or 20 tinned copper wire, enclosed in Systoflex or other sleeving, or with Glazite. The connections from the high-frequency transformers are continuations of the fine wire windings of the transformers themselves, these being enclosed in sleeving wherever possible. A certain part of the wiring (in particular the connections to the large fixed condenser C9, which is the only component mounted beneath the baseboard) is located under the baseboard, and is shown

China Enters the Radio Field.

VERY ambitious plans are being made for an extensive programme of radio activity in China, according to an American report.

A prominent official, Dr. Tsa Tso, is making a survey of radio stations in the U.S.A. and is purchasing equipment for two short-wave stations in China. These will be the most powerful stations in Asia—at least, they Tsa Tso!

High Power for Vatican Station.

REPORTS from Rome indicate that the Vatican wireless station, concerning which there has been much speculation, is to have a power of 20 kilowatts. This will place it fairly high among Europe's transmitters, so far as strength goes. For telephony only short waves are to be used, the suggested wavelength being somewhere in the band between 15 and 45 metres.

French Stations.

STATION F8BP, the experimental station of the French wireless association "Le Journal des Huit," has increased its wavelength from 47 to 55 metres.

Eiffel Tower, Paris, has resumed its experiments in short-wave telephony; the wavelength has been reduced to 31.5 metres.

From September 1 a radio telephony service was opened between the s.s. Levathan and Berlin on short waves.

Radio Manila—KZRM.

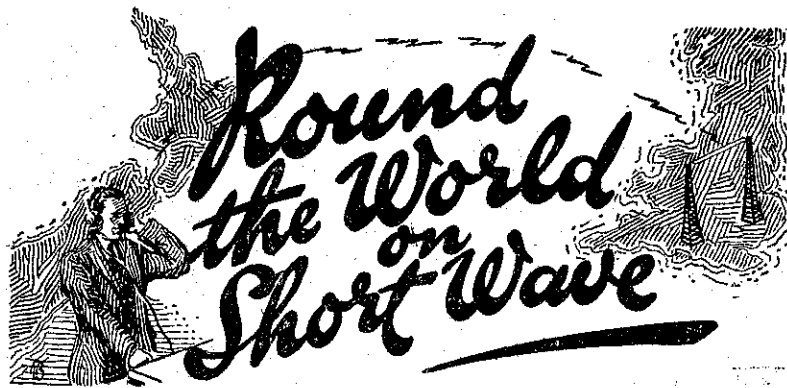
A LETTER from this Philippine station was received during the week. They give their short wavelength as 48.8 metres, nothing being said of 26.5 metres (about), where they are more often heard. The weekly schedule is the same as was published a few weeks ago on this page. The following are features worth tuning in to:—

Philippine Constabulary Band, Wednesday, Friday, Saturday and Sunday, 10 p.m. to 11 p.m.

Bureau of Prison's Band concert, Sundays, 7 p.m. to 8 p.m. Dance music from Sta. Ana Cabaret, Wednesdays and Saturdays, 1.30 a.m. till 3.30 a.m. Stadium prize-fights, Sundays, 2 a.m. to 4 a.m. Church services, Sundays, 2.30 p.m. The above times are New Zealand summer time, which is four hours ahead of Manila standard time.

A correspondent last week said, in reference to the call of this station, that it was KGRM not KZRM. The letter referred to gives it as KZRM and I think the explanation is that they pronounce the Z and Zee, which, of course, could easily be mistaken for G.

STATION VK2ME has been heard during the week on 15.5 metres calling GBX. This was the exact wave-length



THIS page is conducted in the interests of shortwave enthusiasts. A weekly log comprising notes of reception and interesting topical events is contributed by Mr. F. W. Sellens, Northland, Wellington, but all listeners are invited to send in paragraphs of general interest.

given by the Sydney station. 6AG, Perth, has been heard again; he is now working on 41.5 metres.

Reception during Week Ending November 23.

CONDITIONS are still unfavourable for good reception of most overseas short-wave stations. RA97, Siberia, comes in well on 70 metres at R8-9. More music is heard now. On Friday, at 10.15 p.m., children's singing was very well received, the static trouble being less than usual.

W9XF, Chicago, short-wave station of WENR, has not been quite as strong as usual on most evenings. Saturday, the 23rd, they were about the best ever heard. R9 at 6.30 p.m., perfect except for a very slight surge. Volume slowly decreased till signing off at 8 p.m.

Zeesen, relaying Königswusterhausen. On Sunday, the 17th, a fine programme was heard till 6.30 a.m., when they closed down. Volume R8. They apparently closed down by 6 a.m. other mornings as I heard them only on Saturday from 5.40 a.m. till 6 a.m., when they came in like a local station, full speaker volume, free from any static, etc. This was the only morning Zeesen was tried for before 6 a.m.

PCJ, Holland, started well on Friday at 6.5 a.m., being R9, but rapidly decreased in volume, being R3 by 7 a.m. On Saturday morning they commenced about 6 a.m., but apparently closed down before any items were broadcast, only the metronome being heard for a few moments. The afternoon session was late before readable strength was reached. R5 at 5 p.m., increasing to R8-9 by close time at 6 p.m.

2ME, Sydney, still carry on most of their duplex with GBX on 28.5 metre during the early evening, but were heard on 15.5 metres about 10.30 p.m. on Monday at R8-9, very clear and steady. 2FC was relayed for a time.

2XAC, Schnectady, was heard on Sunday afternoon, when, with its sister stations, 2XAF and 2XAD, they were transmitting their usual programme. Strength at 5 p.m. was R7.

2XAF was very poor on Sunday.

2XAD was only audible for a short time early in the day on Sunday.

KDKA, like the other Americans, was very weak. Bangkok, Siam.—This station was tuned in on Monday morning about 6 a.m. when the usual native music was heard. A call sign was again given, but could not make out the letters and/or figures. The wave-length was given at 29.5 metres Volume R7-8.

Radio, Manila, continues to come in at good strength from 10 p.m. When heard earlier it is much weaker.

7LO, Nairobi, at its best, has been very weak.

5SW, Chelmsford, is still too weak when opening at 7 a.m. to be worth listening to. I understand that it is good strength from 12.30 a.m. to 1.30 a.m.

PLE and PLF, Java, sending out duplex telephony with PCK, Holland, come in at good strength from about 9.30 p.m.

Unidentified Stations.

ON about 31.4 metres an American station was received at R9 from 10 p.m., and was still going strong at 11.45 p.m. on Saturday. A Morse station was working on the same wavelength all the time, making it impossible to get the call. Volume and modulation were first-rate. It was possibly 2XAF; it was on this wavelength.

38 Metres (about), a foreign voice was heard at R3-4 on Wednesday morning every few moments, "Allo! Allo!" with a call was heard, but not understood.

On Sunday morning, at 7 a.m., on about 33 metres, music was heard at R5, with a lady announcing the items. She was not readable on account of mush.

On 32.5 metres a man and woman were heard calling, "Hullo, London!" on Saturday, 5 p.m. English was being spoken, but was difficult to follow, because of surge and mush. This station, an American, is often on the air—carrier only, for hours at a stretch, without any sign of talk. On 22.4 metres (about) an American voice was heard at R3 early on Wednesday and Thursday morning.

At 6.30 a.m. on Saturday an American station was heard on 19.5 metres, with vocal and orchestral music. Strength was R3 at first, increasing slightly, then going off to R1 by 7.30 a.m. A strong generator hum spoilt readability. A call was not heard during this period, but it was probably 2XAD or 2XD on their daily test with England on 19.5 metres.

Radio Manila

Description of Transmitters

I STATED in last week's issue of the "Radio Record" that station RA97 was operating on 37 metres, but the station I heard was RA19, Tomsk, Siberia. The following is a letter received from the Radio Corporation of the Philippines, giving details of station KZRM, A. D. Rogers (Wellington):—"We are in receipt of your letter reporting reception from KZRM, Radio, Manila, and desire to thank you very much indeed for your comments. Examination of the official log of this station confirms your report, and we wish to take this opportunity of congratulating you. Enclosed herewith please find a schedule of our weekly

broadcast, and a short description of the transmitters.—Marguerite Cromwell (broadcasting manager)."

The KZRM Transmitters.

THE transmitters are located at Manila Heights, approximately seven miles from the studio. The latter is on the top floor of the Manila Hotel, Manila, Philippine Islands.

The long-wave transmitter is of one k.w. power. The antenna used with this transmitter is approximately 300ft. high, and is supported by two steel towers. This transmitter is not crystal controlled, but the frequency (618.5 k.c.) is maintained accurately, and there is little swinging or variation of frequency.

The high frequency transmitter puts one k.w. of energy into a special tuned antenna of the doublet type. The set is crystal controlled, with the crystal controlling the frequency of a 50 watt tube. The output of this stage then passes through the following stages, either doubling or amplifying: One 75-watt tube, two 75-watt tubes, and finally two 750-watt tubes, working through inductive coupling into the antenna circuit. This set is at present operating on a frequency of 6130 k.c.

Weekly schedule of KZRM, 48.8 metres:—Daily (except Monday night), 4 to 5 p.m., recorded music; and 6 to 10 p.m., varied programme.

Earthing Hints

WHERE an earthing clip is used for making connection to a water pipe care must be taken to clean the pipe thoroughly with a rasp, file or sandpaper, so that the metal is really bright before the contact is made with the clip.

A PIECE of corrugated iron such as is used for roofing sheds, etc., makes an almost ideal earth plate.

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