

THE RADIO RECORD

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Summer-Time Radio

Time for Picnics and Portables

Come Summer go Radio is a maxim not without foundation. Due to the irresistible claim of the beach, the receiver is forgotten and remains behind untended while the crashes of static, unwelcome concomitants of summer, break harmlessly through.

Whether outdoors or in, music brings cheer and musical instruments can usually find an opening in every pleasure party. For this reason gramophones are popular, in spite of the fact that they entail the transportation of numerous and breakable records.

Just as this instrument has earned popularity so the future of the portable receiver is assured.



UMMER immediately conjures up visions of grassy banks, shady trees singing birds, delightful beaches, and to the radio enthusiasts a good portable set. The optimist thinks at once of some delightful spot miles away from the dust and roar of traffic where he can sit after lunch and listen to the music of his home station. The pessimist dwells on the hopelessness of trying to enjoy oneself with a portable receiver, unless there is a car within close range to carry the "thing" home, of an obstinate fire which will not burn with wet wood, of mosquitoes and of dust.

When both sides of the case are considered, however, a good light, efficient, portable receiver adds to the enjoyment of picnics and excursions. Most of these parties nowadays, when within reasonable range of home, take a portable gramophone, but from the limitations necessarily imposed it can be seen that the wireless set, which embodies many of the better features of the gramophone, can yet be more popular. Good reception can be assured when reasonable precaution is taken, and when a moderately good circuit is employed. Of course there is the very troublesome question of batteries for good reception, apart from high voltage, and heavy current drain, cannot be fully realised. One must be prepared to make certain compromises; he must not expect reproduction such as he would obtain from his multi-valve receiver with its power amplifier and dynamic cone speaker. The fact of being able to receive news from the home town, or music from the nearest station is alone a good enough incentive to warrant the presence of a portable receiver.

Excellent receivers may be purchased and no doubt very many picnickers will be prepared to obtain their portable in this manner rather than go to the trouble of designing and building one. In such a receiver problems that we are going to discuss will not be present, but without a doubt the greatest fun comes from using a receiver that one has designed and built, rather than one which has been purchased "ready made."

The first problem presenting itself to the operator of both commercial and home-made portable receivers is the aerial. In nearly every case these receivers are equipped with a frame antenna which is no more than an enlarged grid coil built into the lid of the receiving cabinet. The use of this type has decided compensations, although it will undoubtedly be weaker in signal strength. During summer months there are quite a number of storms and occasionally some of them are very severe. When an outside antenna (aerial) is used very many people are afraid of the lightning danger. Actually, this is very remote, but nevertheless a lightning arrester should be placed in series with

(Continued on page 2.)

Music, news, weather reports—these add to the pleasure of any camping party and they can be brought only by radio. Portable sets are in demand, and to meet this need our next issue will be devoted to the description of two portable receivers. One is so compact that it can be placed in any tramping pack or camper's supplies. It will give good 'phone reception of New Zealand and Australian stations and loudspeaker volume from the local. The other is ideal when the car is taken. It is stronger and when used with an aerial will bring in even the big Australians on the speaker. Yet both these are easily constructed.

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Across the Tasman

Impending Broadcasts

WITH the visit of the English cricket team while on its way to New Zealand, and with the selection of an eleven to tour England, the current cricket season in Australia will be an outstanding one. Cricket enthusiasts in New Zealand will be pleased to know that the A.B.C. has arranged for descriptions of all the international and inter-State matches to be broadcast. The first match of the season to be described in Sydney this year at alternate periods through 2BL and 2FC will be the game played at the Sydney Cricket Ground on November 22 between the M.C.C. team and New South Wales.

THE revue to be presented by the Humphrey Bishop Company from 3LO on November 20 will be relayed from 2FC. For a light, clever revue there are few who can surpass this well-known musical comedy company, and its entertainment should prove very acceptable to all classes of listeners.

BRUNTON GIBB, whose sketch "The Stepmother" will be broadcast from 2BL on November 20, is very popular among listeners for his skilful character studies. He was a member of the "Anzac Coves" formed by General Birdwood, and he took part in a command performance at Buckingham Palace. He has also played in the works of Shakespeare, Sheridan and Shaw, and his realistic "type" impersonations in his broadcast plays have made him a universal favourite.

AMONG the most popular items of the Australian broadcast programmes are the clever skits on everyday life which are frequently given by "The Tatlers," a well-known light comedy company. Its next performance, which will be broadcast from 3LO on November 22, is a very amusing sketch which will acquaint listeners with a few of the "Trials of a Theatrical Agent."

AN enjoyable programme consisting of character studies from Dickens will be presented by Frederick Whitlow from 3LO on November 23. Mr. Whitlow, who recently toured Australia and New Zealand, has had much theatrical experience both in England and America. He spent several seasons with the H. B. Irving Company in London, and was also cast for the role of Svengali in the London production of "Trilby."

IN the radio play "The Tomb of Osiris" to be broadcast from "The Little Theatre" through station 2FC on the evening of Thursday, November 21, the Sydney University Players, in collaboration with Mr Laurence Halbert, will present what is likely to be their most successful production to date. The play, which has been specially written for radio production by John Pickard, one of the cast, is divided into two acts, each act containing two scenes. The scene of the first act is laid in Ancient Egypt, in the times of the Great Pharaohs. The second act, however, takes place in modern

times, the climax taking place inside the tomb of Osiris. This play, which is brilliantly written, is said to be a masterpiece of atmospheric effects, and New Zealand listeners should make an effort to listen-in on the night of its presentation.

CECIL MORRISON'S dance band will play in a very unique setting on November 20, when a broadcast of its music will be given through 2FC from the new Dutch liner Nieuw Holland. Between dance numbers this modern vessel will be described by the announcer, and a very interesting broadcast should result.

MISS NORA HILL, who will be heard from 2BL on November 20, has a pleasing soprano voice, which won the applause of Sydney's critics when she gave her first recital at the Conservatorium on her arrival from Dublin. Before she left her own country Miss Hill gained the highest award in all Ireland for interpretative singing, and also a gold medal in the section which had been won by John McCormack in previous years. Her beautiful phrasing and careful enunciation make her singing especially charming to broadcast audiences.

"Still Picture" News Service

AN important contract for the installation of Fultograph apparatus to serve about 800 provincial newspapers in the British Isles has recently been concluded. The pictures of important topical events will be relayed by telephone lines and broadcast by wireless stations by the Central Press Agency of London.

The "still-picture" receivers will be installed in newspaper offices, and as fast as the pictures are transmitted from a branch station nearest the locality of an important event, the photographs will be received by all subscribers throughout the system.

The Fultograph Company in London has also recently received a cablegram from a representative of the Vatican in Rome which stated that the Vatican authorities were interested in obtaining the necessary apparatus for the transmission of ecclesiastical pictures. Captain Fulton and his engineers are now engaged in conducting experiments in America for the establishment of a trans-Atlantic picture transmission service.

Express Radio

FOLLOWING successful experiments with a radio receiving set on a moving train, three of the principal expresses between Paris and Havre are to have wireless installations. A radio engineer, installed in a special cabin, will supervise the reception of radio programmes on these trains. Headphones will be available for each passenger in the first and second-class compartments, and later the service will also be available for third-class passengers. A special charge will be made to each user of the service.

Christchurch Radio Olympia

Another Outstanding Success

THE radio traders of Christchurch held their first radio exhibition last week, and the venture proved a great success. The locale was the Choral Hall, the interior of which was transformed for the occasion. The stalls for the exhibits were ranged on either side beneath the gallery, and made very attractive displays. The whole body of the hall was carpeted and furnished with easy chairs and settees, like a large lounge. Pink chenille curtains, palms and standard lamps with pretty shades added to the pleasing effect.

Nine of the leading radio dealers of Christchurch exhibited the latest in receiving sets and apparatus. The Radio Society of Christchurch also had a display of home-made sets. Included in these were two prize-winning sets by Mr. F. O'Connor. Both of these were all-wavers, one of them being a portable. The other had brought in 200 stations. A three-valve set, made by Mr. J. Stewart and awarded a first prize, was also shown. There was an interesting display by the Radio Broadcasting Company of valves in use at the broadcasting stations. These ranged from a very small specimen, known as the "peanut," to the largest water-cooled valves used at 2YA. Some of these had had portions of the metal outer casting cut away so that the interior economy was placed on view.

The radio dealers who had displays were J. I. Smail, Speddings Ltd. (L. L. Jones, Canterbury agent), L. B. Scott, Ltd., Direct Supply Company, Ltd., H. L. Newton, Chas. Bennett, Ltd., Watkinson's, Ltd., A. R. Harris and Co., Ltd., and A. E. Strange.

The exhibition was conducted in much the same way as were those at the other centres. The Broadcasting Company was responsible for the entertainment programmes for both children and adults. These were staged in the model studio which had been arranged on the stage. 3YA studio had been dismantled for the purpose, and the model studio in pink and grey was a credit to Mrs. Bingham, who was responsible for the lay-out.

The Christchurch Radio Exhibition was not as large as those in the other cities (no adequate hall being available in Christchurch), but the original shown in arranging and furnishing the hall was a matter for the most favourable comment from all visitors as soon as they entered the building. The exhibition was different from the usual "exhibition."

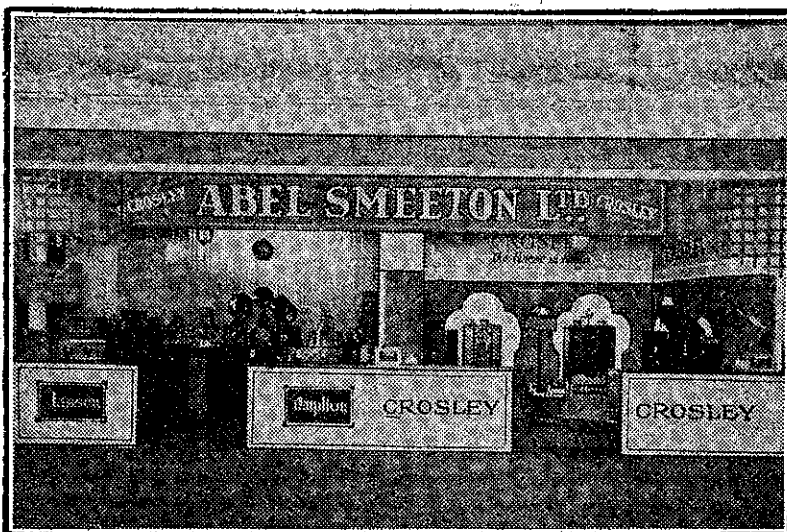
A very interesting section of the exhibition was the office of the Christchurch Amateur Transmitters, who transmitted messages free to all parts of New Zealand.

THE opening of the exhibition took place on Tuesday evening, November 12. The Hon. T. M. Wilford officiated, in the absence from Wellington of the Hon. J. B. Donald, Postmaster-General. Mr. Wilford's remarks were relayed from Wellington to 3YA, thence broadcast and reproduced by loudspeakers in the hall. The next speaker was the Deputy-Mayor of

Christchurch, it follows the telephone wire. Then at Christchurch it is being put out on to the air from 3YA, and is being picked up again in the Choral Hall.

This is the third Radio Exhibition which has been opened by long-distance telephone from Wellington, and I hope that yours in Christchurch will be as great a success as those of Auckland, Wellington and Dunedin.

Radio is one of the responsibilities attaching to the position of Postmaster-General, but Mr. Donald tells me that it is a very interesting one because it has for years been one of his hobbies.



The Crosley "Big News in Radio"—at Auckland Exhibition.

—C. M. Walls, Ltd., photo.

Christchurch, Dr. H. T. J. Thacker, who took the place of the Mayor, the Rev. J. K. Archer, who had that evening been hurriedly called to Wellington. Then followed Mr. L. B. Scott, the chairman of the Exhibitions Committee.

There were also on the platform: Messrs. L. G. K. Stevens (Chamber of Commerce), J. G. Fairbairn, and D. E. Parton (Post and Telegraph Department), H. P. V. Brown (Transmitters' Association), H. C. Lusty (Radio Society), and J. W. Graham (Employers' Association).

The Hon. T. M. Wilford, in his remarks, said:—

It gives me the greatest pleasure to act on behalf of my colleague the Postmaster-General and to take part in the opening of the Radio Exhibition tonight. Although I cannot be with you in person, I am with you in spirit, and I trust that my voice is clearly heard. I am speaking from the Parliament Buildings, Wellington, and my voice is coming to you literally from over the land, under the sea, and through the air. Under the waters of Cook Strait it is conveyed by submarine cable, and from Seddon to Christchurch by what is known as carrier-current telephone. This is really a form of wireless, but instead of being broadcast into the

He wants to see radio become more and more popular because that will mean more licenses, and more licenses mean more money to carry on with, and more money means better programmes and better service generally.

Since 1924 the number of receiving licenses in New Zealand has increased from less than 3000 to more than 50,000. The figures for the different districts at present are as follow:—

Auckland District	16,028
Wellington District	20,192
Christchurch District	8,661
Dunedin District	4,200
Total	49,081

In addition, there are 186 amateur transmitters' licenses, and 1049 dealers' licenses, so that the grand total is now more than 300 above the 50,000 mark. I am sure that your exhibition will result in a considerable increase in the Christchurch figures.

The programmes now are good, and with more revenue will be made better; the listening sets are all that could be desired; so that anyone who is at all interested has no reason to postpone buying a set on the score that something better may be coming out in the near future.

There is one matter in connection with wireless that has caused a good deal of adverse comment, and that is the regulation that every applicant for a license must make a declaration of secrecy. On looking into the matter it has been found that this regulation is of no legal value, and that if we did away with it the Department would still have as much power as ever to enforce the secrecy of public correspondence. As it serves no useful purpose, and is a cause of inconvenience to the public, the regulations are being amended to abolish this declaration altogether.

Lately, as you know, the Postmaster-General has approved of a reduction in the fee charged amateur transmitters, and they will in future pay the same rate as holders of sets designed for receiving only. Also it has been decided to allow more latitude to amateurs sending personal messages to one another. Mr. Donald tells me that he has been very pleased to be able to allow these concessions, because he realises that experiments in wireless are to be encouraged, as there is always the chance that an amateur may hit upon an important discovery.

The Post and Telegraph Department has of recent years been applying radio principles to the ordinary telephone service, with marked success. I have already mentioned the carrier current system, which extends the range of communication, and permits several separate conversations to be carried on simultaneously over the one toll line. Another recent innovation is the amplifying telephone, which the Department is now prepared to install where required. This, I think, will prove a real boon to persons of imperfect hearing, who experience difficulty with the ordinary telephone.

Now, as a member of Cabinet, I should like to assure you that the Government propose to continue doing all that it can to encourage the use of radio in New Zealand, and that in the present Postmaster-General you have a Minister who is keenly anxious to see New Zealand fully abreast of the rest of the world in the use of this modern marvel of science.

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Finally, Your Worship, Mr. Scott, ladies and gentlemen, I congratulate you on your enterprise in holding this exhibition. I wish it every success, and I declare the exhibition open.

DR. H. T. J. THACKER congratulated the promoters of the Exhibition on their excellent display, and stated that the show would be the forerunner of many big radio shows. Endeavours should be made to obtain three or four thousand more licensed listeners in Canterbury, which would make the service far cheaper to everyone. Television was coming, he said. It was operating in other parts of the world, and, with the Dominion's wonderful resources, there was no reason why she should not fall into line with world movements.

Radio meant an excursion into the infinite, and no one knew its possibilities. In fact, it was little doubted that the time would come when New Zealand would be sending airships to Sydney on beam wireless. "To my mind, there is too much 'high falutin' music coming over the air," said Dr. Thacker. "These things like 'Tannhauser,' etc., are too heavy. I like the light music. Radio can be good, bad, or indifferent, but I like the brightness of music." The benefits of radio were immense, he said, and no people in the world derived more pleasure from it than sick people—it brought joy to the bedside. Dr. Thacker again congratulated the executive of the exhibition, which, he said, had made the Choral Hall into a stepping-stone towards a far greater expansion of radio.

MR. L. B. SCOTT said that the increasing popularity of radio placed an obligation on the radio industry to put before the public in the most convenient form its latest developments. For this reason the Christchurch Radio Exhibition was being held—the first of its kind in Christchurch. This year had seen a marked advance in receiving sets, particularly in regard to tonal qualities and purity of reproduction. "The day of much volume without clarity is past," said Mr. Scott. "Clarity is now the first but not the ultimate aim, as with modern improvements, amplification of volume is possible to an extent not previously anticipated. This has been attained by the general improvement in the design and construction of the various components throughout the whole of the receiver up to the speaker, which plays an important part.

During the past eighteen months the all-electric set has been on the market, and has proved very popular; by making use of the electric light supply it does away with the need of batteries and so makes for simplicity of operation. Broadcasting is fast becoming a public service, and is an indispensable means of entertainment—at a remarkably low individual cost. The farmer is realising the value of weather reports and market reports, and an endeavour is being made to institute a primary producers' service to deal solely with agricultural and pastoral problems. We see the application of radio principles resulting in the "talkies." We hear of the progress made with television, and await the next move—wondering. Television is a present field of endeavour just as was radio some few years ago, and probably in the near future you will be able to witness distant happenings from your armchair at home." Mr. Scott concluded by welcoming everyone to the exhibition and commended them to inspect the various stalls which housed the most up-to-date apparatus imported into the Dominion.

red rays to pass. By switching off the ordinary light in the transmitting room, the person being televised found himself apparently in complete darkness, and yet in the receiving screen the image of his face appeared quite clearly.

In the initial stages of this discovery, the phenomenon produced was regarded merely as a scientific curiosity, but during the past few months, Mr. Baird has been devoting nearly all his time in endeavouring to apply his invention commercially. His efforts have been rewarded to such an extent that several naval and mercantile marine officers who witnessed the demonstration of the apparatus unanimously declared that it is one of the most epoch-making inventions of the age.

For the public demonstration, the "Noctovisor" was set up on top of a hill in order to secure an unobstructed view of the surrounding country. At nightfall, a car was despatched along the main road in the valley below. About three miles distant from the apparatus on the hill-top the car was stopped, and one of the headlights directed towards the hill.

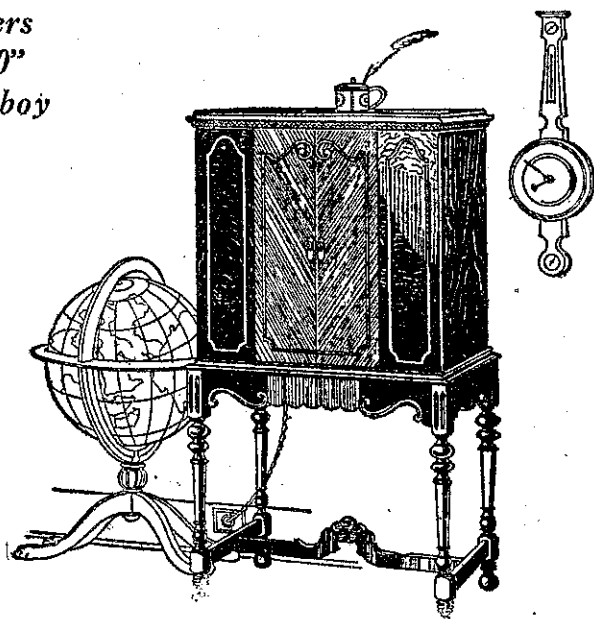
At a signal from the operator of the Noctovisor, the headlight suddenly vanished, and all was pitch darkness. The light on the car had been obliterated by placing a sheet of ebonite in front of it. On the hill, the operator, acting as the navigator of a supposed ship, was endeavouring by means of the Noctovisor to pick up this hidden light, which for the purposes of the demonstration was considered to be a light-ship or a lighthouse obscured by fog. Suddenly, to the amazement of the audience, there appeared on the border of the screen the first signs of the hidden light, which, as the apparatus came into focus, turned into a spot of brilliant orange light. By further adjustment to the apparatus, the operator was able to read off the exact compass bearing of the invisible ray.

The apparatus is very compact and easily manageable, and will probably displace the wireless direction-finder for use over short distances. Direction-finders, though very efficient over long distances, prove unreliable when ships are within a very few miles of one another, owing to the rapidity of movement of the ships concerned. In clear weather, an approaching ship can be seen, and steps taken to avoid a collision. In foggy weather, however, the direction-finder cannot with certainty be relied upon to overcome this danger, because the closer the ships are together, the more difficult it is to determine accurately the position of the approaching vessel.

It is in such circumstances, by rendering fog transparent to navigators, that the Noctovisor will prove invaluable. In cases, also, where it is necessary to sail close to a lighthouse or lightship in foggy weather, this new device will eliminate much of the uncertainty of blind navigation. Its application to commercial aviation, however, will probably prove equally beneficial in preventing loss of life, as its use will eliminate much of the danger and uncertainty of "blind" flying and landing in fogs.

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Rendering Fog Transparent

A New Radiovision Development

AN invention which should prove of immense value to shipping and to aviation was recently demonstrated in England by Mr. J. L. Baird, the inventor of radiovision. The "Noctovisor," as the apparatus is called, is the result of a series of experiments conducted by Mr. Baird to reduce the intensity of illumination with which it was necessary to flood persons being radiovised.

He discovered that by using invisible infra-red rays he was able to obtain almost equally satisfactory results. To obtain these rays he simply covered the front of the boxes containing his flood-lights with thin sheets of ebonite, which allowed only the invisible ultra-

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THE MASTER VALVE

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MANY uses are predicted for a new metal known as "Konel," which has been developed by the Westinghouse Electric and Manufacturing Company of America. Originally prepared as a substitute for platinum in the manufacture of filaments for wireless valves, the new metal has been found to be harder to forge than steel and to be very tough at high temperatures. The Westinghouse Company state that as a substitute for platinum, Konel is already saving £50,000 monthly in the manufacture of wireless valves, and that the life of a Konel filament is approximately ten times longer than that of others. Valves with the new filaments are operated 175 degrees cooler than those with platinum filament, but it is stated that the emission remains the same.

THE wireless communication with the Byrd Antarctic Expedition has recently been so good that the New York short-wave stations have been transmitting special programmes to cheer up the members of the expedition during their lonely vigil at the South Pole. Famous artists have been engaged at Schenectady and some of the "gags" that were sent over the air must have been very amusing to the gallant explorer and his party. One humorist commenced: "This story I am going to tell you now is considered pretty hot in New York, so I don't know what it will seem like to you." Another wag began, "Commander Byrd, if you meet anybody I know, say 'Howdy' for me."

THE Federal Radio Commission of America has had a demand made upon it that the licenses of 38 stations of the National Broadcasting Company be revoked, because of broadcasts from these stations to institute a vast child market for cigarettes. This demand has been made by representatives of over 1500 associations connected with the American Food Industry. They maintain that such broadcasts are against the public interests. This instance is but one of the many disadvantages which accompany a broadcasting system maintained solely by advertising interests.

ACCORDING to a French newspaper, a street in Utrecht was recently the scene of a new form of robbery. An enterprising resident who possessed a radio set, but no aerial, made a secret connection to his neighbour's aerial. Thereafter surprising his friends with the range and excellence of his reception. The owner of the aerial has intimated his intention of taking action in court, but his case is not regarded very optimistically by his legal advisers.

DURING a lecture given recently by Dr. Meissner to a scientific society in Germany, the audience were astounded when the doctor announced that he had trained a crystal to blow out a candle! "Hoch der Doc!" cried the excited scientists—or words to that effect—and then the lecturer explained how it was done. Apparently Dr. Meissner had placed a quartz crystal between electrodes excited by a powerful oscillator. When in resonance, air currents are produced at the sides of the crystal, and these are strong enough to extinguish the flame of a small candle. Moreover, the doctor states, if in the mood, the crystal will sometimes rapidly rotate between the



electrodes when the E.M.F. is high enough! In fact, there seems to be no end to the possibilities of crystals, and now we should never be surprised to hear of one that not only rotated, oscillated, and blew the candle out—but got into bed as well!

ANOTHER form of television was recently demonstrated in America, and despite the fact that it is limited in its application, yet it is decidedly interesting. By utilising ultra-violet light waves instead of radio waves as the transmitting medium it was possible to transmit motion pictures a distance of 100 feet. Although this system is limited to a distance of not more than 25 miles, and cannot penetrate physical obstructions, it is directional; a factor of importance for certain fields of development. The apparatus, aside from the oscillator, is based upon the same principles as are used in radio television. As the number of radio channels available for television is decidedly limited, any method which relieves that situation is well worth while.

A SYSTEM whereby radio programmes can be transmitted over telephone wires was perfected in America recently. Without interfering with the present point-to-point wiring, and without changing equipment, the millions of ordinary telephone installations in the United States could be used to bring all types of programmes into the home. The low power used in the transmission is one of the important advantages claimed for the system; fifty watts, for instance, will supply 5000 telephone subscribers with broadcasts. No tuning is required when operating the telephone-connected set, as the mere turning of a switch gives a different programme. Static effects and other kinds of interference are completely eliminated. The principle involved is the same as that used for the simultaneous sending of multiple telephone or telegraph messages over the one line.

A MAP showing the prevailing weather conditions throughout the British Isles is now broadcast twice weekly by the Fultograph method. The map, which is prepared by the Meteorological Office, has proved of great value to those possessing sufficient knowledge of the weather to be able to base forecasts upon it for their own locality. A written inference of the weather to be anticipated from the chart is also broadcast.

THE idea of detecting and amplifying tiny sounds has inspired two American companies to design an apparatus with which to detect the presence in citrus fruits of the larvae of the Mediterranean fruit fly (states

"Popular Wireless.") The theory is that while these chaps feed they are bound to kick up some sort of row—a top plate clicks here, or the peas roll off the knife there—and the microphone is bound to hear it. So we may expect to see American ads, bearing the slogan: "Is Your Grape-fruit Silent?"

A MERCHANT vessel, the "Athelking," was recently navigated all the way from Finisterre to Liverpool through a thick fog solely by the means of wireless bearings. The good ship "Athelking" carries a Marconi direction finder, and the captain's report emphasises very strongly the valuable aid rendered to navigation by the wireless beacon stations. A chain of these stations around the coast of England is rapidly nearing completion, and the above instance affords an excellent illustration of the immense service rendered by them to all navigation, both by air and water.

TOPICAL films cannot at present be transported physically over great distances because of the loss of time involved, which renders the film, on arrival, no longer topical. Transmission of the film by radiovision methods would eliminate time loss, and enable audiences in any part of the world to see a topical film within a few hours of the actual event. These and other applications of Baird's latest development will un-

doubtedly be perfected in the not far distant future.

AT a time when wireless amateurs throughout the world are showing that distance can so easily be annihilated and that communication from one end of the world to the other is now possible even with very simple wireless apparatus, it would seem to us (says the "Wireless World") that the importance of wireless to the Scout movement cannot be overstated. The Scout movement would be enormously strengthened if a knowledge of wireless and of how to construct and operate transmitting and receiving apparatus were included as an essential part of the Scouts' training. Every Scout headquarters could have its short-wave station capable of communicating with other headquarters in almost every part of the world, and the interchange of messages through their own short-wave network would maintain as a permanency that personal contact which it has been the aim of the recent Scout Jamboree, held in England, to bring about.

PLANS for a simultaneous polar exploration in 1932-33, in which Australia and New Zealand will co-operate with America in the Antarctic, include the use of a new Russian invention, already tested, whereby a balloon is fitted with a camera taking photographs at a height of twelve miles. Immediately the picture is taken, the image is automatically wireless to the base.

NOT to be outdone by the manifest enthusiasm and enterprise shown by the wireless trade during the recent radio exhibition in England, the B.B.C. exhibited an interesting novelty in the form of a diorama. This was a kind of multi-dimensional panorama, in "papier mache," which portrayed the story of a broadcast transmission from the studio, through the control room to the transmitter, and thence to the aerial and loud-speaker of the listener.

For PERFECT REPRODUCTION

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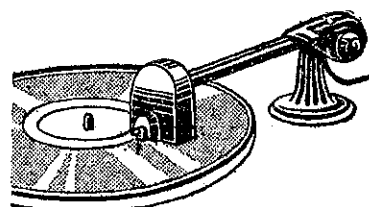
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£3-0-0

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The above illustration is of Model 124A de Luxe, showing the counterbalanced Tone-arm. Ask your nearest Agent for a demonstration.

The New Zealand Radio Record

(Incorporating the "Canterbury Radio Journal.")

P.O. BOX, 1032, WELLINGTON.

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N.Z. RADIO PUBLISHING CO., LTD.,
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WELLINGTON, FRIDAY, NOVEMBER 22, 1929.

EDITORIAL NOTES.

WITH the advent of summer comes the call of the portable. Radio to-day is so much an essential of our life, supplying information vital to daily needs, that even summertime, with its call to the outdoors, does not dissipate its value. Certainly the hours of listening may be reduced, but each listener derives some special benefit from radio which he is reluctant to forgo, even in the summer months. Campers and holiday-seekers, wherever they may roam, still feel the need for radio. Indeed the more genuinely they are on holiday, and the more isolated they are from the ordinary means of communication, the more valuable do they find radio as a means of keeping in touch with events of the day with a minimum of cost and trouble. So marked is this view that few indeed are the camping parties, fishing parties, and even touring parties, that now go far afield without their portable set. even at such distant points as Lake Taupo fishing parties nightly listen to selected YA stations through their radio sets. In this and succeeding issues special attention is being paid to meet the needs of those desirous of enjoying portable wireless. Our technical staff are providing constructional details for two sets, both of which can be strongly recommended for their respective uses.

THE Radio Exhibition held in Christchurch in the past week proved as successful in its degree as were those of Auckland, Wellington, and Dunedin. With the steady flow of country visitors for Carnival Week, the opportunity was taken by many to visit the Radio Exhibition and inspect the latest apparatus for fulfilling the special needs of the countryside for enjoying the radio service. The exhibition throughout was well attended, and business is reported to have been good. The displays made by the exhibiting firms were distinctly creditable, and covered the full range of radio apparatus. It is unfortunate that a larger hall was not available for the exhibition, but this had the effect of giving that crowded atmosphere so highly desirable in connection with such exhibitions. The exhibition was memorable by reason of the various eloquent addresses given by the representative speakers. They are fitly the subject of congratulation.

THE cabled message recording the damage inflicted upon the English and Scottish fishing fleets by a sudden raging gale in the North Sea serves to remind us that, great as has been the service rendered

by radio, it has not succeeded yet in altogether enabling mankind to avoid sudden conflicts with Nature and damage therefrom. It is true that in this particular case the fault, if any, lies with the fishing fleet themselves for inadequate use of the facilities provided by radio. Of the hundreds of fishing vessels comprising these fleets, relatively few, it is reported, carried wireless sets. Only some were so equipped, but these were able to pick up the broadcast warning of the approaching storm, and thus haul in their nets and save that loss inflicted upon the balance of the fleet, running into 31,000 nets, costing £150,000 to replace. It is somewhat surprising to learn that so relatively few vessels were equipped with radio. The law provides now that all ocean-going, passenger-carrying vessels shall carry radio apparatus with competent operators. It would seem that some incentive in addition to self-interest is necessary to force this protective measure upon fishing fleets. The lesson just read by the storm, however, is likely to be so clear and far-reaching in its effect that a much greater percentage will speedily be equipped. The disaster affords a lesson as to the value of the meteorological service. It indicates that weather conditions may change so suddenly that constant watchfulness is needed, both on the part of the observers and those standing to benefit by their warnings. Rural and shipping interests in New Zealand are alive to the value of weather warnings and the radio distribution of them, and our readers are aware, every opportunity is taken by the broadcast service to render good service in this field.

A Gift to Man

Bequeath of Radio

ONE of the finest and most eloquent addresses on radio ever broadcast was delivered at the Christchurch Radio Olympia last Friday evening by Mr. J. E. Strachan, M.Sc., rector of Rangiora High School, and one of the pioneers of radio in New Zealand.

Facetiously confessing that he was a "radiomaniac," Mr. Strachan said that he believed that radio, without exception, was the greatest achievement of modern science. And not only that, it was the greatest gift to the human race since man invented writing. Through it was springing up a new brotherhood, the brotherhood of man, bound together by radio. Broadcasting was only eight years old, yet it had made a wonderful appeal to the imagination. Until radio came, the human voice could reach only a very limited number of people. Now its audience was limited only by the circle of the earth. Radio was now a greater factor in the abolition of war than the League of Nations itself. An example of the power of radio was given by Mr. Strachan. When he arrived in Los Angeles for the Radio Olympia recently, he had not known a single person amongst thousands at the Olympia, yet, simply by pinning on the lapel of his coat his radio call code, O.Z. 3A1, he had made many friends, entered many homes, and had a pleasant social time throughout the States. In addition, while there, he had kept in touch with his fireside in New Zealand, and with his daughter in Honolulu.

Mr. Strachan contrasted the difference which radio made in Antarctic exploration. He pictured Commander Byrd, sitting in his tent on the most remote "hunk" of ice on God's earth, as he described the place. Outside his tent was a bamboo pole supporting an aerial through which he was able to keep in daily communication with New York. Contrast that with the story of Captain Scott writing his last message alongside the dead bodies of his

comrades. And it was more than a year afterwards that we heard of the tragedy!

Mr. Strachan also graphically described the finding of the Southern Cross, and how the news was flashed to London, New York, and other parts of the world.

Immediately following Mr. Strachan, Mr. J. Ball said he felt sure listeners everywhere must have welcomed so eloquent an interruption, as Mr. Strachan had called his address. He felt sure their hearts must have been touched and their imaginations fired by Mr. Strachan's splendid tribute to the power and influence of radio and his magnificent conception of its use and influence in bringing the peoples of the world closer together and hastening the coming of the brotherhood of man. New Zealand listeners could do something towards the advancement of this great ideal. The season of good will was at hand. Let them all endeavour to make it a Radio Christmas. If every listener would persuade at least one friend not now enjoying the boon of radio broadcasting to become a licensed listener, New Zealand at least would be linked up in a radio Brotherhood of Man.

Obituary

LISTENERS to 4YA will regret to hear of the death of Mr. A. G. Cooke, Dunedin, whose voice has been heard frequently from the southern station. Mr. Cooke was a bass singer of pleasing style and resonant voice, and a member of the Dunedin Returned Soldiers' Choir. He was a gas casualty during the war and died of pneumonia in the Dunedin General Hospital on Monday, November 12.

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St. Andrew's Day**Scottish Programmes**

SCOTTISH programmes broadcast by 1YA, 3YA, and 4YA will commemorate St. Andrew's Day on Saturday, November 30. Opening the programme at 1YA will be the Auckland Pipe Band, which will make its first appearance "on the air," playing "March Melodies," "Cock o' the North" and two reels. Concerted numbers will be sung by the New Zealand Four. Miss Reta McCullay will sing "The Scottish Blue Bells," "Turn Ye to Me" and "The Rowan Tree." Mr. James Simpson's tenor solo will be "The Nameless Lassie." As a baritone solo Mr. Eric Mannall will sing "My Ain Folk." Mr. Duncan Black will sing "The Deil's awa wi' the Exciseman." Mr. Roy Dormer (tenor) will be heard in "The Battle of Stirling." The vocal numbers will also comprise two duets. On the instrumental side of the programme selections will be played by the 1YA Orchestral Octet, under Mr. Eric Waters.

3YA has an excellent concert arranged. The principal contributors will be the Melodious Four, who recently visited Greymouth under special engagement to the Caledonian Society there to give a Scottish concert. They were accorded a great reception. They will present the same vocal numbers at 3YA, and the programme will be augmented with items by the Studio Instrumental Octet, under Mr. Harold Beck, by selections played by Pipe Major J. A. Patterson, and by humour from Mr. Jock Lockhart. Every item on the programme will be Scottish. It will be a programme to be revelled in by all who appreciate Scottish music.

Placed "On Record"

AT the Christchurch Radio Exhibition last week, Mr. E. J. Howard, M.P., delivered a short, entertaining address concerning radio broadcasting generally. In the course of his remarks he referred to the Radio Broadcasting Company and the service it was giving to listeners. Mr. Howard said for some years past he had taken an interest in radio. He was the first man who had ever mentioned broadcasting in the House of Parliament, when 75 per cent. of the members knew nothing of broadcasting.

Three years ago he had strongly criticised the Broadcasting Company and two years ago he had criticised it still more strongly, but now he would like to place on record, as they said in the House, his congratulations to the Broadcasting Company for the great improvements which had been made in the service in the past year. Indeed, he said, so excellent was the service now rendered that any reasonable listener would be hard put to find grounds for complaint.

Armistice Day**Successful Rebroadcasts**

IN view of the special services conducted in London on Armistice Day and broadcast by the short-wave station 5SW, Chelmsford, an attempt at re-broadcast was made by all New Zealand stations, and it is surprising that the degree of success that was achieved, for conditions were not ideal for rebroadcasting. Shortly before 11 o'clock, all stations interrupted their programmes to commence the long relay. Organ music was first heard, and this came through very loudly and clearly. We were listening in at the time and the music, brought through a reasonably powerful set, could be heard with great clarity and distinctness for a considerable distance. This part of the rebroadcast was a triumph.

The music was followed by commands given to the assembled troops, and although these could not be heard distinctly, yet it was quite clear that they were commands. These were followed by more organ music, and at about 11 o'clock a bugle called out very clearly. This was followed by a silence which was broken by another bugle call. At four minutes past eleven the hymn "O God Our Help in Ages Past" was clearly recognised.

Shortly after this the Archbishop of London was heard clearly leading prayer. The Lord's Prayer immediately followed and was recognisable in parts. There were more commands to the troops assembled, and the "Last Post" was sounded at 11.8 p.m. New Zealand time. The proceedings concluded with the National Anthem. An announcement was then heard from station 5SW, giving its name, and stating that they were now closing down until 5 p.m.

Throughout there was a certain gustiness and quick fading, although static was not troublesome. We checked up with Christchurch, and found that they were getting the broadcast very well indeed, but unfortunately the static was heavy on the broadcast band and prevented any continuous listening to this station.

Such rebroadcasts as these, although not perfect, are a triumph, for when one comes to consider that with a crystal set one can hear the Archbishop of London leading a London congregation in prayer they must admit that this is truly a remarkable feat.

Those with short-wave receivers report having received 5SW excellently. Mr. Leslie Jones, in reporting the broadcast, states: "Reception was exceedingly good, and volume all that could be desired. The proceedings could be followed throughout without any trouble, except for a howler for a few moments. So far as I am concerned, I have never heard G5SW more clearly, and reception was not materially interfered with by static."

A "League of Nations" Concert**Recent European Broadcast**

A NOVEL concert intended to symbolise the co-operation of European nations, was recently broadcast from Zurich and relayed by all the German stations. The orchestra, which was composed of musicians situated in Berlin, London, Paris, Milan, Vienna and Zurich, was conducted by Dr. Fischer, who invented and patented the system.

The method employed was as follows:—A piano, provided with a special damping device, was placed in the Telephone Exchange at Zurich. This damping device rendered the tones of the piano almost inaudible in the room itself, but they were received by a microphone placed close to the piano. The resulting frequencies passed from the microphone to amplifiers, and then were relayed over telephone lines to the musicians located in the six cities mentioned above. The musicians were provided with head-phones, and were thus able to hear the piano played in Zurich by the conductor, who played the score according to a pre-arranged method. At the side of each musician was placed a microphone, which transmitted his playing via a second telephone line to the Zurich telephone exchange, where a collective line united the sounds received from each instrument, and passed them simultaneously to the transmitting station and to the musicians. The latter were thus enabled to hear their own performance in unison with those of the other members of the orchestra. The transmission was also passed direct to the five hotels in Geneva, at which were quartered the delegates to the League of Nations.

Recital at 1YA**Music from Byrd to Busoni**

ONE of the undoubted boons of broadcasting lies in its beneficent educational possibilities which bring the most isolated listeners directly in contact with modern movements and cultural phases undreamed of in pre-wireless days.

No better example of this aspect of broadcasting could be found than the proposed series of piano lecture-recitals by Mr. Cyril Towsey, the well-known pianist at 1YA, Auckland, on the "History of Keyboard Music from Byrd to Busoni."

These recitals will be of about half an hour's duration and are to be given regularly each Tuesday afternoon between four o'clock and half-past. Piano music-lovers, to say nothing of a host of ordinary listeners, will find the series both informative and entertaining, because allied to Mr. Towsey's rare ability to demonstrate the chosen examples on the piano will be the interesting remarks on the composers and their works.

He will attempt to emphasise the human side of music and there is not a musician of the old masters who was not only intensely human, but many of them were remarkably versatile men of affairs. It would be an excellent idea for music-teachers everywhere to hold listening-in parties of piano students, who could make notes on what is said and played, and thereby derive substantial benefit from the course. The series will be inaugurated by 1YA on Tuesday afternoon, November 26, at 4 o'clock.

Have you secured your copy of
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1YA Lectures**Talks on Zoology****Radio Advertising****Freely Used in Election Fight****Wellington Radio Society****Monthly Meeting****Wanganui Choral Society****Relay by 2YA**

AT 1YA on Saturday, November 30,

Professor J. C. Sperrin-Johnson, president of the Auckland Zoological Society, will give a talk on the activities and objects of the society. The lecture is timed for 7.40. This address is another of the interesting series of talks arranged by 1YA.

The Auckland Zoological Society is of comparatively recent formation, and is the logical outcome of the very fine zoological park which the Auckland City has. The suggestion for the society's formation came from His Worship the Mayor (Mr. Geo. Baidon), and a public meeting readily endorsed the proposal, and the membership, which includes many well-known people, is steadily increasing.

The society's objects are to encourage the study of zoology in the Dominion, and in the Auckland provincial districts in particular; to promote a knowledge and interest in the native fauna of New Zealand, and encourage its protection; and to publish bulletins and papers relating to zoology.

The society has been fortunate in securing as its first president Professor J. C. Sperrin-Johnson, M.A., M.Sc., M.B., B.Ch., Litt.D., F.Z.C., F.R.G.S., who occupies the Chair of Biology at the Auckland University College. Professor Sperrin-Johnson gave an initial talk from 1YA on Thursday, November 11, and a further talk will be given on November 30, St. Andrew's night. After the New Year it is proposed to run a series of zoological talks, the society arranging for the speakers.

For any of our readers interested in the activities of the society, we desire to add that the hon. secretary and treasurer is Mr. T. W. M. Ashby, A.A.I.S., Town Hall, Auckland, and he will be happy to furnish particulars of membership to any interested. Members have the privilege of free admission to the zoological park on any day of the year, and also receive a certain number of complimentary tickets which may be given to friends.

"NEWSPAPER NEWS," an Australian technical journal, says of the recent political campaign there:—

"Broadcast stations came into their own as advertising mediums during the Federal election campaign. Never in Australian history have they been hired to such an extent by the political parties.

"The 'A' class stations (which do not accept advertising) broadcast one speech by each of the party leaders, and left it at that. But with the knowledge that hundreds of thousands of persons can now listen in, the politicians were eager to get their propaganda on to the air every night; and so the 'B' class stations, which may be leased for advertising purposes, reaped a rich harvest.

"On the last night of the campaign, 2GB, Sydney, staged 16 Nationalist speakers, in addition to the Premier and Prime Minister, and Mr. Hughes. The Queensland station, 4QG, occupied the night broadcasting a rowdy meeting at which the Treasurer, Dr. Page, was star speaker. In fact, it was almost impossible to get anything but political speeches on October 11. 2GB did not finish until close on 1 a.m.

"Mr. Hughes, especially, made great use of broadcast stations. The last week of the campaign listeners in heard him every night. The Trades Hall station, 2KY, held an election session every day, and staged the novelty of the only speeches by a candidate's wife—two addresses by Mrs. Theodore.

"At previous elections there was very little private broadcasting done, most of it being confined to the official broadcasts and relays of the three party leaders. The interest taken in the recent campaign made the ether a valuable medium for getting right into the homes.

"Gramophone records were also exploited for publicity purposes for the first time in an election campaign—but not by the politicians. Their voices were used for advertising purposes by

(Concluded at foot of next column.)

THE Amateur Radio Society of Wellington held its monthly meeting in the Cambridge Terrace Congregational Church schoolroom on Tuesday evening, November 12. The president, Mr. Byron Brown, being absent on a visit to Australia, the chair was taken by Mr. I. M. Levy, vice-president.

A lady member reported serious electrical interference from a source in proximity to Daniell Street, Newtown. She stated that the interference was almost continuous night and day, and spoilt broadcast reception. A motion was carried instructing the honorary secretary to notify officially the district radio inspector of the complaint. Another member complained of similar interference, although intermittent, at Miramar.

The subject of the annoyance occasioned by howling valves was much discussed, and it was explained by a member of the trade that the P. and T. Department very rigidly tested all types of sets on the market in order to prevent the sale of any set likely to cause interference with broadcast listening. He offered the opinion that the trouble from howling valves was mostly due to home-built sets. The advance of the a.c. type of set in popularity, however, was steadily reducing the howling valve nuisance, and in time would almost entirely eliminate the trouble.

Members reported a somewhat persistent nuisance caused in the Lyall Bay area by a howling valve, which was almost continuous each evening. A member who resided at Miramar added that the howling valve was probably the same which annoyed listeners in that area. A suggestion was made that the matter should receive attention from the district radio inspector.

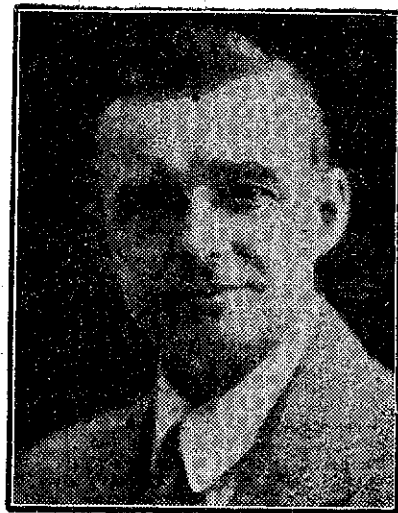
It was decided to congratulate the New Zealand Association of Radio Transmitters on the reduction of the license fee for transmitting stations from £2 2s. to £1 10s.

AN instructive and interesting lecture on methods of testing loudspeakers in the laboratories of manufacturers was delivered by Mr. C. Liddell, a member of the New Zealand Association of Radio Transmitters. Mr. Liddell, who illustrated his remarks with graphs prepared by himself, said that very little real research had been done on the subject. It was a difficult problem to ascertain the amount of energy imparted to the air on various frequencies from a loudspeaker, but he described by diagrams the Phonodeik Raleigh Disc and other ingenious and successful methods. Many difficulties had to be overcome in obtaining a fairly even distribution of volume throughout the gamut by a loudspeaker, and these were dealt with in detail.

Columbia records, who produced records of the Prime Minister, the Treasurer, the Deputy Leader of the Labour Party, and Mr. Hughes. Matrices of these are being sent by Columbia to the Federal Museum to take their places beside records of Hinkler, Kingsford Smith, and Ulm.

ON Wednesday, December 4, the eighth concert of the Wanganui Choral Society will be relayed from Wanganui by 2YA.

The society was formed early in 1926, and from its first public performance down to the last concert in June, 1929, has had a continuous record of success, and of enthusiastic reception from musical critics and the public generally. The opinion has been expressed by more than one professional musician of repute that there is no



Mr. F. Wentworth Slater, A.R.C.O.

finer choir in Australia or New Zealand than that of the Wanganui Choral Society.

The society has given only one concert outside Wanganui, in respect of which the "Hawera Star" stated: "It was a revelation in the art of concerted singing and a high tribute to the work of the conductor. He concentrates his abilities on the control of the voices, and, as it were, plays on them as an organist on his instrument, bringing out at will the most glorious effects. The members sing without music, consequently are able to give their undivided attention to their conductor. The results obtained were remarkable. Their breath and tone control, their grades of expression, the wonderful pianissimos (in which their conductor excels), the attack and release are features which mark all the work of the choir. Meticulous care and attention to detail are most pronounced, and this completed the triumph in choral singing which was achieved."

Needless to say, the high standard attained by this choir is in very great measure due to the genius and practical ability of the hon. conductor, Mr. F. Wentworth Slater, A.R.C.O., who, in addition to his work with the Choral Society, is conductor of the Wanganui Male Voice Choir, organist and choir-master of Christ Church, and has an extensive practice as a teacher of voice production.

Mr. Slater had most extensive experience in Wales in the training of both male and mixed voice choirs, and also in adjudication, particularly in the choral sections, at many musical festivals.



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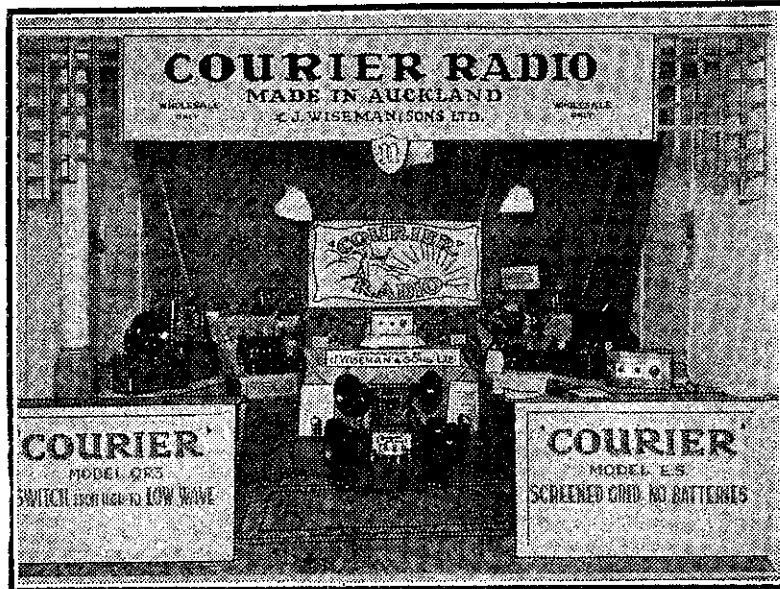
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Broadcasting News of the Week in Photographs



MR. NORMAN KERR,
Lecturer on "Physical Culture" at IYA. He is seen here before the microphone, at which he is a well-known personality. Mr. Kerr's wide experience makes him a valuable lecturer, and he is keenly appreciated.

—S. P. Andrew, photo.

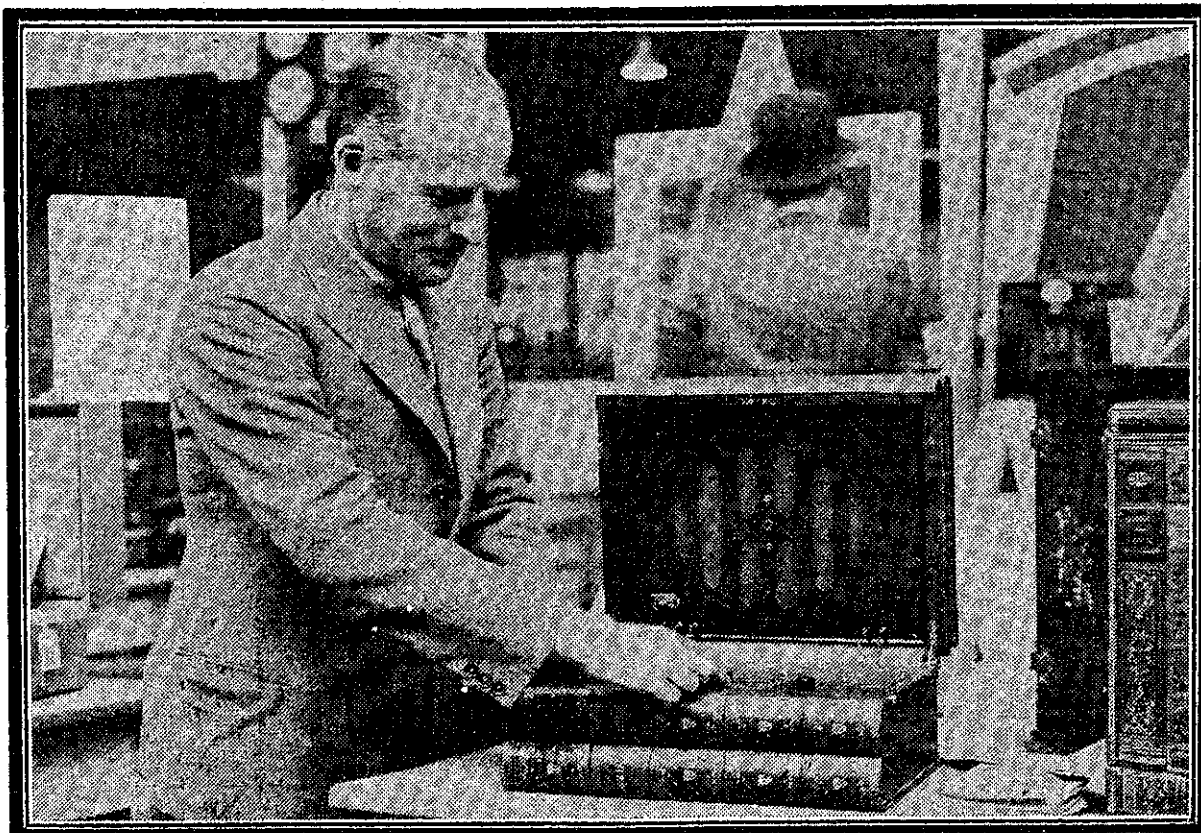


An interesting display at the recent Auckland Radio Exhibition showing the separate components of the Courier radio receivers.

—C. M. Walls, Ltd., photo.



MRS. CULFORD BELL
A very popular 1 YA Elocutionist.
—S. P. Andrew, photo.



A remarkable portable five-valve radio set, self-contained, including antenna, batteries and loudspeaker, which may be called the "library set." It is built in the form of folio volumes.

A New Cable Invention

AN improved telephone cable which is said virtually to eliminate static, has been perfected in the Bell laboratories in America and will be in operation for trans-Atlantic communication within a year. The new cable employs a single copper conductor, and will be installed so that at intervals of sixty miles or thereabouts, transmission will be revitalized and fading minimized, thus giving a steady and continuous service.

The inventor claims that with the aid of this static-eliminating cable the entire field of trans-Atlantic cable communication will be revolutionised. He predicts that within a few years inter-telephonic communication between practically every country in the world will be an accomplished fact.

Australian Topics

A HUGE radio display, the most comprehensive that has yet been staged in Australia, opened recently at Sydney. Almost every radio manufacturing company in Australia has co-operated to make this exhibition completely representative of the many recent advances in the most romantic of modern industries, wireless telegraphy. A feature of the display is the miniature broadcasting studio, which is completely glassed-in to prevent any possibility of sound interference.

SINCE the Australian Broadcasting Company commenced operations at 3LO and 3AR it has conducted 3122 auditions or tests in its continual quest for new artists for the broadcasting programmes. These tests take place almost every day under the direction of William G. James, and an elaborate loudspeaker system is installed throughout the administrative offices of 3LO in order that the manager, studio manager and programme directors may hear the tests and select any voice that is suitable or shows promise with training of becoming suitable for broadcasting.

Summer-Time Radio

Portables for Picnics

(Continued from front page.)

the aerial to act as a safeguard. As a matter of fact there is a clause in the rules of the Fire Underwriters' Association which tightening danger. Actually, this is very remote, but nevertheless a lightning-arrester should be placed in series with the aerial to act as a safeguard. As a matter of fact, there is a clause in the rules of the Fire Underwriters' Association which protects fire insurance companies against fire caused by induced charges from an aerial. In other words, if a fire occurs and it can be proved that an aerial leading into a radio receiver was not equipped with an arrester, the owner of the property has no claim for insurance money.

Another bugbear of summer-time reception is the prevalence of static. In sultry weather one often hears so many crackles, crashes, and other delightful noises that distant reception becomes painful, if not impossible. Quite frequently, too, the programme from the local station is marred. Atmospheric are due to waves of no particular frequency set up by lightning discharges often very many hundred miles away; the louder crashes are often produced by local static charges collected by the aerial and discharged through the set.

THIS brings us to the point where we diverged. The use of a frame antenna for summer-time reception minimises static and does away completely with the lightning question. There is a very much quieter background, selectivity is sharper, reaction usually smoother, and the receiver may be used even when a thunderstorm is overhead. Apart from use of portables, frame antenna may with advantage be used in the home. Details of such an antenna will be found in our special number next week. When conditions are good an aerial can be used with advantage with the portable receiver to replace the frame which then acts as an ordinary grid coil. Signal strength is strengthened, with the result that stations that could be heard on the 'phones can now be put on the speaker, and very many more brought on to the

'phones. Almost every portable receiver is designed so that an aerial may be attached. Well-insulated wire such as "electron" may be purchased very cheaply in 100ft. rolls, and a single roll of this wire and an insulator or two, a copper earth tube with a wooden mallet to drive it into the ground and a small wireless set will entertain quite a very large circle of holiday makers.

In reception of this nature where rapid changes of location are necessary a few refinements should be made to the aerial and earth equipment. Tie an insulator into the centre of a fairly long piece of cord, pass the insulated wire through insulator and secure it by a convenient knot to the aerial itself. This may now be suspended from any convenient tree or other support. The particular merit of this device is that the end of the aerial can be quickly attached to any convenient point, while the same end of the aerial is well insulated from the object to which it is attached.

The fact that the wire is insulated does not always dispense with the use of insulators. The insulation of the aerial wire, while excellent, is thin, as if this wire is bound round, for example, a metal post considerable leakage of wireless current can occur from the wire to the post. The insulation here acts as a dielectric of a quite large condenser.

Aerials may be slung from tree to tree, and a lead-in provided, or one end may be hoisted in the air and the other direct to the set. The aerial may be slung over a convenient support, and although both ends may be resting on the ground provided they are insulated from it good results will accrue.

A wire fence makes another very good aerial, for in very few cases are the wires earthed. It is advisable, however, in cases where either this or any other large object is used as antenna to connect a variable condenser of small capacity between the aerial terminal of the portable set and the aerial. This can then be adjusted so that the best results may be obtained. Such a condenser built into a box is an essential to any complete portable outfit. The body work of a motor can be brought into commission and makes a really useful aerial. It is wise, further, when using a motor-car in this manner to keep the set either well away from it or place the set so that the car is not between it and the station that is to be received. This shielding effect of a motor explains why a portable set may not work when inside.

A motor may be used for another useful purpose when holiday making with a portable receiver. The American cars are provided with 6-volt batteries for the lighting and ignition system, and by plugging into the nearest socket power may be taken off for the A battery, which is the greatest bugbear of portable receiver design.

OBTAINING an earth occasions very little difficulty, but to obtain a good earth requires a little thought and preparation. An earth tube driven into the ground is excellent, but to drive some of these into hard soil and pull them up again often militates

against the enjoyment of an itinerant picnic party. A nail driven into a living tree so that it connects with the sap makes an excellent connection with the ground, while a copper or metallic mat thrown into a stream makes a both convenient and ideal earth. Two water-pipes driven into the ground at some distance from one another may be used for aerial and earth. This is possible because the ground potential at different points varies.

Earth mats (large sheets of copper and bronze gauze or netting) were largely used during the Great War. When these are unrolled on the ground they can be used as counterpoises, and will often give much better earth effect than a varied plate, particularly if the latter is small. An earth mat may be a mattress spring, can be rolled up and tucked into the back of a car, and one should certainly be obtained if any serious effort at outdoor reception is contemplated.

WHEN a wireless set is designed the enthusiasm immediately thinks of screen grid and pentode valves. With the enormous amplification factor that these possess, it would appear that these are the perfect valve for portable receivers, but there are one or two points to consider. Both valves require high voltage to operate them successfully, and the screen grid requires very complete shielding. The pentode does not operate successfully, if supplied with low voltage, and even when adequate voltage is forthcoming, then a very large current drain results. The object of portable receivers is to keep both these to a minimum, so that we consider it unwise unless adequate battery power can be provided to incorporate these valves in the summer set, at least in the smaller set. The total current drain for economical use should not be greater than ten milliamperes.

The power valve should be biased so that it will accommodate a fairly wide grid swing, although it need not be efficient as the power valve in the radio receiver used for home use. Good reception is required, but that supplied by a sensitive speaker is to be preferred to good quality and a lower volume level supplied from a good cone, for this reason, a horn speaker is better than a cone for outdoor reception. Microphonic trouble often arises. A ringing will start in the speaker, and gradually build up until the noise is unbearable, and the set has to be shut off. Most detector valves are microphonic to some extent, but this is not noticed in the home where good conditions may be secured. When, however, the set is frequently moved or the surrounding objects moved, the trouble frequently becomes acute. A good preventive is to cover the valve with plasticine, which, although effective, is unsightly. The screen grid valve occasionally causes trouble in this manner, but nothing so usual as the detector. The use of the detector makes these precautions unnecessary.

The unforgivable sin—allowing the set to fall through flat batteries—should never be committed. There is no excuse for it, although it causes probably more disappointment than any other factor. No matter how well a set may be going the day or the night before, put the voltmeter across all batteries before setting off, and replace any that are at all suspiciously low. For "A" current, the use of dry cells is usually resorted to, but an accumulator is preferable, and should be used

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Summer radio may be a pleasure—it may be an annoyance, but if proper precautions are taken and simple advice followed, it can add very much to the joy of picnic or beach parties.

A Noted Wrestler

JOHN PESEK, who wrestled in Auckland last Monday night, is a Nebraskan farmer. He says: "I have been wrestling as long as I can remember. When I was a boy going to school I learned to look after myself, and a little later I wrestled with the cowboys out in the prairies. We knew little or nothing about rules. The hard ground was the mat, and it was always rough and tumble—Rafferty's rules, where the one that could last the longest was the winner. Later on I took up boxing, as there was money to be made in it. I was matched against Walter Harwood, and I knocked him out in the first round. He was unconscious for two days. This boxing had my mother worried, and she tried to persuade me to give it up. I had to later on because the authorities in Nebraska prohibited it. It was then that I took to wrestling. I found out that I liked it better, and that I could make money at it if I made good. I believe that I've done this, because in the last thousand matches I have lost the referee's decision maybe ten times, but no more. To date I have met and beaten every man of note. I hold decisions over two world's champions, when they were in their prime—Joe Stecher and Strangler Lewis.

International Exhibition

THE first International Wireless Exhibition opened recently in Paris, and one hundred and fifteen exhibitors took part. Among the foreign countries represented were: Great Britain, America, Germany, Austria, Holland, Russia, and Switzerland. Special rooms were fitted up for elaborate demonstrations of radio-vision, and it is stated that the public were amazed at the state of perfection already reached in this new development. Another feature of the exhibition which attracted much interest was the demonstrations of the transmission of radio-vised pictures, not by means of wireless waves, but by the utilization of similar properties possessed by light waves.

Songs of the Nations

Arranged for 4YA Stirring Recital

A PROGRAMME that will make a direct appeal to all, and should be one of the most popular and stirring yet broadcast, has been arranged for 4YA for Friday, November 29. It will be a night of patriotic songs and songs of the nations, both martial and sentimental.

Following a song like the British Grenadiers" will come "Home, Sweet Home," "Auld Lang Syne" will follow the stirring "Scots Wha Hae," and the plaintive "Londonderry Air" will follow "The Wearing of the Green." Wales will be represented by the "Men of Harlech," France by "The Marseillais," Italy by "Garibaldi's War Hymn,"

The D.X. Club

Identification Wanted.

I WISH to report reception of a station 2ZU, Marton, on November 6, at approximately 10.30 p.m. Wavelength, approximately 245 metres (1225 k.c.). Volume was fair on loudspeaker. I would like to know this station's power, and the address of the person operating it.—T.S. (Palmerston North).

IN the D.X. columns of the November 1 issue, a correspondent takes Mr. F. G. MacSherry to task over the wavelength of 1YA. I also receive this station on 338 metres (890 k.c.). My set is fairly accurate, or at least sufficiently so to register the slight variation in 4YA's wavelength recently. Could anyone identify a station operating on a wavelength of 180 metres, approximately (1670 k.c.). I have had

the address "Tipperary" and God Save the King" were sung. We could not pick up the station. Would be pleased if you could tell us. We have a seven-valve screen-grid factory-built receiver.—Grid (North Otago).

[This appears to be a rebroadcast of part of the Armistice Day celebrations in London.—Ed.]

Our Mail-Bag

Listening v. Reading.

I WOULD like to thank those responsible for putting on the excellent programmes on Monday evening last at 2YA, especially the second half of the programme. Why, Mr. Editor, have we not heard this clever Castle family before? Is it too much to ask them to appear in future programmes? The visitors we had during the evening told us that if talent like this was broadcast more often they would certainly and willingly pay 30s. for a license. I fully realise that what suits me probably does not suit my neighbours. When it does not meet with my approval, well, I simply switch off, take a book and read, and I am afraid that to-day I have done more reading than listening.—W.D.W. (Hataitai).

Musical Programmes.

I WISH to congratulate the R.B.C. upon the excellent musical programmes recently broadcast from 2YA. Apart from the concerts by the Wellington Symphony Orchestra—undoubtedly the "gems" of the radio year—the studio items have been excellent. Particularly I would like to mention the items by Mr. W. Haydock, who is one of the most brilliant violinists we hear "on the air," including overseas talent. Now, I must say, there is one class of item we have missed greatly during the past few months, and that is the excellent pianoforte music which used to be provided by Mr. Gordon Short. I wonder if Mr. M. T. Dixon could be persuaded to give one or two piano solos each week, and feel sure that such items would be greatly appreciated.—"Zedder," Masterton.

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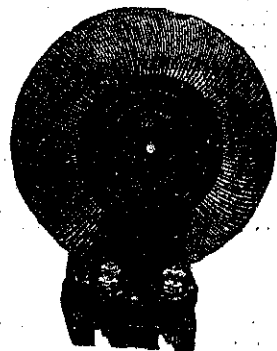
A. M. Walls, photo.

and the United States by "The Star Spangled Banner." "The Watch on the Rhine" will also be sung. New Zealand, too, will be represented.

The programme will be in the form of a lecture-recital by Mr. John T. Leech. Songs will be sung by Miss Valda G. McCurdy, Mr. John T. Leech. There will be items by the Instrumental Trio, Miss Muriel Caddie (pianiste), Miss Ethel Wallace (violiniste), and Mr. Hunter (cellist).

this station on several nights lately, mostly after 11 p.m.—Moi Whare (Feilding).

ON Sunday evening (November 10) between 8.30 p.m. and 8.40 p.m. we picked up a station about 1030 k.c. Someone announced something about the Bishop of London, then went on to say that Lord Jellicoe (former Governor-General of New Zealand) would address the gathering. After



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CROSLEY RADIO	Abel, Smeeton, Ltd., 27-29 Customs St. E., Auckland.
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MAJESTIC RADIO RECEIVERS	Kirkcaldie & Stains, Chief Wellington Agents, Lambton Quay.
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Stations Heard in New Zealand

FOLLOWING is a continuation of the list of stations heard in this country. The American stations will appear in subsequent weeks.

Australian Stations

			Metres (kc.)	Frequency
3DX	Melbourne	100 w.	224	1330
3EX	Melbourne	500 w.	240	1250
5KA	Adelaide	2.5 kw.	250	1200
2UW	Sydney	500 w.	267	1125
2MK	Bathurst	250 w.	275	1090
2KY	Sydney	1.5 kw.	280	1070
2HD	Newcastle	100 w.	288	1040
2UE	Sydney	250 w.	298	1025
4GR	Toowoomba	100 w.	294	1020
5DN	Parkside	500 w.	313	960
2GB	Sydney	3 kw.	316	950
2BE	Sydney	100 w.	316	950
3UZ	Melbourne	100 w.	319	940
2BL	Sydney	5 kw.	353	850
3LO	Melbourne	5 kw.	371	810
4QG	Brisbane	5 kw.	385	775
5CL	Adelaide	5 kw.	409	725
6WF	Perth	5 kw.	440	690
2FC	Sydney	5 kw.	451	665
3AR	Melbourne	5 kw.	484	615
7ZL	Hobart	3 kw.	516	580

Canadian Stations.

	Metres	Kilocycle
CFCF—Montreal, Quebec—1650 watts	411	730
CFCN—Calgary, Alberta—1800 watts	434	690
CFTT—Victoria, B.C.—500 watts	476	630
CFRB—Toronto, Ontario—1000 watts	512	960
CHYC—Montreal, Quebec—750 watts	411	730
CKAC—Montreal, Quebec—1200 watts	411	730
CKGW—Bowmanville, Ontario—5000 watts	312	960
CKLC—Red Deer, Alberta—1000 watts	357	840
CKY—Winnipeg, Man.—5000 watts	384	780
CNRV—Vancouver, B.C.—500 watts	291	1030

Japanese Stations.

	Metres	Kilocycles
JOAK—Tokio—1000 watts	345	870
JOBK—Osaka—1000 watts	400	750
JOCK—Nagoya—1000 watts	360	830
JODK—Keijo—1000 watts	357	840
JOFK—Hiroshima—10,000 watts	353	850
JOGK—Kumamoto—2000 watts	380	790
JOHK—Sandai—1000 watts	390	770
JOIK—Sapporo—1000 watts	361	830

Mexican Stations.

	Metres	Kilocycles
OYJ—Mexico City—2000 watts	400	750
OYM—Torreon—1500 watts	225	1330

Philippine Stations.

	Metres	Kilocycles
KPM—Iloilo—500 watts	400	750
KZIP—Manila—500 watts	260	1150
KZKZ—Manila—500 watts	270	1110
KZRQ—Manila—1000 watts	385	780

South African Stations.

	Metres	Kilocycles
ZTC—Capetown—1200 watts	372	805
ZTD—Durban—1200 watts	398	755

Indian Stations.

	Metres	Kilocycles
7BY—Bombay—3000 watts	357.1	840
7CA—Calcutta—4000 watts	370.4	810

ONE of the out-of-door relays to be put on the air by the Sydney stations shortly will be the description of the official opening of the shark-proof fence at Coogee, and a concert on the pier at night. The new American liner *Malolo*, which is touring the Pacific with American holiday-makers, will be at Newcastle shortly, and a programme will be broadcast from the vessel when she is there. As the ship is to come to Auckland afterwards, perhaps IYA, Auckland, will be able to relay a concert from her.

THE poor audibility of the Australian stations has had the effect of making many New Zealand listeners appreciate their own stations. Owners of good sets frequently declare, nowadays, that they are well satisfied with the "YA" programmes, and many of them say that they prefer to listen solely to 2YA, Wellington, excepting when there is something extra special from one of the other "YA" stations. "Switch" has noticed that lately, although the trans-Tasman stations have been weak, the "YA" stations have come in with splendid volume, not excepting 4YA, Dunedin.

THE daytime reception of 3YA, Christchurch, as heard in Wellington, is exceptionally good, and, of course, there is no trace of fading during daylight. During the recent Christchurch racing carnival "Switch" had 3YA continuously, and the volume was more than sufficient to fill the house throughout. The quality of tone of 3YA must be heard in daylight to be appreciated, for there are then no howling valves and atmospheric distortion to near reception.

A LOOSE bond in the tram rails in Constable Street, Newtown, is reported to be creating almost continuous interference with broadcast listening in the surrounding area. The tram-rails are connected together with a thick copper wire welded to the rails. Whether through electrolysis or vibration, the fact remains that these bonds become loose sometimes, and then a loud frying noise is heard in receiving sets within a considerable radius. When a tram passes over the loose bond it temporarily tightens it, but frequently the next car loosens it and the noise commences again.

IN his recent lecture before the Wellington Radio Society, Mr. C. Liddell stated that it was quite impossible for the common horn-type of loudspeaker to reproduce the lowest bass notes. Sounds were certainly heard which passed for the lower notes, but they were really only harmonics of those notes. Mr. Liddell paid a tribute to the "exponential" type of loudspeaker, which owing to its scientific measurements was able to reproduce the very lowest musical note. The moving coil loudspeaker was also capable of the same performance.

MR. F. P. BLACKWOOD, speaking at the recent meeting of the Wellington Radio Society, sounded the most hopeful note yet heard by "Switch" with regard to the howling valve nuisance. He said that the steady increase in popularity of the a.c. set would in time reduce the howling valve nuisance almost to the vanishing point. It was mainly the home-built sets which created this nuisance, and the construction of an a.c. set was practically beyond the capabilities of

the overwhelming majority of listeners. Nevertheless, an a.c. set of the neutrodyne type is capable of a lusty howl unless it is correctly neutralised, but no doubt the traders see to it that they are O.K. before they are installed. [We don't agree that a.c. sets are more difficult to build than d.c.—Tec. Ed.]

PECULIAR peaks in the volume obtained from loudspeakers were shown in graphs prepared by Mr. C. Liddell in his lecture before the Wellington Radio Society recently. The popular horn-type loudspeaker was proved to be the worst offender, and even the latest moving-coil loudspeakers were shown to emphasise considerably certain notes in the scale. It was only with ingenious devices for detecting these vagaries that an improvement could be possible.

THE seasonable change from winter into summer is having a pronounced effect on long-distance short-wave reception. An Australian listener states that among the overseas short-wave stations which are badly affected are W2XAF and 2XAD. He says that at 5 p.m. (7 p.m. N.Z. time) on Sundays, KZRM, 485 metres (620 k.c.) can be picked up in Sydney. An excellent programme is provided by the Bureau of Prisons' Band. Have any New Zealanders heard this transmission?

LISTENERS as a body display much impatience over the peculiarities of reception from various stations. They generally cannot understand that locality has a most important bearing on the quality of reception. "Switch" has received letters from listeners giving entirely opposite reports of the quality of reception of 2YA, Wellington. Some state reception is consistently perfect, while others, in a different locality, complain that the station is frequently distorted. They have the same sort of thing in Australia. A Melbourne listener writes to the Press that 2FC, Sydney, comes in perfectly, and invites all and sundry to come and hear for themselves. Another residing 200 miles west of Brisbane endorses this. Other reports state 2FC is badly distorted.

A WELLINGTON listener has sent in a query as to which Australian stations relayed the running description of the Melbourne Cup. The stations were: 3LO and 3AR, Melbourne; 2FC, Sydney; 4QG, Brisbane, and 5CL, Adelaide. It was also put "on the air" by the short-wave stations 3MB, Melbourne, and 2MB, Sydney, and rebroadcast by 7ZL, Hobart, and

6WF, Perth. The Melbourne "Listener In" remarks: "It is doubtful whether anything so big has ever been attempted in the way of broadcasting in any part of the world. This is an obvious exaggeration. The arrival of the Graf Zeppelin in America was described throughout the vast network of broadcast stations in the United States, and broadcast also on short-wave to distant parts of the globe."

A KELBURN correspondent writes: "On Monday and Tuesday evenings of this week, whenever the announcer was speaking or when a recitation was being given, we could detect the sound of music at the same time, although muffled, presumably at a distance. We have not heard it before, and it was sufficiently loud to be heard across the room in which the set is installed. I wondered if it was another station or perhaps music in another room of 2YA studio, as in addition we heard the sound of the

Wellington General Post Office clock chiming on each occasion during the evenings mentioned. Could you advise me what can be done to remedy this defect, that is, if there is anything wrong with my set? I think that it must have been something wrong at the studio, but perhaps you will let me know.—The music was coming from another room in the studio. The management, no doubt, will take steps to prevent this sort of interference recurring.

AUSTRALIAN listeners are disappointed because the new Australian Broadcasting Co.'s service does not include broadcasts from other countries. The programmes of the British Broadcasting Corporation, of stations PCJ and PHI, and of WGY in America, were frequently relayed by 2FC and 2BL. True, the produce was often far from perfect, but it was felt in broadcasting circles that the initial troubles were being overcome and that the time was approaching when the listening public could expect to hear London and other programmes repeated whenever anything special was being put over. One great advantage of these overseas programmes was that they cost nothing. Amalgamated Wireless, it is understood, made no charge for picking up the stations and passing along the overseas programmes to 2FC. Now this is all cut out. The Commonwealth Postal Department has no facilities for receiving from overseas and apparently is unwilling to allow anyone else to do it.

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Next Week's Features

1YA Features

THE Rev. Lionel B. Fletcher will be the preacher at Beresford Street Congregational Church on Sunday evening, when the service is to be broadcast. Contributing to the studio concert which will follow will be Miss Laura Walker (soprano), Mr. Walter Brough (baritone), and Mr. Joe Clark (elocutionist).

ON Tuesday evening at 7.40 there will be another talk on "Artistic Physical Development" by Madame Edith Baird. On Tuesday evening, singing in concerted and solo numbers, will be the Clarion Quartet, whose items include excerpts from "The Arcadians," "The Wonder Worker" (Kételbey), "Lucia di Lammermoor," and "The Princess of Kensington." Baritone solos will also be sung by Mr. Leo O'Malley, while Miss Margot St. L. Toner, the brilliant young Auckland pianiste, will contribute solos. The Studio Trio will play instrumental selections, and a violin solo will be contributed by the well-known violiniste, Miss Ina Bosworth. Mr. A. B. Chappell will give one of his interesting "Topical Talks."

THAT popular combination of variety artists, "The Radio Scamps," will again be heard "on the air" on Thursday evening, and will present a novelty programme entitled "Still Scampering With the Scamps." Their items will include ballads, humorous sketches, songs and harmony choruses.

ON Friday evening at 7.40 Mr. Martin Cock will give a talk on "Friends of Canterbury Cathedral." Madame Mary Towsey's Quartet will provide the major portion of the vocal programme on Friday evening, their programme including solos, duets and quartets. On the instrumental side of the programme will be the Studio Trio, Mr. Eric Waters (pianist) and Mr. Paul Hayes (cornetist). The pro-

gramme will conclude with a gramophone review of the latest recordings.

2YA Features

THE service in the Vivian Street Church of Christ will be broadcast on Sunday evening. Preacher, Pastor W. G. Carpenter. A studio concert by the Port Nicholson Silver Band will

and Mr. and Mrs. Victor Lloyd. The items to be played by the Orchestra will include Keler Bela's "Hungarian Lustspiel," which will be played as an overture, a movement of Schubert's "Fifth Symphony," Chaminade's "Serenade," an arrangement by Langey of three well-known French songs, Paderewski's "Minuet," and the "Aragonesa" from Massenet's suite "Le Cid." The items chosen by the Ariel Singers will comprise vocal numbers of a mis-

IN place of the usual band programme on Thursday evening the Wellington Commercial Travellers and Warehousemen's Association Orchestra and Concert Party will provide the programme. The orchestra, which plays under the conductorship of Mr. J. F. Woodward, will give a programme which should prove popular with a large number of musical tastes. The assisting artists will be Mrs. Amy Woodward (soprano), Mr. Stan. Croft (bass), Miss Vera Boesley (solo pianist), Mrs. Emma Astill (contralto), and Mrs. Gwen Clayton (mezzo-soprano). Mr. Will McKeon, the popular entertainer, will entertain with some humorous items rendered in his usual inimitable style. Mrs. E. Benson will feature some old-time and popular songs. Another feature of the programme will be a piano duet played by the Misses Vera Boesley and Eileen Rhodes, their item being Liszt's "Hungarian Rhapsody No. 2."

ON Friday afternoon the programme will be interspersed with summaries of the Town v. Country cricket match, which is being played at the Basin Reserve, the announcer being Mr. A. Varney, the secretary of the Wellington Cricket Association. The evening concert will feature the Phil-



MRS. AMY DUNN,
A soprano who is frequently heard
from 2YA.
—S. P. Andrew, photo.



MR. WILL HANCOCK,
Tenor, who sings for 2YA
regularly.
—S. P. Andrew, photo.

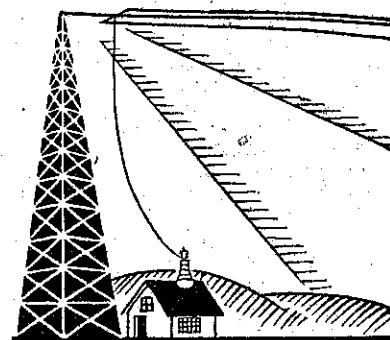
follow. Assisting vocal artists will be Miss Isabel Cooper, Miss Edith Buckmaster, and Mr. Harry Matthew.

ON Monday an interesting and varied programme will be presented by the 2YA Orchestra, the Ariel Singers,

cellaneous nature, both concerted and solo. Mr. H. Temple White, who will give a short organ recital, will play "Romance," by Zitterbart, and a "March in G," by Smart.

A feature of Monday's programme will be a play in one act by Mr. Victor S. Lloyd, which has for its scene of action a broadcasting studio. The plot, while being very interesting to listen to, is not of the "thriller" type generally associated with Edgar Wallace, but one of distinctly original character. The author, Mr. Lloyd, will act and produce his own play, being assisted by Mrs. Elsie Lloyd.

ON Tuesday the usual "popular" light programme will be given, the contributing artists being the Salon Orchestra, Miss Anne Davies (soprano), Mr. L. Bent (baritone), Miss Areta Wharton (humorous recitals), and Mr. Spencer Furrell, who will feature some of the latest popular songs. A feature of the orchestral numbers will be two instrumental trio numbers by Messrs. M. Dixon, W. Haydock, and Stanley Chapman (piano, violin, and 'cello respectively), viz., Widor's "Serenade" and Kreisler's "Viennese Popular Song." At 9.30 the second of the H.M.V. Theme Song series will be given, being followed by an H.M.V. dance programme until 11 p.m.



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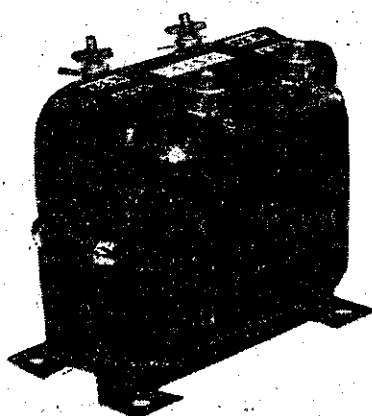
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CHRISTCHURCH.

harmonic Quartet in vocal gems from grand opera and musical comedy and the 2YA Orchestra, under the conductorship of Signor Truda, will contribute items. Miss Eileen Goodson, a pupil from the studio of Mr. Gordon Short, will play as a piano solo Liszt's "Liebestraum." Humorous sketches will be given by Miss Gracie Kerr, the well-known elocutionist, and Mr. Geo. Power.

ON Saturday afternoon a further relay from the Basin Reserve of the Town v. Country cricket match will be carried out, Mr. Varney being at the microphone. The concert session will be contributed to by the Salon Orchestra, the Lyric Male Voice Quartet, Mrs. Mildred Kenny's Mandolin Orchestra, Mrs. Winifred Birch-Johnson (siftense and entertainer), and Mr. W. Yates, who will provide the humour of the programme. From 10 p.m. until 10.45 p.m. there will be a Brunswick dance programme, the usual sporting summary being given at 10.45 p.m.

3YA Features

THE Rev. T. W. Armour will be the preacher at Knox Presbyterian Church on Sunday evening, when the service is to be broadcast. A studio concert will follow. Selections will be played by the Christchurch String Quartet, under Professor Oddone Savini, and the programme will be augmented with specially selected records.

THE fortnightly review of the latest books will be given by Mr. E. J. Bell on Monday evening at 7.15. The New Brighton Municipal Band, under Mr. J. A. Nuttall, will present a bright and diversified programme on Monday evening. Instrumental numbers will also be played by the Christchurch Broadcasting Trio. The vocalists will be Miss Betty Sutton (soprano), Miss Lottie Colville (mezzo-soprano), Mr. P. Macdonald (tenor), Mr. John Worган (baritone). Both Miss Sutton and Miss Colville are very talented young singers. Humorous items on the programme will be given by Mr. J. J. Flewellyn.

THE Studio Instrumental Octet and the Salon Quartet, with Mrs. Margaret Williams (elocutionist) will be the local artists for Wednesday evening's programme, which will include numerous operatic numbers. One concerted number which the quartet will sing will be "With My Flock as Walked I," an arrangement of a sixteenth century English air. Miss Corrie Aslin will sing an operatic number, "Mia Piccarella," also "The Woodpecker," and "The Cuckoo." "O Mio Fernando," from Donizetti's opera, "La Favorita," will be sung by Miss Dulcie Mitchell, who will also sing "My Dear Soul." Solos will also be sung by Mr. H. Blakeley and Mr. J. Graham Young. A very bright programme

has been arranged by the Studio Octet under Mr. Harold Beck.

ON Thursday evening at 7.30, Mr. C. C. Leitch, of the Department of Agriculture, will give a talk on "Certification of Wheat." Thursday will be a night of grand opera and classical numbers. The vocalists will be Madame Gower Burns, Miss Mavis Spiller, Mr. Ernest Rogers and Mr. J. Filer. Solos, duets and quartettes will be sung. Another of the series of piano recitals by Mr. Sydney Francis Hoben will be given on Thursday evening and selections will be played by a string quartet.

ON Friday at 7.30 Miss J. Beck, head of the Home Science Department of the Technical College, will give a talk on "Diet for School Children." The Bailey-Marston Dance Orchestra has been engaged for Friday evening and will supply a programme up to their usual high standard. The vocalists for the evening will be Miss Doris Irvine, Mrs. J. Filer and Mr. W. J. Bishlager. Humorous recitations will be given by Mr. Hiram Dunford and humour will also be dispensed by Mr. Geo. Titchener.

ON Saturday evening there will be a Scottish programme, which will be relayed to 4YA.

4YA Features

THE service in St. Andrew's Street Church of Christ will be broadcast on Sunday evening. Pastor W. D. More will be the preacher. A concert by the St. Kilda Band, relayed from St. Kilda rotunda, will follow.

LIONEL MONCKTON'S musical comedy "The Dancing Mistress" will provide the first half of the programme on Monday evening. Choruses, solos and duets will be sung by the Majors Quartet, under the direction of Mr. T. J. Kirk-Burnand. In the second half, when a miscellaneous programme will be presented, Miss Freda Elmes will sing "Full Moon" and Miss Dorothy Skinner will sing "O Thou That Tellect." "The Mistress of the Master" will be sung by Mr. L. M. Cachemaille (baritone), and the tenor solo "Marie" will be sung by Mr. J. Montague. As a cello solo, Mr. P. J. Palmer will play "Le Cygne," and there will be a piano solo by Mrs. Ernest Drake.

THE St. Kilda Band under Mr. James Dixon will provide a programme on Tuesday evening consisting of marches and selections, a cornet solo with band accompaniment, "Lizzie," and a trombone novelty, "The Firefly." Featured on the vocal programme will be two duets, to be sung by Miss Rita Holmes and Miss Irene Hornblow. Offenbach's "Barcarolle" and Haydn Wood's "When the Daisy Opens Her Eyes." Bass solos by Mr. G. M. Salmund

will be "Mine Enemy" and "Nelson's Gone a'Sailing." There will be elocutionary items by Miss Nellie Osborn.

ON Wednesday evening the programme will be provided by "The Merry-makers' Concert Party" under the direction of Mr. Allan Young.

ON Friday evening there will be a special programme of "Patriotic Songs of the Nations."

THE programme from 3YA will be relayed on Saturday evening.

Children's Sessions

AT 1YA.

TUESDAY, NOVEMBER 26.—Listeners will welcome the pupils of Miss Blamires to the studio once again, to hear their musical items, and of course to hear Uncle George's stories.

WEDNESDAY.—Uncle Tom with cheery choruses and stories, and cousins reciting.

THURSDAY.—What do you think? Another playette with all little folk in it—what luck. And catches and puzzles from Peter Pan.

FRIDAY.—This evening Nod and Aunt Jean have some new entertainers with them. The Richmond Road School Choir will make their first appearance, but all listeners hope it won't be their last.

SATURDAY.—Cinderella in charge, and Mr. Taylor present with an interesting talk about life on a training ship. Boys will be especially interested, so gather round and listen in at 5 o'clock.

SUNDAY.—Children's song service conducted by Uncle Leo assisted by Beresford Street Sunday School.

AT 2YA.

MONDAY, NOVEMBER 25.—The pupils of Mrs. E. Mackay will play on two pianos to-night and Cousin Helen will sing lovely lullaby songs. Uncle Jeff will give birthday greetings.

TUESDAY.—Cousin Marjorie will sing some happy songs to-night, and Cousin Betty will recite several of her charming poems. Mr. Gramophone Man will have a cheery tale to tell, and Uncle Jim will send birthday wishes over the air.

THURSDAY.—Songs, recitations and music to-night. Also, there will be birthday messages from Uncle George.

FRIDAY.—Several cousins will be here to-night with songs, recitations, and piano solos. Cousin Zena has arranged these items, and will sing some of her welcome songs. Brother Jack will give the birthday greetings.

SATURDAY.—Cousins Joyce and Maurice and the Revellers Band to-night. Uncle Toby and Aunt Gwen will join in the fun.

SUNDAY.—The Children's Song Service will be conducted by Uncle George, assisted by the Terrace Congregational Sunday School Choir conducted by Mr. C. R. Lankshear.

AT 4YA.

MONDAY, NOVEMBER 25.—Here we come gathering fun and play.

Macandrew School will sing to-day. Uncle Allan will have something to say, At five o'clock in the evening.

TUESDAY.—Please don't grieve because Edna Neev And his bairns will sing like you'd hardly believe, Whilst Uncle George with his stories and fun Will have the hour gone before it'd hardly begun.

WEDNESDAY.—There's nothing like fun for healthy boys, And girls, too, as a matter of that; Miss Martyn's pupils will provide these joys, Or Brother Bill will eat his hat.

FRIDAY.—Let's all sing; make the rafters ring; We don't care what the day may bring; At five o'clock we laugh and sing. Aunt Shiela will make it just the thing, So let's all sing.

SATURDAY.—Boom-boom-boom-goes the big bass drum, Zrr-uph goes the long trombone; Aunt Anita will provide some fun, And the band of the Catholic Home.

Owing to the change of hours of the Children's Sessions at 4YA it has been found necessary to readjust the rota of Uncles and Aunts. Uncle George changes to Tuesday night, Aunt Anita to Saturday night, and Big Brother Bill to Wednesday night.

Radio in Spain

THE authorities governing broadcasting in Spain have recently issued another set of regulations in order to enforce a license fee upon listeners. This provision has been found necessary, as, since the imposition of the tax, only one third of those possessing sets have paid their fees. Fines, varying from ten to one hundred pesetas, are now to be imposed upon "pirates." The system of sandwiching profuse advertisements between items has long been a bone of contention between listeners and authorities in Spain; and the former, as a protest, refused to pay any license fees. As it has now been stipulated that no more than one hundred words of advertising per hour will be permitted, it is expected that the controversy will cease, and fees will be forthcoming.

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Full Programmes for Next

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Sunday, November 24

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, NOVEMBER 24.

- 2.0 : Afternoon session—selected studio items.
 4.0 : Literary selection by the 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.): Studio concert:
 Metropolitan Symphony Orchestra, "Tannhauser" overture (Wagner) (Broadcast 5003).
 Soprano—Miss Laura Walker, (a) "Le Roi D'ys" (Lalo); (b) "Charm of Spring" (Clark).
 Recital—Mr. Joe Clark, "From My Scrapbook."
 Violin—Peggy Cochrane, Excerpt from "Andante Concerto in E Minor" (Mendelssohn) (Broadcast 5042).
 Baritone—Mr. Walter Brough, "Eri Tu Che Machiavi" (Verdi).
 Organ—Berkeley Mason, "Polonaise in A Major" (Chopin), (Broadcast 5065).
 Soprano—Miss Laura Walker, "Joy of Life" (Brett).
 Metropolitan Symphony Orchestra, "Hungarian Dances" Nos. 1 and 2 (Liszt) (Broadcast 5083).
 Recital—Mr. Joe Clark, "More From My Scrapbook."
 Pianoforte—Maurice Cole and Metropolitan Symphony Orchestra, "Concerto Op. 16 in a Minor—3rd. Movement" (Grieg) (Broadcast 5016).
 Baritone—Mr. Walter Brough, (a) "Yeomen of England" (German), (b) "I Heard You Singing" (Coates).
 Band of H.M. Welsh Guards, "King's Guards" March (Keith) (Broadcast 302).
 9.30: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, NOVEMBER 24.

- 3.0 : Afternoon session—Selected studio items.
 6.0 : Children's song service conducted by Uncle George.
 7.0 : Relay of service from Vivian Street Church of Christ. Preacher, Pastor W. G. Carpenter; Organist, Mrs. L. Simcock; Choirmaster, Mr. W. G. Carpenter.
 8.15 (approx.): Studio concert by the Port Nicholson Silver Band, under the conductorship of Mr. G. Kerr (Deputy-Conductor), and assisting artists:
 Hymn—Band, "Silver Hill."
 Overture—Band, "La Flandre" (Bouillon).
 Soprano—Miss Isabel Cooper, (a) "Slave Song" (Del Riego), (b) "I Hear a Thrush at Eve" (Cadman).
 Lener String Quartet, "Menuetto—Quartet in D Major" (Haydn) (Columbia 04213).
 Contralto—Miss Edith Buckmaster, "The Lover's Curse" (arrgd. Hughes).
 Cornet solo with band accompaniment, Bandsman C. Eades, "London-derry Air" (arrgd. Hawkins).
 Baritone—Mr. Harry Matthew, "Les Rameaux" (Faure).
 Selection—Band, "Il Trovatore" (arrgd. Round).
 Weather report.
 Soprano—Miss Isabel Cooper, (a) "A Castilian Lament" (Del Riego), (b) "That's All" (Brahe).
 Euphonium solo with band accompaniment—Bandsman A. Kaye, "Drink to Me Only With Thine Eyes" (arrgd. Hawkins).
 Contralto—Miss Edith Buckmaster, (a) "Caprice" (Furrell), (b) "How Many a Lonely Caravan" (Woodforde-Finden).
 Intermezzo—Band, "Cinderella's Procession" (Weir).
 Baritone—Mr. Harry Matthew, (a) "The Lute-Player" (Allitsen), (b) "The Banjo Song" (Homer).
 Don Cossacks Choir, (a) "Kolj Slavenj" (Bortnjansky), (b) "Tri Pjensi" (Three Folk Songs) (arrgd. Dorowen) (Columbia 02712).
 March—Band, "Punchinello" (Rimmer).
 Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, NOVEMBER 24.

- 3.0 : Afternoon session—selected studio items.
 5.30 : Children's song service (Children of the Presbyterian Sunday Schools).
 6.15 : Hymn tunes from studio.
 6.30 : Studio concert:
 Organ—G. T. Pattman, "Liebestraum" (Liszt) (Columbia 01003).
 Violin—Miss Mary Martin, (a) "Romance" (D'Ambrosio); (b) "Chanson Polonaise" (Wieniawski).

Chorus—Grand Opera Chorus, "King's Prayer" ("Lohengrin") (Columbia 02592).

Violin—Miss Mary Martin, "Allegro" (Harold Henry).

Chorus—Chauve Souris Company, "A Russian Barcarolle" (Varlamoff) (Columbia 02525).

7.0 : Relay from Knox Presbyterian Church, Bealey Avenue. Preacher: Rev. T. W. Armour. Organist: Mr. Alan Welbrock. Musical Director: Mr. W. H. Dixon.

8.15 (approx.): Studio concert.

Christchurch String Quartet, under the conductorship of Professor Oddone Savini—"Allegro Moderato" and "Scherzo" ("Quartet No. 2") (Borodin, arrgd. Savini).

8.25 : Columbia Symphony Orchestra, (a) "March of the Bojaren" (Halvorsen) (b) "Bridal Procession" (Grieg) (Columbia 02622).

8.33 : Boy soprano—Trevor Schofield, "Good-night, said the Cuckoo" (Harding) (Columbia 01503).

8.36 : Christchurch String Quartet, "Adagio Minuet" ("Sonata Pathetique") (Beethoven).

8.46 : Tenor—Herbert Brown, "One Flower Grows Alone in Your Garden" (Romberg) (Columbia 01517).

8.49 : Grand organ—Francis Sutton, "Suite Gothique" (Boellman): 1. Choral. 2. Menuet Gothique (Columbia 01378).

8.57 : Duet and chorus—Marise Beaujou, M. Bordon and chorus, "Faust—Church Scene" (Gounod) (Columbia 02843).

9.5 : Christchurch String Quartet, "Andante Cantabile" ("Quartet Op. 11") (Tschaikowsky).

9.14 : Chorus with orchestra—La Scala Chorus, "Otello—La Tempesta" and "Otello—Fuoco di Gioia" (Verdi) (Columbia 02723).

9.22 : Lucerne Kursaal Orchestra, "Orpheus in the Underworld" (Offenbach) (Columbia 02839).

9.30: Close down.

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, NOVEMBER 24.

- 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. Andrew's Street Church of Christ (Preacher, Pastor W. D. More; Organist, Miss Stokes).
 7.55 : Weather report.
 8.5 : Relay from St. Kilda Band Rotunda of concert by the St. Kilda Band.
 9.15: Close down.

Monday, November 25

1YA, AUCKLAND (900 KILOCYCLES)—MONDAY, NOVEMBER 25.

SILENT DAY.

2YA, WELLINGTON (720 KILOCYCLES)—MONDAY, NOVEMBER 25.

- 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 Jeff.
 6.0 : Dinner session—"Columbia" Hour:
 Ketelbey's Concert Orchestra, "In a Persian Market" (Ketelbey) (02689).
 Efreim Zimbalist, "Liebeslied—Old Vienna Waltz" (Kreisler) (04221).
 6.12 : Tacet.
 6.15 : Morceau—Plaza Theatre Orchestra, "The Busy Bee" (Bendix) (01438).
 Plaza Theatre Orchestra, "My Lady Dainty" (Dance) (Hesse) (01438).
 J. H. Squire's Celeste Octet, "La Serenata" (Braga) (9116).
 Cinema organ—G. T. Pattman, "Firefly" (Nicholls) (01348).
 6.27 : Tacet.
 6.30 : Columbia Symphony Orchestra, "March of the Toys" (Herbert) (02651).
 Waltz—New Concert Orchestra, "Hydropaten" (Gungl) (02672).
 Violin—Efreim Zimbalist, "Zapateado" (Sarasate) (04221).
 6.42 : Tacet.
 6.45 : Waltz—New Concert Orchestra, "Jolly Fellows" (Bruder) (02672).
 J. H. Squire's Celeste Octet, "Serenade" (Titl) (9116).
 Waltz—Eddie Thomas's Collegians, "Beautiful Ohio" (Earl) (02651).
 6.56 : Tacet.
 7.0 : News session, market reports and sports results.
 7.40 : Lecturette—Miss Margaret O'Connor, "Dancing."
 8.0 : Chimes of the G.P.O. clock.
 8.1 : Overture—2YA Orchestra, under the conductorship of Signor A. P. Truda, "Hungarian Lustspiel" (Keler Bela).
 8.9 : Vocal duet—Misses Jeanette Briggs and Ngaire Coster, "Violets" (Cowen).

Week-all Stations-to Dec. 1

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- 8.13: Tenor—Mr. W. Roy Hill, "How Vain is Man" ("Judas Maccabæus") (Handel).
 8.17: 2YA Orchestrina, "Symphony No. 5" (Schubert).
 8.25: One-act Play—Mr. Victor S. Lloyd and Miss Elsie Lloyd, "When Courage Fails" (V. S. Lloyd).
 8.40: Violin—Yelli d'Aranyi, (a) "Rondo" (Beethoven-Kreisler), (b) "Bagatelle in D" (Gatty) (Columbia 01622).
 8.46: Bass—Mr. J. M. Caldwell, "The Fibroch" (Stanford).
 8.50: Vocal quartet—Ariel Singers, "The Winds" (Cympton).
 8.54: 2YA Orchestrina, "Serenade" (Chaminade).
 9.0: Weather report.
 9.2: Relay of organ recital by Mr. H. Temple White: (1) "Romance" (Zitterbart); (2) "March in G" (Smart).
 9.14: Soprano—Miss Jeanette Briggs, L.A.B.: (a) "The Silver Ring" (Chaminade), (b) "The Night Wind" (Farley).
 9.21: Don Cossacks Choir, (a) "Monotonously Rings the Little Bell" (Russian folk song), (b) "Song of the Volga Boatmen" (Russian folk song) (Columbia 9085).
 9.28: Mezzo-contralto—Miss Ngaire Coster, "To Music" (Schubert).
 9.32: 2YA Orchestrina—"Three French Songs" (arrgd. Langey): (1) Hindoo Song (Romberg), (2) At Evening (Debussy), (3) "Open Thy Blue Eyes" (Massenet).
 9.40: Tenor—Mr. W. Roy Hill, "My Love's an Arbutus" (traditional).
 9.44: Cello—W. H. Squire, (a) "Gavotte" (Mehul), (b) "Madrigale" (Simonetti-Squire) (Columbia 03646).
 9.50: Vocal quartet—Ariel Singers, "Now is the Month of Maying" (Morley).
 9.54: Minuet—2YA Orchestra, "Minuet" (Paderewski).
 Selection—2YA Orchestrina, "Aragonaise" ("Le Cid") (Massenet).
 10.2: Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—MONDAY, NOVEMBER 25.

- 3.0: Afternoon session—selected studio items.
 4.25: Sports results to hand.
 5.0: Children's session, conducted by Scatterjoy.
 6.0: Dinner session—"His Master's Voice" Hour:
 Overture—H.M. Coldstream Guards, "Morning, Noon and Night" (Suppe, arrgd. Morelli) (C1594).
 Violin—Heifetz, "Hebrew Melody" (Akron) (DB1048).
 San Francisco Symphony Orchestra, "Midsummer Night's Dream" Overture and Wedding March (Mendelssohn) (D1568).
 6.12: Tacet.
 6.15: New Light Symphony Orchestra, "Malaguena" (Spanish Dance) (Moszkowski) (C1210).
 Grand Organ—Whitaker-Wilson, "Largo" (Handel) (C1237).
 New Light Symphony Orchestra, "Rustic Wedding Symphony" (Goldmark) (C1210).
 6.27: Tacet.
 6.30: New Light Symphony Orchestra, "Scene De Ballet Marionettes" (Glazounov) (B2754).
 Piccadilly Orchestra, "Friend O' Mine" (Sanderson) (B2857).
 Piccadilly Orchestra, "None But the Weary Heart" (Tschalkowsky).
 6.42: Tacet.
 6.45: La Vittoria Orchestra, "Wedding of the Winds" (Hall) (EF21).
 Cello—Pablo Casals, "Prize Song" ("Mastersingers of Nuremberg") (Wagner) (DB1012).
 Royal Opera Orchestra, "Marche Militaire" (Schubert) (C1279).
 6.55: Tacet.
 7.0: News session and sports results.
 7.15: Talk—Mr. E. J. Bell, Book Review.
 7.30: Lecturette—Canterbury Chamber of Commerce Agricultural Bulletin No. 5—"Top Dressing in Canterbury," prepared in conjunction with Canterbury Agricultural College, Lincoln, and Economic Department, Canterbury College. (Broadcast arranged by 3YA Primary Productions Committee).
 8.0: Chimes.
 Studio programme by New Brighton Municipal Band, under the conductorship of Mr. J. A. Nuttall, and assisting artists:
 8.1: March—Band, "Victoria" (Lithgow).
 One-step, Band, "You're in Style" (Gus Rhan).
 8.8: Soprano—Miss Betty Sutton, (a) "Sunflakes" (Phillips); (b) "Fairy Lures" (Stanford).
 8.13: Instrumental—Christchurch Broadcasting Trio, (a) "Melodie" (Moszkowski); (b) "Rondo Alla Turka" (Mozart).
 8.21: Baritone—Mr. John Worgan, "Dreamland, I Hear You Calling" (Hade).
 8.25: Humorous song—North and South, "The Continong" (Wallace).
 8.29: Waltz—Band, "Ninette" (Al Manch).
 8.34: Humorous recital—Mr. J. J. Flewellyn, "The Laundry Problem or the Vanished Washerlady" (Leacock).
 8.39: Kinema organ—Eddie Horton, "Sunrise" (Merton).

- 8.42: Mezzo-soprano—Miss Lottie Colville, (a) "Song of the Little Folk" (Coates); (b) "Mighty Lak' a Rose" (Nevin).
 8.49: Foxtrot novelties—Band, (a) "Colombo" (Nicholls); (b) "You're a Real Sweetheart" (Friend).
 8.56: Tenor—Mr. P. Macdonald, (a) "Love is Mine" (Gartner); (b) "Because" (D'Hardelot).
 9.2: Weather report.
 9.4: Soprano—Miss Betty Sutton, (a) "Days of Joy Are Here" (Hemery); (b) "The Little Old Garden" (Hewitt).
 9.9: Instrumental—Christchurch Broadcasting Trio, (a) "Intermezzo" ("Carmen" (Bizet), (b) Serenata" (Moszkowski).
 9.17: Baritone—Mr. John Worgan, (a) "My Beloved Queen" (Fabian Rose), (b) "There's a Song Down Every Roadway" (Haydn Wood).
 9.25: Selection—Band, "Carisbrooke" (Calvert).
 9.34: Recital—Mr. J. J. Flewellyn, "The Scene Shifter's Lament" (Anon).
 9.39: Trombone—Mr. Les Croft, "Sliding Sid" (Losey).
 9.44: Mezzo-soprano—Miss Lottie Colville, "Hanging Out the Clothes" (Oliver).
 9.48: Foxtrot Novelties—Band, "I Ain't Never Been Kissed" (Gilbert); (b) "Virginia" (Phillips).
 9.55: Tenor—Mr. P. Macdonald, "Land of Delight" (Sanderson).
 9.59: March—Band, "Steadfast and True" (Tieke).
 10.3: Close down.

4YA, DUNEDIN (650 KILOCYCLES)—MONDAY, NOVEMBER 25.

- 3.0: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 5.0: Town Hall chimes.
 5.1: Children's session conducted by Uncle Allan.
 6.0: Dinner session—"His Master's Voice" Hour:
 Royal Opera Orchestra, "Praeludium" (Jarnefeldt) (B2618).
 Cello—Pablo Casals, "Melody in F" (Rubinstein) (DA833).
 Waltz—Royal Opera Orchestra, "Eugénie Onegin" (Tschalkowsky) (C1281).
 Balalaika Orchestra, "Shining Moon" (Russian folk song) (EA48).
 6.12: Tacet.
 6.15: Suite—Paul Whiteman's Orchestra, "Suite of Serenades" (Herbert):
 (1) Spanish, (2) Chinese, (3) Cuban, (4) Oriental (EB26).
 Waltz—Philadelphia Symphony Orchestra, "Tales from the Vienna Woods" (Strauss) (ED2).
 6.27: Tacet.
 6.30: Royal Opera Orchestra, "Berceuse" (Jarnefeldt) (B2618).
 Cello—Pablo Casals, "Traumerel" (Schumann) (DA833).

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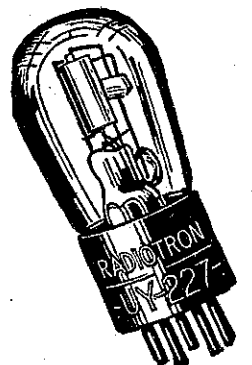
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- Male quartet—The Rounders, "Chlo-e" (Kahn) (EA402).
 San Francisco Symphony Orchestra, (a) "Serenade" (Volkmann), (b) "Flight of the Bumble Bee" (Rimsky-Korsakov) (ED9).
 6.42: Tacet.
 6.45: Chicago Symphony Orchestra, (a) "Valse Frieze" (Sibelius), (b) "Funeral March of a Marionette" (Gounod) (ED5).
 March—San Francisco Symphony Orchestra, "Marche Militaire" (Schubert) (ED9).
 6.57: Tacet.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Overture—New Mairfair Orchestra, "Lilac Time" (Schubert-Clutsum) (H.M.V. C1457).
 8.9: Presentation of the comic opera "The Dancing Mistress" (Monckton) by the Majors Quartet under the direction of Mr. Thos. J. Kirk-Burnand:
 Act 1: Opening Chorus; Bella and chorus, "Tom, Dick, and Harry"; Widdicombe and Girls, "A Little Flutter"; Nancy, "The Dancing Mistress"; Scene and chorus, "The 'At Home'"; Duet (Nancy and Teddy), "Fly Away Jack"; Finale.
 8.29: 4YA Broadcasting Trio, "Quintet—Die Meistersinger von Nurnberg" (Wagner).
 8.39: Act 2: Opening Chorus; Duet (Nancy and Teddy), "If I Were to Dance Like You"; Pianoforte interlude; Baron and chorus, "When You are in Love"; Nancy, "Dance, Little Snowflake"; Pianoforte interlude; Finale, duet and chorus, "While We're Dancing Together."
 9.0: Weather report.
 9.2: Royal Opera Orchestra, "Sylvia Ballet—Prelude and Intermezzo" (Delibes) (H.M.V. C1417).
 9.10: Baritone—Mr. L. M. Cachemaille, "The Mistress of the Master" (Phillips).
 9.14: 'Cello—Mr. P. J. Palmer, "Le Cygne" (Saint-Saens).
 9.20: Soprano—Miss Freda Elmes, "Full Moon" (Woolmer).
 9.24: Pianoforte—Mrs. Ernest Drake, "Two Sea Pieces" (McDowell).
 9.30: Contralto—Miss Dorothy Skinner, "O Thou That Tellest" (Handel).
 9.34: 'Cello—Mr. P. J. Palmer, "Siciliana" ("Cavalleria Rusticana") (Mascagni).
 9.39: Concerted—Light Opera Company, "Gems from 'Sunny'" (Kern) (H.M.V. C1293).
 9.46: 4YA Broadcasting Trio, "Cujus Animam" ("Stabat Mater"—Rossini).
 9.56: Tenor—Mr. J. Montague, "Marie" (Aitken).
 9.59: Finale—Royal Opera Orchestra, "Sylvia Ballet" (Delibes): Pizzicato and Procession of Bacchus (H.M.V. C1418).
 10.3: Close down.

Tuesday, November 26

1YA, AUCKLAND (900 KILOCYCLES)—TUESDAY, NOVEMBER 26.

- 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:
 Suite—Ketelbey's Concert Orchestra, "In a Fairy Realm" (Ketelbey):
 1. The Moonlit Glade. 2. The Queen Fairy Dances. 3. Gnomes March (02694-5).
 6.12: Tacet.
 6.15: Columbia Symphony Orchestra, "March of the Bojaren" (Halvorsen).
 'Cello—Gasper Cassado, "Melodie Arabe" (Glazounov), (03579).
 New Queen's Hall Light Orchestra, "Summer Days" Suite (Contes):
 1. In a Country Lane. 2. On the Edge of the Lake. 3. At the Dance (02590-1).
 6.42: Tacet.
 6.45: J. H. Squire Celeste Octet, "Memories of Mendelssohn" (arrgd. Sear).
 Pastoral—Columbia Symphony Orchestra, "Bridal Procession" (Grieg).
 6.57: Tacet.
 7.0: News session and market reports.
 7.20: Talk—Madame Edith Baird, "Artistic Physical Development."
 7.40: Talk—Miss Ellen Melville, "Art and the Community."
 8.0: Chimes.
 8.10: Milan Symphony Orchestra, "Il Matrimonio Segreto" overture (Cimarosa) (Columbia 02877).
 8.9: Vocal quartet—Clarion Quartet, "Friendship" ("Lucia di Lammermoor") (Donizetti).
 8.13: Instrumental—1YA Studio Trio, "Songs of the Hebrides" (Kennedy-Fraser).
 8.22: Contralto—Miss Beryl Smith, "The Girl With the Brogue" ("The Arcadians") (Monckton-Talbot).
 8.26: Bass—Mr. Duncan Black, "Her Name Shall Live for Aye" ("The Wonder Worker" (Ketelbey).
 8.30: Pianoforte—Miss Margot St. L. Toner, "Poeme and Two Preludes" (Scriabine).
 8.36: Chorus—Columbia Vocal Gem Chorus, "Mercenary Mary" (Col. 9067).
 8.40: Vocal duet—Miss B. Smith and Mr. J. Simpson, "Love is But a Fancy Fair" ("The Wonder Worker" (Ketelbey).
 8.44: B.B.C. Wireless Symphony Orchestra, "Tolanthe" (Sullivan, arrgd. Godfrey) (Regal G30020).
 8.52: Baritone—Mr. Leo. O'Malley, "Old Faggots" (Lohr).

- 8.56: Soprano—Miss Alma McGruer, "Arcady Is Ever Young" ("The Arcadians") (Monckton-Talbot).
 9.0: Violin—Miss Ina Bosworth, "Berenice Minuet" (Handel).
 9.4: Weather report.
 9.6: Talk—Mr. A. B. Chappell, "Topical Talk."
 9.21: New Queen's Hall Orchestra, "Grand March" ("Tannhauser") (Wagner) (Columbia L1021).
 9.25: Tenor—Mr. James Simpson, "My Heart a Ship at Anchor Lies" ("Princess of Kensington" (German).
 9.29: Pianoforte—Miss Margaret St. L. Toner, "River Gardens" (Besley).
 9.35: Vocal duet—Miss McGruer and Mr. D. Black, "A Barndoor Fowl" ("Princess of Kensington" (German).
 9.39: 'Cello—W. H. Squire, "Lament" (Squire) (Columbia 04223).
 9.43: Baritone—Mr. Leo. O'Malley, "Mifanwy" (Foster).
 9.47: Selection—1YA Studio Trio, "Vienna Caricatures" (Strauss) ("The Arcadians") (Monckton-Talbot).
 9.56: Vocal quartet—Clarion Quartet, "The Joy of Life" ("The Arcadians") (Monckton-Talbot).
 10.0: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—TUESDAY, NOVEMBER 26.

- 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 Jim.
 6.0: Dinner session—"Parlophone" Hour:
 Overture—Grand Symphony Orchestra, "Zampa" (Herold) (A4020).
 Waltz—Dajos Bela Orchestra, "Morgenblätter" (Strauss) (A4038).
 6.12: Tacet.
 6.15: Orchestra of the Opera Comique, Paris, "Scenes Pittoresques" (Massenet) (A4057).
 Waltz—Edith Lorand Orchestra, "Vienna Waltz" (Drdla) (E10531).
 6.27: Tacet.
 6.30: Waltz—Dajos Bela Orchestra, "Marien Klänge" (Strauss) (A4038).
 Dajos Bela Orchestra, "Ideale" (Tosti) (A4015).
 Edith Lorand Orchestra, "Merry Vienna" (Zishrer) (E10531).
 6.42: Tacet.
 6.45: Waltz—Edith Lorand Orchestra, "Song of Autumn" (Waldteufel) (E10570).
 March—Queenie and David Kail, "Hawaiian March" (Ellis) (A2372).
 Valse Intermezzo—Edith Lorand Orchestra, "The Flowers' Dream" (Translauteur).
 Selection—H.M. Irish Guards Band, "The Desert Song" (Romberg).
 6.57: Tacet.
 7.0: News session, market reports and sports results.
 7.40: Lecture—Representative of the 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, "If I Were King" (Adam).
 8.9: Soprano—Miss Anne Davies, "Morning" (Speaks).
 8.13: Baritone—Mr. L. Brent, (a) "Whispers of Heaven" (Kihan), (b) "Desert Song" (Romberg).
 8.20: 2YA Orchestra, "Four Indian Love Lyrics" (Woodforde-Finden).
 8.30: Humour—Miss Areta Wharton, (a) "The Girl and the Gloves" (Pain), (b) "In the Rain" (Hanray).
 8.37: Popular song—Mr. Spencer Furell, "Romance" (Romberg).
 8.41: Instrumental trios—Messrs. Mat Dixon, W. Haydock, and S. Chapman, (a) "Serenade" (Widor), (b) "Viennese Popular Song" (arrgd. Kreisler).
 8.49: Soprano—Miss Anne Davies, (a) "Tiptoe" (Carew), (b) "Poor Butterfly" ("The Big Show"—Hubbell).
 8.56: Selection—2YA Salon Orchestra, "Little Dutch Girl" (Kalmann).
 9.4: Weather report.
 9.6: Baritone—Mr. L. Bent, "Elegie" (Massenet).
 9.10: Humour—Miss Areta Wharton, "Mrs. Brown at the Play" (Stretchley).
 9.16: Popular songs—Mr. Spencer Furell, (a) "Coquette" (Berlin), (b) "That's What Put the 'Sweet' in 'Home, Sweet Home'" (Lowry).
 9.23: Suite—2YA Salon Orchestra, "My Lady Dragon Fly" (Finck).
 9.30: "His Master's Voice" Theme Song Programme:
 Vocal—Gene Austin, "Weary River" (Silvers) (EA512).
 Waltz—Arnheim's Orchestra, "Sleepy Valley" ("The Rainbow Man" (Sterling) (EA583).
 Vocal—Helen Clark, "Smiling Irish Eyes" (EA598).
 Organ solo—Jesse Crawford, "Little Pal" ("Say it with Songs") (De Sylva) (EA594).
 Vocal—Gene Austin, "Lonesome Road" ("The Show Boat" (Kern).
 Waltz—The Troubadours, "Pagan Love Song" (Freed) (EA558).
 Vocal—Johnny Marvin, "I'm in Seventh Heaven" ("Say it with Songs") (De Sylva) (EA589).
 Foxtrots—Waring's Pennsylvanians, (a) "Jericho," (b) "I'll Always be in Love with You" ("Syncopation") (Robin) (EA559) (actual artists in picture).
 Vocal—Lupe Velez, "Mi Amado" ("Wolf Song") (Lewis) (EA535) (actual artist in picture).
 10.0: "His Master's Voice" Dance Programme:
 Foxtrot—Arcadians Dance Orchestra, "Bluebird, Sing Me a Song" (Davis) (Zonophone 5201).
 Foxtrot—Bert Firman's Dance Orchestra, "'Cause I'm in Love" (Donaldson) (Zonophone EE123).

- Foxtrot—Jack Hylton's Orchestra, "Forty-seven Ginger-headed Sailors" (Sarony) (EA448).
 10.10: Tenor—Franklyn Baur, "At Dawning" (Cadman) (Zonophone 5204).
 Foxtrot—Bert Firman's Orchestra, "I'm a Broken-hearted Blackbird" (Fields) (Zonophone EE123).
 Foxtrot—All Star Orchestra, "There's a Rainbow 'Round My Shoulder" (Olson) (EA436).
 Waltz—Arcadians Dance Orchestra, "Nicolette" (Batten) (Zono. 5201).
 10.22: Male chorus—"Over There" Medley (EB33).
 Hawaiian—Hilo Hawaiian Orchestra, (a) "Kawaihan Waltz" (Kealakai), (b) "My Hula Love" (B2799).
 Male voices—Salon Group, "Sonny Boy" (Jolson) (EB35).
 10.31: Peter Dawson, "Lorraine, Lorraine, Lorraine" (Capel) (B2759).
 Wurlitzer organ—Jesse Crawford, "A Dream" (Bartlett) (EA488).
 Foxtrot—All Star Orchestra, "She Didn't Say Yes, She Didn't Say No" (Strong) (EA436).
 Waltz—Waring's Pennsylvanians, "Just Another Night" (Donaldson).
 10.43: Male voices—Salon Group, "Jeannine, I Dream of Lilac Time" (Gilbert) (EB35).
 Wurlitzer organ—Jesse Crawford, "Amapola" (Lacalle) (EA488).
 Foxtrot—Waring's Pennsylvanians, "I'm Sorry, Sally" (Kahn) (EA462).
 Waltz—Arcadians Dance Orchestra, "Couldn't You Have Waited?" (Mitchell) (Zonophone 5215).
 10.55: Male trio—Melody Three, "Pals, Just Pals" (Dreyer) (Zono. EE133).
 Wurlitzer organ—Reginald Foort, "Just Like a Darby and Joan" (Gilbert) (B2775).
 Foxtrot—Arcadians Dance Orchestra, "Juanita" (Flynn) (Zono. 5215).
 11.0: Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—TUESDAY, NOVEMBER 26.

SILENT DAY.

4YA, DUNEDIN (650 KILOCYCLES)—TUESDAY, NOVEMBER 26.

- 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—"Columbia" Hour:
 Selection—B.B.C. Symphony Orchestra, "La Boutique Fantasque" (Respighi, arrgd. Carr) (Regal G30018).
 'Cello—W. H. Squire, "Humoresque" (Dunkier-Squire) (04192).
 6.12: Tacet.
 6.15: J. H. Squire's Celeste Octet, "Chant Sans Paroles" (Tchaikowsky).
 Plaza Theatre Orchestra, "Gipsy Suite": (1) Valse, "Lonely Life," (2) Allegro, "The Dance (German)" (02537).
 6.27: Tacet.
 6.30: Plaza Theatre Orchestra, "Gipsy Suite"—1. Menuetto, Love Duet; 2. Tarantella—The Revel (German). (02538).
 Madrid Symphony Orchestra, "Dance of the Neighbours" (De Falla).
 6.45: Venetian Players' String Quintet, (a) "Romanza" (Mozart), (b) "Allegro" (Mozart) (Regal G20467).
 Pianoforte—Ignaz Friedman, "Romance in E Flat" (Rubinstein) (03630).
 Basle Symphony Orchestra, "Rosamunde—Entr'acte No. 2" (Schubert) (02875).
 6.57: Tacet.
 7.0: News session.
 8.0: Town Hall chimes.
 Concert by the St. Kilda Band, under the conductorship of Mr. James Dixon, and assisting artists:
 8.1: Concert march—Band, "Constellation" (Clark).
 8.7: Bass—Mr. G. M. Salmond, "Mine Enemy" (Rudd).
 8.11: Waltz—Symphony Orchestra, "Artists' Life" (Strauss) (Col. 02577).
 8.15: Vocal duet—Misses Rita Holmes and Irene Horniblow, "Night of Stars and Night of Love" (Offenbach).
 8.19: Intermezzo—Band, "Just a Memory" (Marsden).
 8.26: Male choir—Don Cossacks, "Serenade" (Abt) (Columbia 02792).
 8.30: Cornet solo with band accompaniment, "Lizzie" (Hartman).
 8.33: Recital—Miss Nellie Osborne, "The Carver and the Caliph" (Dobson).
 8.44: Soprano—Miss Rita Holmes, "My Dreamland Rose" (Phillips).
 8.48: Novelty—Marimba Serenaders, (a) "Paree" (Padilla), (b) "Dolores Waltz" (Waldteufel) (Regal G20344).
 8.52: Overture—Band, "Raymond" (Thomas).
 9.1: Weather report.
 9.3: Bass—Mr. G. M. Salmond, (a) "Nelson's Gone a-Sailing" (Lohr), (b) "O Flower of All the World" (Woodforde-Finden).
 9.10: Trombone novelty—Band, "The Firefly" (Moss).
 9.17: Vocal duet—Misses Rita Holmes and Irene Horniblow, "When the Daisy Opens Her Eyes" (Haydn Wood).
 9.21: Organ—Terence Casey, "Bird Songs at Eventide" (Coates).
 9.24: Contralto—Miss Irene Horniblow, "Lullaby" (Scott).
 9.28: Revue Selection—Band, "The Desert Song" (Romberg).
 9.42: Recitals—Miss Nellie Osborne, (a) "The Soldier" (Brooke); (b) "Politeness" (Milne).
 9.49: Male choir—Don Cossacks, "Evening Bells" (Faroff) (Col. 02792).
 9.54: March—Band, "On the Quarter Deck" (Alford).
 10.0: Close down.

Wednesday, November 27

1YA, AUCKLAND (900 KILOCYCLES)—WEDNESDAY, NOVEMBER 27.

- 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—"His Master's Voice" Hour:
 Selection—New Mayfair Orchestra, "Lilac Time" (Schubert-Clutsam).
 Royal Opera Orchestra, "Carmen" Ballet No. 1 (Bizet) (C1424).
 6.12: Tacet.
 6.15: National Symphony Orchestra, "William Tell" Overture (Rossini) (Zonophone 2969-70).
 6.27: Tacet.
 6.30: Royal Opera Orchestra—"Sylvia Ballet—Pizzicato and Procession of Bacchus" (Delibes) (C1418).
 Royal Opera Orchestra, "Carmen" Ballet No. 2 (Bizet) (C1424).
 6.42: Tacet.
 6.45: Detroit Symphony Orchestra, "Spanish Rhapsody" (Chabrier) (E522).
 Philadelphia Symphony Orchestra, "Nocturne No. 2—Fetes" (Debussy).
 6.57: Tacet.
 7.0: News and market reports.
 7.40: Talk—Madame Mabel Milne, "Health and Diet."
 8.0: Chimes.
 8.1: Selection—1YA Orchestral Octet, "The Dollar Princess" (Fall).
 8.11: Bass—Mr. E. Green, "Nirvana" (Adams).
 8.15: Band selection—Vesella's Italian Band, "Rigoletto" Quartet (Verdi) (Brunswick 20026).
 8.19: Soprano—Mrs. Jean Le Pettit, (a) "Darkness" (Hurlestone), (b) "Slumber Song" (Mayhew).
 8.26: Instrumental—1YA Orchestral Octet, "Norwegian Rhapsody" No. 1 (Svendsing).
 8.35: Pianoforte and vocal numbers—"Eric and Jack," (a) "She's Funny that Way" (Moret); (b) "Think of Me Thinking of You" (Abbott).
 8.43: Cornet—Herbert Clarke, "Stars in a Velvety Sky" (Clarke) (Brunswick 2367).
 8.46: Comedian—Tom Lewis, "His First After-Dinner Speech" (Lewis) (Brunswick 2727).
 8.49: Violin—Mr. Paul Bretnall, "Hymn to the Sun" (Rimsky-Korsakov).
 8.53: Bass—Mr. E. Green, (a) "Anchored" (Watson), (b) "The Blind Ploughman" (Clarke).
 9.0: Weather report.
 9.2: Instrumental—1YA Orchestral Octet, "Post in the Forest" (Schaeffer).
 9.12: Vocal quartet—Masket Shrine Quartet, "Absent" (Metcalf) (Brunswick 3115).
 9.16: Whistler—Margaret McKee, "Bird Imitations" (Brunswick 3386).
 9.18: Violin—Miss Ina Bosworth, "Concerto—Second Movement" (Bruch).
 9.23: Soprano—Mrs. Jean Le Pettit, "Song of the Cruise" (Leoni).
 9.27: Comedian—Tom Lewis, "Old-Time Minstrel Scene" (Lewis) (Brunswick 2727).
 9.30: Pianoforte and vocal numbers—"Eric and Jack," (a) "My Mother's Eyes" (Baer), (b) "It All Depends on You" (Jackson).
 9.38: Violin—Mr. Paul Bretnall, (a) "Romance in F" (Beethoven), (b) "Legende" (Wienlawski).
 9.45: Vocal quartet—Masket Shrine Quartet, "Standing in the Need of Prayer" (Burleigh) (Brunswick 3116).
 9.48: Contralto—Marie Morrissey, "Long, Long Ago" (traditional) (Brunswick 10235).
 9.51: Instrumental—1YA Orchestral Octet, "Waltz de Ballet" (Drigo).
 10.0: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—WEDNESDAY, NOVEMBER 27.

SILENT DAY.

3YA, CHRISTCHURCH (980 KILOCYCLES)—WEDNESDAY, NOV. 27.

- 3.0: 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—"Parlophone" Hour:
 Fantasia—Dajos Bela Orchestra, "La Traviata" (Verdi) (A4027).
 London Flute Quartet—"Carnaval of Venice" (Benedict) (A4023).
 6.12: Tacet.
 6.15: Waltz—Dajos Bela Orchestra, "Songe D'Amour Apre le Bal" (Czibulka) (E10602).
 Cembalo solo—Anna Lind, "Passacaglia" (Handel) (E10514).
 Edith Lorand Orchestra—"Venetian Barcarolle" (Leoncavallo).
 6.27: Tacet.
 6.30: Fantasia—Edith Lorand Orchestra, "Johann Strauss" (Strauss).
 Dajos Belo Trio, "Simple Aveu" (Thome) (E10580).
 6.42: Tacet.
 6.45: Grand Symphony Orchestra, "Hungarian Dances Nos. 5 and 6" (Brahms) (A4089).
 Violin—Mark Linz, "Romanza Andaluza" (Sarasate) (A2579).
 Grand Symphony Orchestra, "Polonaise in A" (Chopin) (A4089).
 6.55: Tacet.

- 7.0 : News session.
 7.30 : Addington Stock Market Reports.
 8.0 : Chimes.
 8.1 : Studio Instrumental Octet, under the conductorship of Mr. Harold Beck, "La Source Ballet" (Delibes) : (1) Scarfe Dance, (2) Love Scene, (3) Dance Circassienne.
 8.9 : Vocal quartet—Salon Quartet, "With My Flock as Walked I" (Traditional, arrgd. from 16th Century English Air).
 Soprano—Miss Corrie Aslin, "Mia Piccarella" ("Salvator Rosa") (Gomes).
 8.15 : Wurlitzer organ—Reginald Foort, "The Riff Song" ("The Desert Song") (Romberg) (H.M.V. 2463).
 8.18 : Tenor—Mr. H. Blakeley, "Love in Her Eyes Sits Playing" (Handel).
 Soprano and baritone duet—Salon Duo, "Still as the Night" (Goetze).
 8.25 : Studio Instrumental Octet, (a) "March and Habanera" ("Carmen") (Bizet); (b) "Toreador Song" ("Carmen") (Bizet).
 8.35 : Contralto—Miss Dulcie Mitchell, "O Mio Fernando" ("La Favorita" (Donizetti)).
 8.37 : Grand organ and cornet—R. Arnold Grier, "Softly Awakes My Heart" ("Samson and Delilah") (Saint-Saens).
 8.40 : Recital—Mrs. Margaret Williams, "The Glory of the Garden" (Kipling).
 8.45 : Studio Instrumental Octet, "Gilbert and Sullivan Operas" Selection (Sullivan).
 8.57 : Baritone—Mr. J. Graham Young, "Go Not, Happy Day" (Somervell).
 9.0 : Weather report.
 9.2 : Studio Instrumental Octet, (a) "Barcarolle" ("Tales of Hoffman") (Offenbach); (b) "Gavotte" ("Mignon") (Thomas).
 9.8 : Soprano—Miss Corrie Aslin, (a) "The Woodpecker" (Nevin); (b) "The Cuckoo" (Martin Shaw).
 9.11 : Violin and cinema organ—Charles Williams, "Intermezzo" ("Cavalleria Rusticana") (Mascagni) (Zonophone 5280).
 9.15 : Tenor—Mr. H. Blakeley, (a) "She is Far from the Land" (Lambert); (b) "I Know of Two Bright Eyes" (Clutsam).
 9.21 : Contralto and tenor duet—Salon Duo, "Nocturne" (Denza).
 9.25 : Studio Instrumental Octet, (a) "Laguna Lullaby" (Hope); (b) "Serenade" (Ern).
 9.31 : Contralto—Miss Dulcie Mitchell, "My Dear Soul" (Sanderson).
 9.35 : Selection—H.M. Coldstream Guards, "Iolanthe" (H.M.V. C1368).
 9.38 : Recital—Mrs. Margaret Williams, "The Story of Pierrot" (Pelisser).
 9.43 : Selection—H.M. Coldstream Guards, "Pirates of Penzance" (Sullivan).
 9.46 : Baritone—Mr. J. Graham Young, "Ave Maria" (Cooper).
 Vocal quartet—Salon Quartet, "How Calmly the Evening" (Coldicott).
 9.52 : Selection—Weber's Orchestra, "Faust" (Gounod, arrgd. Weber).
 10.0 : Close down.

4YA, DUNEDIN (650 KILOCYCLES)—WEDNESDAY, NOVEMBER 27.

- 8.0 : Town Hall chimes.
 8.1 : Selected gramophone items.
 4.25 : Sports results to hand.
 5.0 : Town Hall chimes.
 5.1 : Children's session, conducted by Aunt Anita.
 6.0 : Dinner session—"Columbia" Hour:
 Royal Italian Band, "M'arcia Reale" (Gabetti) (01182).
 Court Symphony Orchestra, "In Venice" (Sellars) (896).
 Kinema organ—Stanley MacDonald, "Was It a Dream" (Coslow) (Regal G20401).
 Royal Italian Band, "Garibaldi's Hymn" (Olivieri) (01182).
 6.12 : Tacet.
 6.15 : Ketelbey's Concert Orchestra, "Sanctuary of the Heart" (Ketelbey).
 Cello—W. H. Squire, "Melody in F" (Popper) (04178).
 6.26 : Tacet.
 6.30 : J. H. Squire Celeste Octet, "Mignon"—1. Introduction and Romance;
 2. Polonaise (Thomas) (02749).
 Cello—W. H. Squire, "Silver Threads Among the Gold" (Danks, arrgd. Squire) (04178).
 6.42 : Tacet.
 6.45 : Band of H.M. Grenadier Guards, "Turkish Patrol" (Michaelis) (4111).
 Kinema organ—Stanley MacDonald, "Nicolette" (Batten) R. G20401).
 Waltz—Jacque Jacobs Ensemble, "Vienna Life" (Strauss) (02556).
 Idyll—H.M. Grenadier Guards Band, "Smithy in the Woods" (Michaelis) (4111).
 6.58 : Tacet.
 7.0 : News session.
 8.0 : Town Hall chimes.
 8.1 : Overture—Raie da Costa Ensemble, selection from "Funny Face" (Gershwin) (Parlophone A4074).
 8.9 : Special popular programme by "The Merry-makers" Concert Party, under the direction of Mr. Allan Young.
 9.0 : Weather report.
 9.2 : Continuation of entertainment by "The Merry-makers."
 9.30 : "Columbia" Dance programme:
 Foxtrot—Paul Specht's Orchestra, "I Love You, I Love You, I Love You" (Firth) (01459).
 Foxtrot—Vern Buck's Orchestra, "What a Girl! What a Night" (Sanders) (01469).
 9.37 : Organ—Terence Casey, "I'm Lonely" (Coates) (01501).
 Foxtrot—Stellar Dance Band, "In the Shadows" (Finck) (R. G20451).
 Foxtrot—Piccadilly Players, "Who Did? You Did" (Kalmar) (01492).
 Waltz—Continental Novelty Quintette, "Sunlight" (Regal G20432).
 9.50 : Vocal duet—The Trix Sisters, "My Rock-a-Bye Baby" (Leslie) (01484).

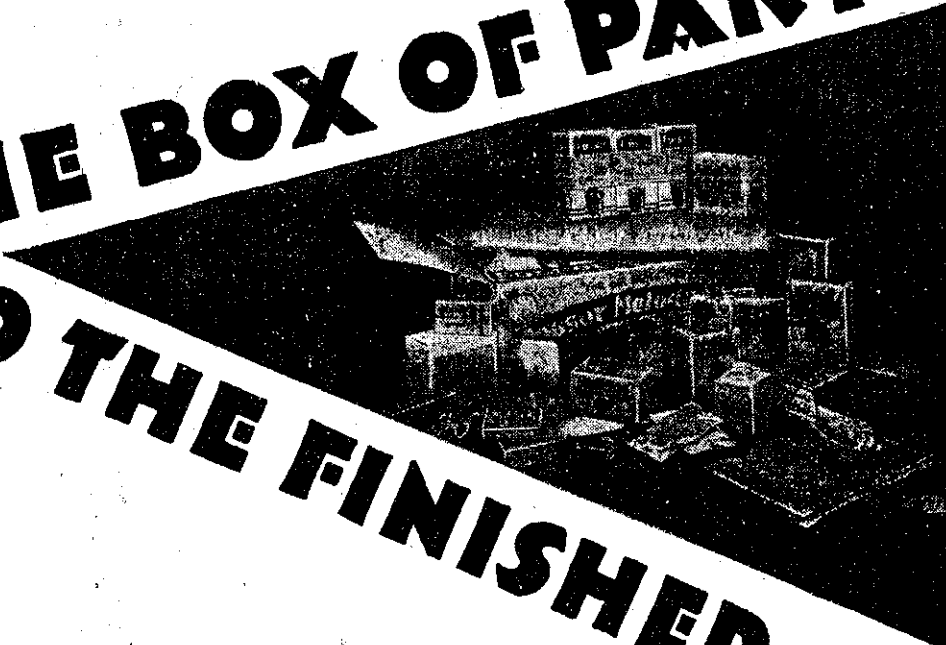
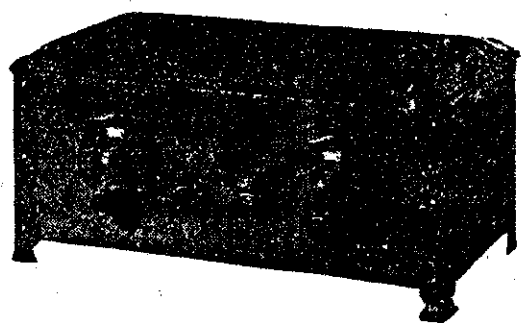
- Foxtrot—Jan Garber's Orchestra, "Weary River" (Silvers) (01459).
 Foxtrot—Ben Selvin's Orchestra, "If I Had You" (Shapiro) (01469).
 10.0 : Bass—Robert Easton, "If Ever I Meet the Sergeant" (Wright) (01502).
 Foxtrot—Stellar Dance Band, "The Song I Love" (de Sylva).
 Foxtrot—Piccadilly Players, "Happy-Go-Lucky Bird" (Kalmar).
 10.9 : Organ—Terence Casey, "Bird Songs at Eventide" (Coates) (01501).
 Foxtrot—Ben Selvin's Orchestra, "If You Want the Rainbow" (Rose).
 Foxtrot—California Ramblers, "You're Just a Great Big Baby Doll" (Herscher) (01365).
 Waltz—Continental Novelty Quintette, "On Board" (Regal G20432).
 10.21 : Vocal duet—Trix Sisters, "I'm Crazy Over You" (Sherman) (01484).
 Foxtrot—California Ramblers, "Bless You, Sister" (Robinson).
 Waltz—The Cavaliers, "I Loved You Then as I Love You Now" (Axt).
 10.30 : Band—Gard Republicaine de France, "Marche Indienne" (Sellenick).
 Foxtrot—Stellar Dance Band, "Heartbroken and Lonely" (Coslow).
 Foxtrot with vocal chorus—Piccadilly Band, "A Room With a View" (Coward) (01420).
 10.30 : Band—Gard Republicaine de France, "Marche Indienne" (Sellenick).
 Foxtrot—Stellar Dance Band, "I Can't Make Her Happy" (Pollack).
 Waltz—Eddie Thomas' Collegians, "Moments With You" (Shilkret).
 Band—Gard Republicaine de France, "Le Bombardier" (Pares).
 Foxtrot—Piccadilly Band, "Try to Learn to Love" (Coward) (01420).
 Waltz—Eddie Thomas' Collegians, "Moonlight on the Danube" (Gay).
 Baritone—Tom Barratt, "Shout Hallelujah! 'Cause I'm Home" (Dixon) (Regal G20457).
 11.0 : Close down.

Thursday, November 28

1YA, AUCKLAND (900 KILOCYCLES)—THURSDAY, NOVEMBER 28.

- 3.0 : Afternoon session—Programme presented by Messrs. Lewis Eady Ltd.
 5.0 : Children's session, conducted by Peter Pan.
 6.0 : Dinner session—"His Master's Voice" Hour:
 Overture—H.M. Coldstream Guards, "Poet and Peasant" (Suppe).
 Symphony Orchestra, "Love, The Magician" (De Falla) (D1453).
 6.12 : Tacet.
 6.15 : March—U.S. Army Band, "Army and Marine" (Starke) (Zonophone).
 Waltz—International Novelty Quartet, "Cuckoo" (Jonasson) (Zono.).
 Waltz—Jack Hylton's Orchestra, "Spanish Rose" (Pearson) (B5481).
 Xylophone—Sam Herman, "Al Fresco" (Zonophone EE53).
 6.27 : Tacet.
 6.30 : New Light Symphony Orchestra, "In a Clock Store" (Orth) (C1308).
 March—Royal Opera Orchestra, "Marche Hongroise" (Berlioz).
 Symphony Orchestra, "Spanish Dance" (De Falla) (D1453).
 6.42 : Tacet.
 6.45 : Schottische—International Novelty Quartet, "Lena" (Mewes).
 Pipe organ, piano, trombone and harp—Shilkret's Rhythm Melodists, "When You're With Somebody Else" (Gilbert) (EA336).
 Waltz—Jack Hylton's Orchestra, "The Angelus Was Ringing" (Damarrell) (B5481).
 March—United States Army Band, "American Spirit" (Buglione).
 6.57 : Tacet.
 7.0 : Book review.
 7.15 : News and market reports.
 7.40 : Talk—Dr. T. Harold Pettie, "Life Saving."
 8.0 : Chimes.
 8.1 : Presentation of novelty programme, "Still Scampering with the Radio Scamps."
 9.30 : "Columbia" Dance Programme:
 Foxtrot—Ben Selvin's Orchestra, "Broadway Melody" (Brown).
 Foxtrot—Leo Reisman's Orchestra, "My Castle in Spain is a Shack in the Lane" (Friend) (01544).
 Foxtrot—Broadway Nitelites, "You Were Meant For Me" (Brown).
 Foxtrot—The Knickerbockers, "That's the Good Old Sunny South" (Ager) (01544).
 9.42 : Entertainer—Norman Long, "What Did the Village Blacksmith Say?" (Squires) (01533).
 Foxtrot—Ben Selvin's Orchestra, "He, She and Me" (Lombardo).
 Foxtrot—Paul Whiteman's Orchestra, "Louise" (Whiting) (07022).
 Foxtrot—Ipana Troubadours, "Deep Night" (Henderson) (01539).
 Waltz—Paul Whiteman's Orchestra, "Blue Hawaii" (Baer) (07021).
 Waltz—Paul Whiteman's Orchestra, "My Angeline" (Wayne) (07020).
 10.0 : Duet—Flotsam and Jetsam, "We Never Know What to Expect."
 Foxtrot—Piccadilly Players, "Make Believe" (Kern) (01408).
 Foxtrot—Jan Garber's Orchestra, "Guess Who" (Davison) (01489).
 Foxtrot—Piccadilly Players, "Why Do I Love You?" (Kern) (01408).
 Foxtrot—Paul Specht's Orchestra, "My Annapolis and You" (Weinberg).
 10.15 : Organ—Frederick Curzon, "For Old-Time's Sake" (de Sylva).
 Foxtrot—Gil Dech's Syncopators, "My Mammy" (Lewis) (01520).
 Foxtrot—Stellar Dance Band, "If I Had You" (Shapiro) (Regal).
 Foxtrot—Harry Reser's Syncopators, "Here Comes the Show Boat" (Rose) (01583).
 Foxtrot—Harry Reser's Syncopators, "Where Did You Get That Name?" (Klein) (01583).
 10.30 : Entertainer—Norman Long, "Overture 1929" (Carlton) (01533).
 Foxtrot—Gelders Kettner Five, "Shout Hallelujah! 'Cause I'm Home" (Dixon) (G20476).
 Foxtrot—Paul Whiteman's Orchestra, "Nola" (Arndt) (07022).

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- Foxtrot—Stellar Dance Band, "How About Me?" (Berlin) (Regal).
 Foxtrot—Gelders Kettner Five, "Happy Days and Lonely Nights."
 Waltz—Paul Whiteman's Orchestra, "Coquette" (Berlin) (07021).
 10.48: Duet—Flotsam and Jetsam, "When I Grow Old, Dad" (01530).
 Foxtrot—Stellar Dance Band, "Flower of Love" (Dreyer).
 Foxtrot—Paul Whiteman's Orchestra, "Chinese Lullaby" (Bowers).
 Waltz—Gil Dech's Syncopators, "I'll Always be in Love with You" (Ruby) (15020).
 Waltz—Stellar Dance Band, "Marie" (Berlin) (Regal G20486).
 11.0: Close down.

3YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, NOVEMBER, 28.

- 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 George.
 6.0: Dinner session—"His Master's Voice" Hour:
 March—U.S. Army Band, "Army and Marine" (Starke) (Zonophone).
 Selection—Piccadilly Orchestra, "The Waltz Dream" (Strauss).
 Jack Hylton's Orchestra, "My Inspiration is You" (Nicholls) (C1577).
 6.12: Tacet.
 6.15: Royal Opera Orchestra, "Sylvia Ballet—Prelude" (Delibes) (C1417).
 Royal Opera Orchestra, "Sylvia Ballet—Intermezzo" (Delibes).
 Salon Orchestra, "Chanson Bohemienne" (Bolidi) (B2581).
 6.27: Tacet.
 6.30: Jack Hylton's Orchestra, "A Room with a View" (Coward) (C1577).
 Salon Orchestra, "Aloha Sunset Land" (Kawleo) (B2581).
 March—San Francisco Symphony Orchestra, "Marche Militaire" (Schubert) (ED9).
 6.42: Tacet.
 6.45: Detroit Symphony Orchestra, "Spanish Rhapsody" (Cahbrier) (E522).
 Balalaika Orchestra, "Shining Moon" (Russian Folk Song) (EA48).
 March—U.S. Army Band, "American Spirit" (Buglione) (Zonophone).
 6.57: Tacet.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. W. J. Fergie, Publicity Branch N.Z. Railways, "Excursions by Rail."
 8.0: Chimes of the G.P.O. clock.
 Special programme presented by the Wellington Commercial Travellers' and Warehousemen's Association Orchestra and Concert Party:
 8.1: Overture—Orchestra (under the conductorship of Mr. J. F. Woodward), "Jolly Robbers" (Suppe).
 8.9: Old-time song—Mrs. E. Bensen, "Sweet Adeline" (Armstrong).
 8.13: Musical comedy selection—Orchestra, "Floradora" (Stuart, arrgd. Ernest Allen).
 8.21: Bass—Mr. Stan Croft, "The Storm Fiend" (Roedel).
 8.25: Pianoforte—Miss Vera Besley, "Sing a Song of Sixpence" (Livens); (b) "Humoreske" (Levine).
 8.32: Humour—Mr. Will McKeon, "Humorous Anecdotes" (Original).
 8.39: Selection—Orchestra, "La Boheme" (Puccini).
 8.47: Contralto with violin obligato—Mrs. Emma Astill, "One Fleeting Hour" (Lee).
 8.51: Instrumental—Orchestra, "Entry of the Boyards" (Halvorsen).
 8.59: Weather report.
 9.1: Light Opera Company, (a) Gems from "The Desert Song" (Romberg); (b) Gems from "The Student Prince" (Romberg) (H.M.V. EB7).
 9.9: Vocal duet—Mesdames Emma Astill and Gwen Clayton, "Farewell to Summer" (Johnston).
 9.14: Comic opera selection—Orchestra, "The Gondoliers" (Sullivan, arrgd. Godfrey).
 9.21: Pianoforte duet—Misses Vera Besley and Eileen Rhodes, "Rhapsody Hongroise" No. 2 (Liszt).
 9.27: Soprano—Mrs. Amy Woodward, (a) "Carmena" (Wilson); (b) "Cuckoo" (Lehmann).
 9.34: Selection—Orchestra, "Rienzi" (Wagner).
 9.42: Humour—Mr. Will McKeon, "Some Humour" (Original).
 9.49: Popular song—Mrs. E. Benson, "Pal o' Mine" (Dixon) (by request).
 9.53: Musical comedy selection—Orchestra, "The Geisha" (Sidney Jones).
 10.1: Bass—Mr. Stan Croft, "The Trumpeter" (Dix).
 10.5: Mezzo-soprano—Mrs. Gwen Clayton, "Break o' Day" (Sanderson).
 10.9: March—Orchestra, "Entry of the Gladiators" (Blankenburg).
 10.13: Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—THURSDAY, NOV. 28.

- 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:
 Overture—Halle Orchestra, "Rosamunde" (Schubert) (04056).
 Pianoforte solo—Godowsky, "Nocturne in F Minor" (Chopin) (04240).
 6.12: Tacet.
 6.15: Venetian Players String Quintet, "A Little Night Music" (Mozart) (Regal G20467).
 Orchestra de Paris, "Le Carillon" ("L'Arlesienne"—Bizet) (Regal G20467).
 Orchestra de Paris, "Adagietto" ("L'Arlesienne"—Bizet) (01327).
 6.27: Tacet.
 6.30: Madrid Symphony Orchestra, "The Three-Cornered Hat" (De Falla) (02848).

- Viola and piano—Lionel Tertis, "Allegro" (Sonata in F) (Handel, arrgd. Tertis) (04248).
 6.42: Tacet.
 6.45: Organ—Edouard Commette, "Fantasie in G Minor" (Bach) (02746).
 New Queen's Hall Orchestra, "Morning" ("Peer Gynt Suite") (Grieg)
 6.55: Tacet.
 7.0: News session.
 7.30: Lecturette—Mr. C. C. Leitch, Department of Agriculture, "Certification of Wheat" (arrgd. by 3YA Primary Productions Committee).
 8.0: Chimes.
 8.1: Berlin State Opera Orchestra, "The Mastersingers of Nuremberg" Overture (Wagner) (H.M.V. D1260).
 8.9: Vocal quartet and bass aria—Grand Opera Quartet and Mr. James Filer, (a) "Fairest Daughter" ("Rigoletto"—Verdi), (b) "Loving Smile of Sister Kind" ("Faust"—Gounod).
 8.16: 'Cello—Mr. Harold Beck, "Schumerlied" (Schumann).
 8.20: Soprano aria—Madame Gower-Burns, "He is Good, He is Kind" ("Heriodiad"—Massenet).
 Mezzo-contralto and tenor duet—Grand Opera Duo, "Home to Our Mountains" ("Il Trovatore"—Verdi).
 8.28: Instrumental quartet—Mr. Harold Beck, 'cello; Miss I. Morris, violin; Mr. J. Mercer, viola; Miss D. Davies, piano—"Intermezzo and Finale" (Mendelssohn).
 8.36: Tenor—Mr. Ernest Rogers, "Siciliana" ("Cavalleria Rusticana" (Mascagni).
 8.40: Pianoforte recital with introductory remarks—Mr. Sydney Francis Hoben: (a) "Air de Ballet" ("Thais"—Massenet), (b) "A Night Song" (Litta-Lynn-Hoben) (for left hand), (c) "March" ("Tannhauser"—Wagner-Liszt).
 8.56: Contralto aria—Miss Mavis Spiller, "Voi Che Sapete" ("Le Nozze di Figaro"—Mozart).
 9.0: Weather report.
 9.2: St. Louis Symphony Orchestra, "Fingal's Cave" Overture (Mendelssohn) (H.M.V. D1290).
 9.10: Tenor—Mr. Ernest Rogers, "Thy Tiny Hand is Frozen" ("La Boheme"—Puccini).
 Soprano and bass duet—Grand Opera Duo, "Ah, Daughter, Let Me Comfort Thee" ("Rigoletto"—Verdi).
 9.17: 'Cello—Mr. Harold Beck, "Gavotte" (Popper).
 9.21: Mezzo-contralto aria—Miss Mavis Spiller, "Lascia Ch'io Piange" ("Rinaldo"—Handel).
 9.25: String quartet—(a) "Two Valses" (Brahms), (b) "Vesperale" (Cyril Scott), (c) "Marche Militaire" (Schubert).
 9.35: Vocal duet—Male Operatic Duo, "In This Solemn Hour" (Verdi).
 Soprano aria—Madame Gower-Burns, "They Call Me Mimi" ("La Boheme"—Puccini).
 9.42: Violin—Jacques Thibaud, "Valse" (Brahms) (H.M.V. DA866).
 9.45: Bass recitative and aria—Mr. James Filer, "Star of Eve" (Wagner).
 9.49: Vocal duet and quartet—Grand Opera Quartet, (a) "Stay, Stay, Turridu" ("Cavalleria Rusticana"—Mascagni); (b) "What! From Vengeance Yet Restrain Me" ("Lucia di Lammermoor"—Donizetti).
 9.57: National Symphony Orchestra, Sylvia Ballet—Cortege de Bacchus" (Delibes) (H.M.V. EB24).
 10.1: Close down.

4YA, DUNEDIN (650 KILOCYCLES)—THURSDAY, NOVEMBER 28.

SILENT DAY.

Friday, November 29

1YA, AUCKLAND (900 KILOCYCLES)—FRIDAY, NOVEMBER 29.

- 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—"Parlophone" Hour:
 Waltzes—Dajos Bela Orchestra, (a) "Sulamith" (Hansen-Milde); (b) "Mignonette" (Nicholls) (E10571).
 Dajos Bela Orchestra, "Eldgaffeln" (Landen) (A4009).
 6.12: Tacet.
 6.15: Frank Westfield's Orchestra, "Classica" (arrgd. Tilsley) (A2195).
 Organ—Sigmund Krumgold, "Indian Love Call" (Friml) (A2339).
 Waltz—Dajos Bela Orchestra, "You, Only You" (Arnold) (E10592).
 6.27: Tacet.
 6.30: Selection—Raie da Costa Ensemble, "Funny Face" (Gershwin).
 Waltz—Dajos Bela Orchestra, "The Sphinx" (Popy) (E10592).
 6.42: Tacet.
 6.45: Orchestra Mascotte, (a) "The Flowers' Dream" (Translatour); (b) "Whispering of the Flowers" (Von Blon) (A2559).
 Organ—Sigmund Krumgold, "Gypsy Love Song" (Herbert) (A2339).
 Dajos Bela Orchestra, "Electric Girl" (Helmburgh-Holmes) (A4009).
 6.58: Tacet.
 7.0: News session and market reports.
 7.40: Talk—Mr. Martin Cock, "Friends of Canterbury Cathedral."
 8.0: Chimes.
 8.1: Relay of concert from Lewis Eady Hall.

8.30 : Studio Concert:

Vocal quartet—Madame Mary Towsey's Quartet, "An Old Love Song" (Mendelssohn).

8.34 : Instrumental—1YA Studio Trio, "Andante—Trio in D Minor" (Mendelssohn).

8.43 : Baritone—Mr. John Bree, "The Gentle Maiden" (arrgd. Somerville).

8.47 : Contralto—Miss Aimee Clapham, "Yonder" (Oliver).

8.51 : Cornet solo—Mr. Paul Hayes, "Zanette" (Code).

8.56 : Soprano—Madame Mary Towsey, "Tore Che Langue" (Rotoli).

9.0 : Weather report.

9.2 : Tenor—Mr. John McDougall, "Annabel Lee" (Leslie).

9.5 : Pianoforte—Mr. Eric Waters, "Autumn" (Chaminade).

9.9 : Soprano—Miss Nancy O'Connor, "The Last Rose of Summer" (trdfl.).

9.12 : Instrumental—1YA Studio Trio, (a) "Romance" (Bridge); (b) "Intermezzo" (Bridge); (c) "Saltarello" (Bridge).

9.20 : Baritone—Mr. J. Bree, "O Star of Eve" (Wagner).

9.23 : Soprano with violin obligato—Madame Mary Towsey and Miss Ina Bosworth, "Agnus Dei" (Bizet).

9.26 : Cornet solos—Mr. P. Hayes, (a) "Miranda" (Code); (b) "Serenata" (Toselli).

9.33 : Vocal quartet—Madame Mary Towsey's Quartet, "Bonnie Banks" (arrgd. Vincent).

9.36 : Gramophone review—A commentator, Latest Recordings.

10.6 : Close down.

2YA, WELLINGTON (720 KILOCYCLES), FRIDAY, NOVEMBER 29.

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

3.1 : Selected studio items, interspersed with summaries of the Town versus Country Cricket Match at Basin Reserve.

5.0 : Children's session, conducted by Big Brother Jack.

6.0 : Dinner session—"Columbia" hour:

Orchestre Symphonique de Paris, "L'Arlesienne Suite" (Bizet): (1) Prelude; (2) Entr'acte—Pastorale, L'Etang de Vaccares; (3) Choeurs—Suiuant la Pastorale. (C1324/5).

6.12 : Tacet.

6.15 : Selection—Columbia Symphony Orchestra, "Faust" (Gounod).

Violin—Toscha Siedel, "Chanson Arabe" (Rimsky—Korsakov).

6.27 : Tacet.

6.30 : Orchestre Symphonique de Paris, "L'Arlesienne"—(1) La Cuisine de Castelet; (2) Minuetto; (3) Le Carillon; (4) Adagietto (Bizet).

6.42 : Tacet.

6.45 : Orchestre Symphonique de Paris, "Farandole" ("L'Arlesienne") (Bizet) (01328).

Band de Garde Republicaine de France, "Carmen—Entr'acte" (Bizet).

6.56 : 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.

8.1 : Overture—2YA Orchestra, under the conductorship of Signor A. P. Truda, "Fra Diavolo" (Auber).

8.9 : Soprano—Miss Ena Rapley, "Musetta's Song" ("La Boheme") (Puccini).

8.13 : Pianoforte—Miss Eileen Goodson, "Liebestraum" (Liszt).

8.20 : Baritone—Mr. Arthur Brady, "A Jovial Monk Am I" ("La Poupee") (Audran).

8.24 : Selection—2YA Orchestra, "Favourite French Songs" (Ricker).

8.32 : Sketch—Miss Gracie Kerr and Mr. Geo. Power, "Mrs. Hamblett Records Her Vote" (Sargent).

8.39 : Contralto—Miss Madge Freeman, "Villia" ("The Merry Widow") (Lehar).

8.43 : Tenor—Mr. Edwin Dennis, "Questa O Quella" ("Rigoletto") (Verdi).

8.47 : Vocal duet—Miss Ena Rapley and Mr. Arthur Brady, "The Rajah of Bhong" ("The Country Girl") (Monckton).

8.51 : Selection—2YA Orchestra, "Mignon" (Thomas).

8.59 : Weather report.

9.1 : Vocal quartet—Philharmonic Quartet, "Take Your Pretty Partner" ("The Country Girl") (Monckton).

9.5 : Contralto—Miss Madge Freeman, "Waltz Song" ("The Merry Widow") (Lehar).

9.9 : Selection—2YA Orchestra, "To Spring" (Grieg).

9.17 : Vocal duet—Miss Ena Rapley and Mr. Edwin Dennis, "Miserere Duet" ("Il Trovatore") (Verdi).

9.21 : B.B.C. Wireless Military Band, "Dance of the Tumblers" ("The Snow Maiden") (Rimsky—Korsakov, arr. O'Donnell) (Col. 02893).

9.25 : Sketch—Miss Gracie Kerr and Mr. George Power, "Income Tax" (Sargent).

9.32 : Soprano—Miss Ena Rapley, "The Bird with the Broken Wing" (Golson).

9.36 : Musical comedy selection—2YA Orchestra, "A Waltz Dream" (Strauss).

9.44 : Baritone—Mr. Arthur Brady, "The Fishermen of England" (Montague Phillips).

9.48 : B.B.C. Wireless Military Band, "Golliwog's Cake Walk" (Debussy) (Columbia 02893).

9.52 : Tenor—Mr. Edwin Dennis, "Eleanore" (Coleridge-Taylor).

9.56 : Waltz—2YA Orchestra, "Valse" (Gungl).

10.1 : Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—FRIDAY, NOVEMBER 29.

2.0 : 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:

Plaza Theatre Orchestra—"Menuetto—Love Duet" (German) (02538).

Violin—Naoum Blinder, "Caprice Viennois" (Kreisler) (02733).

Valse—Plaza Theatre Orchestra, "Lonely Life" (German) (02537).

6.12 : Tacet.

6.15 : Wurlitzer organ—Stanley McDonald, "Spring Song" (Mendelssohn).

Eddie Thomas' Collegians, "Moments With You" (Yellen) (01135).

Hilo Hawaiian Orchestra—"Hawaiian Nights" (Lee) (EA310).

Waltz—Eddie Thomas' Collegians, "Moonlight on the Danube" (Gay).

6.27 : Tacet.

6.30 : Cornet—Jas. Compton, "Absent" (Metcalf) (01169).

Columbia Symphony Orchestra, "Scarf Dance" (Chaminade) (01371).

Saxophone—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft) (01176).

Columbia Symphony Orchestra, "The Flatterer" (Chaminade) (01371).

6.42 : Tacet.

6.45 : Xylophone and Orchestra—Bournemouth Municipal Orchestra, "Gee Whiz" (Byron Brooke) (02575).

Selection—Plaza Theatre Orchestra, "Belle of New York" (Kerker).

6.55 : Tacet.

7.0 : News session.

7.30 : Lecturette—Miss J. Beck, "Diet for School Children" (arranged by 3YA Primary Productions Committee).

8.0 : Chimes.

8.1 : Overture—Court Symphony Orchestra, "The Gondoliers" (Sullivan).

8.9 : Mezzo-soprano—Miss Doris Irvine, "Will O' the Wisp" (Spross).

8.13 : Guitars and ukuleles—Kane's Hawaiians, "Drowsy Waters" (Ailan).

8.16 : Humorous recital—Mr. Hiram Dunford, "Only a Pin" (MS).

8.19 : Tenor—Mr. Wm. J. Bishlager, "Mountain Lovers" (Squire).

8.23 : Dance music—Bailey Marston Dance Orchestra, (a) "Doin' the New Low Down" (Field); (b) "One Alone" (Romberg).

8.31 : Soprano—Mrs. Jas. Filer, (a) "The Children's Home" (Cowan); (b) "When the Great Red Dawn is Shining" (Sharpe).

8.38 : Suite—Ketelbey's Concert Orchestra, "In a Fairy Realm" (Ketelbey): 1. The Moonlit Glade; 2. The Queen Fairy Dances; 3. The Gnomes March (Columbia 02694-5).

8.50 : Humour—Mr. George Titchener, "Funny Phrases" (MS).

8.55 : Dance music—Bailey Marston Dance Orchestra, (a) "The Desert Song" (Romberg); (b) "Don't Be Like That" (Warren).

9.3 : Weather report.

9.5 : Novelty—Ketelbey's Concert Orchestra, "In a Persian Market" (Ketelbey) (Columbia 02689).

9.13 : Mezzo-soprano—Miss Doris Irvine, (a) "Sing, Break Into Song" (Malinson); (b) "The False Prophet" (Scott).

9.27 : Humorous recital—Mr. Hiram Dunford, "Joe Brown's Account of Rubinstein's Playing" (Anon).

9.34 : Xylophone and Orchestra—Bournemouth Municipal Orchestra, "Gee Whiz!" (Brooke) (Columbia 02575).

9.37 : Tebor—Mr. Wm. J. Bishlager, (a) "Rosebud" (Drummond); (b) "The Flight of Ages" (Bevan).

9.43 : Dance music—Bailey Marston Dance Orchestra, (a) "Blossoms" (Die trick); (b) "Laughing Marionette" (Collins).

9.51 : Soprano—Mrs. Jas. Filer, "The Last Milestone" (Pontet).

9.51 : Humour—Mr. George Titchener, "My Motor Bike" (Rouse).

10.0 : Dance music—Bailey Marston Dance Orchestra, (a) "Old Man Sunshine" (Warren); (b) "Jericho" (Myers).

Dance music by the Bailey-Marston Dance Orchestra until 11 p.m.

11.0 : Close down.

4YA, DUNEDIN (650 KILOCYCLES)—FRIDAY, NOVEMBER 29.

3.0 : Town Hall chimes.

3.1 : Selected gramophone 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:

Piccadilly Orchestra, (a) "My Beloved Gondoller" (Tiber); (b) "Souvenir De Capri" (Beece) (B2575).

New Light Symphony Orchestra, "Just a Memory" (de Sylva) (EB18).

Violin and kinema organ—Elsie Southgate, "I Hear You Calling Me" (Marshall) (Zonophone 5109).

6.12 : Tacet.

6.15 : Waltzes—Marek Weber's Orchestra, "Pot Pourri of Waltzes" (Röbrecht) (C1544).

Waltz—Hilo Hawaiian Orchestra, "Sweet Hawaiian Dream Girl" (Williams) (Zonophone EB150).

6.26 : Tacet.

6.30 : New Light Symphony Orchestra, "Scene De Ballet Marionettes" (Gla-zounov) (B2754).

Violin and kinema organ—Elsie Southgate, "Rose in the Bud" (Tate).

New Light Symphony Orchestra, "Persiflage" (Francis) (B2754).

Jack Hylton's Orchestra, "When the White Elder Tree Blooms Again" (Doelle) (C1616).

6.44 : Tacet.

6.45 : Salon Orchestra—"My Blue Heaven" (Whiting) (EB18).

Waltz—Hilo Hawaiian Orchestra, "Sleepy Honolulu Town" (Earl).

Jack Hylton's Orchestra, "I Kiss Your Hand, Madame" (Erwin).

7.56 : Tacet.

7.0 : News session.

8.0 : Town Hall chimes.

8.1 : Overture—Royal Albert Hall Orchestra, "Pomp and Circumstance" (Elgar) (H.M.V. D1102).

Special programme on "Patriotic Songs of the Nations," presented by Mr. John T. Leech, assisted by the Instrumental Trio and vocal artists:

- 8.9 : Introductory remarks by Mr. John T. Leech.
 8.21: Instrumental Trio—"Rule Britannia" (Arne).
 Baritone—Mr. Les Stubbs, "British Grenadier" (Nowal).
 Soprano—Miss Valda McCurdy, "Home, Sweet Home" (Bishop).
 Novelty—Balalaika Orchestra, "Shining Moon" (Russian trdtl.).
 Baritone—Mr. Les Stubbs, "Scots Wha' Hae" (Scottish trdtl.).
 March—H.M. Coldstream Guards Band, "Semper Fidelis" (Sousa).
 Baritone—Mr. Wm. Ruffell, "Men of Harlech" (trdtl.).
 Contralto—Miss Margaret Howden, "Londonderry Air" (Anon).
 Weather report.
 Instrumental Trio—"Malbrook to War" (Origin).
 Tenor—Mr. John Leech, "The Wearing of the Green" (trdtl.).
 Baritone—Mr. Les Stubbs, "The Marseillaise" (De Lisle).
 Novelty—Balalaika Orchestra, "Song of the Volga Boatmen" (trdtl.).
 Baritone—Mr. Wm. Ruffell, (a) "La Brabaronne" (Canparlout); (b) "Watch on the Rhine" (Wilhelm).
 Contralto—Miss Margaret Howden, "God Preserve Our Noble Empire" (Haydn).
 Instrumental Trio—"Garibaldi's War Hymn" (Clirerie).
 Soprano—Miss Valda McCurdy, "God Save the Oar" (Lwoff).
 Baritone—Mr. Les Stubbs, "Kimi-Ga-Yo-Wa" (Hiromore).
 Intermezzo—Band of H.M. Coldstream Guards, "The Bells of St. Malo" (Rimmer) (B2647 H.M.V.).
 Tenor—Mr. John Leech, "Then Did Moses Sing" (Ancient Melody).
 Baritone—Mr. Wm. Ruffell, "The Star Spangled Banner" (Smith).
 Contralto and quartet—Miss Margaret Howden and Quartet, "God Defend New Zealand" (Bracken).
 Instrumental Trio and Sextette, "God Save the King" (Carey).
 10.0 : Close down.

- 9.33: Instrumental—Auckland Pipe Band, (a) "Highland Reel"; (b) "Reel o' Tulloch".
 9.39: Tenor—Mr. Roy Dormer, "The Battle of Stirling" (Anon.).
 9.43: Band of H.M. Grenadier Guards, "Harry Lauder Medley" (Columbia).
 9.50: Vocal—New Zealand Four, "Scottish Airs" (Traditional).
 9.54: March—1YA Orchestral Octet "Scottish Patrol" (Williams).
 10.1 : "His Master's Voice" Dance Programme:
 Foxtrot—Rhythmic Eight, "Don't Be Like That" (Gottler) (Zono).
 Foxtrot—Jack Hylton's Orchestra, "Sweetheart of all My Dreams" (Fitch) (EA540).
 Foxtrot—Arcadians Dance Orchestra, "Pokee-okee-oh" (Butler).
 Foxtrot—Jack Hylton's Orchestra, "I Lift Up My Finger" (Sarony).
 10.12: Wurlitzer organ—Jesse Crawford, "A Precious Little Thing Called Love" (Davis) (EA536).
 Foxtrot—Geo. Olsen's Music, "I'm Bringing a Red, Red Rose" (Kahn).
 Foxtrot—Nat Shilkret's Orchestra, "One For All, All For One" (Trent).
 Foxtrot—Heidt's Orchestra, "I'm Ka-ra-zy for You" (Jolson) (EA539).
 Waltz—Arcadians Dance Orchestra, "That Old-Time Organ Melody" (Carlton) (Zonophone EE155).
 10.30: Contralto—Lupe Velez, "Mi Amado" (Lewis) (EA535).
 Foxtrot—Geo. Olsen's Music, "Come West, Little Girl, Come West" (Kahn) (EA537).
 Nat Shilkret's Orchestra, "I'm Thirsty for Kisses, Hungry for Love" (Davis) (EA528).
 Foxtrot—Nat Shilkret's Orchestra, "Some Sweet Day" (Shilkret).
 Foxtrot—Waring's Pennsylvanians, "My Mother's Eyes" (Gilbert).
 10.45: Wurlitzer organ—Jesse Crawford, "Carolina Moon" (Davis) (EA536).
 Foxtrot—"Kassels in the Air," "He, She and Me" (Newman) (EA532).
 Foxtrot—Park Central Orchestra, "Sally of My Dreams" (Kernell).
 Waltz—Connecticut Yankees, "Coquette" (Berlin) (EA532).
 Waltz—Nat Shilkret's Orchestra, "Lady Divine" (Shilkret) (EA531).
 11.0 : Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SATURDAY, NOVEMBER 30.

- 3.0 : Chimes of the G.P.O. clock.
 3.1 : Selected gramophone items interspersed with descriptions of the Town versus Country cricket match at Basin Reserve.
 5.0 : Children's session conducted by Uncle Toby and Aunt Gwen.
 6.0 : Dinner session—"His Master's Voice" Hour:
 Suite—London Symphony Orchestra, "Czar Sultan Suite" No. 3 (Rimsky-Korsakov) (D1491).
 Waltz—International Concert Orchestra, "Waltz Dream" (Strauss) (Zonophone EF18).
 6.12: Tacet.
 6.15: Suite—New Light Symphony Orchestra, "Peer Gynt Suite" No. 2 (Grieg): (1) Ingrid's Lament, (2) Arabian Dance (C1571).
 New Light Symphony Orchestra, "Prelude in G Minor" (Rachmaninoff) (Zonophone EF24).
 6.27: Tacet.
 6.30: Suite—New Light Symphony Orchestra, Peer Gynt Suite No. 2 (Grieg): (1) Return of Peer Gynt, (2) Solveig's Song (C1572).
 New Light Symphony Orchestra, "Prelude in C Sharp Minor" (Rachmaninoff) (Zonophone EF24).
 6.42: Tacet.
 6.45: Philadelphia Symphony Orchestra, "Danse Orientale" (Glazounov) (Zonophone B521).
 Waltz—International Concert Orchestra, "Sari" (Kalman) (Zonophone EF18).
 March—Philadelphia Symphony Orchestra, "March of the Caucasian Chief" (Ippolitoff-Iwanoff) (B521).
 6.57: Tacet.
 7.0 : News session, market reports and sports results.
 8.0 : Chimes of the G.P.O. clock.
 8.1 : Overture—2YA Salon Orchestra under the conductorship of Mr. Mat Dixon, "Potted Overture" (Engelmann).
 8.9 : Tenor—Mr. Charles Williams, (a) "I Wonder if ever the Rose" (Bowles), (b) "Daffodils" (Thompson).
 8.16: Mrs. Mildred Kenny's Mandolin Orchestra, (a) "The Kilties" (Grimshaw), (b) "Magnolia Waltz" (Morley).
 8.23: Comic song—Mrs. Winifred Birch-Johnston, "I Didn't 'Arf Larf" (Johnson).
 Whistling solo with orchestral accompaniment—Mrs. Winifred Birch-Johnston, "Il Bacio" (Arditi).
 8.30: Novelty—Al Bernard, "The Preacher and the Bear" (Arzonla) (Brunswick 312).
 8.33: Instrumental—2YA Salon Orchestra, (a) "In a Clock Store" (Orth), (b) "Dream Castles" (Hope).
 8.41: Vocal quartet—Lyric Quartet, "Pussy's in the Well" (Herbert).
 8.45: Humour—Mr. W. Yates, "A Kiss in the Train" (original) (by request).
 8.52: Baritone—Mr. Will Goudie, (a) "Secret of the Tide" (McGeogh), (b) "West Country Courting" (Sanderson).
 8.59: Instrumental—2YA Salon Orchestra, request number.
 9.7: Weather report.
 9.9 : Vocal quartet—Lyric Quartet, "When You Played the Organ" (arrgd. Gatheridge).
 9.13: Mandolins—Mrs. Mildred Kenny's Mandolin Orchestra, (a) "Comical Coons" (Grimshaw), (b) "Love's but a Dream" (Paroletti).
 9.20: Bass—Mr. W. Binet Brown, "A Devonshire Wedding" (Phillips).
 9.24: Accordion solo—Johnny Sylvester, "Waltz Medley" (Regal G20350) (by request).

Saturday, November 30

1YA, AUCKLAND (900 KILOCYCLES)—SATURDAY, NOVEMBER 30.

- 5.0 : Afternoon session—Selected studio items.
 4.0 : Literary selection by the Announcer.
 4.25: Sports results to hand.
 5.0 : Children's session, conducted by Cinderella.
 6.0 : Dinner session—"Columbia" Hour:
 Waltz—Symphony Orchestra, "Artist's Life" (Strauss) (02577).
 Columbia Symphony Orchestra, "Al Fresco" (Herbert) (01092).
 Foxtrot—La Nuova Orchestra, "Di Napoli" (Romani) (3066).
 Band of H.M. Grenadier Guards, "La Paloma" (Yradier) (0987).
 6.13: Tacet.
 6.15: Ketelbey's Orchestra, "In a Monastery Garden" (Ketelbey). (02688).
 Waltz—Jacque Jacobs Ensemble, "Over the Waves" (Rosas) (02556).
 6.27: Tacet.
 6.30: Columbia Symphony Orchestra, "Bandinage" (Herbert) (01092).
 Waltz—Royal Serbian Tambouritza Orchestra, "Kosovo" (3066).
 Waltz—Symphony Orchestra, "Tales from the Vienna Woods" (Strauss) (02577).
 March—H.M. Grenadier Guards, "Twist and Twirl" (Kottaun) (0987).
 6.43: Tacet.
 6.45: Waltz—Royal Philharmonic Orchestra, "Blue Danube" (Strauss).
 Waltz—Jacque Jacobs Ensemble, "Espana" (Waldteufel) (02560).
 6.57: Tacet.
 7.0 : News session.
 7.40: Talk—Professor J. C. Sperrin-Johnson (President, Auckland Zoological Society)—"General Activities of the Auckland Zoological Society."
 8.0 : Presentation of special Scottish programme commemorating St. Andrew's Day:
 8.1 : Overture—Auckland Pipe Band, "March Medley."
 8.6 : Vocal quartet—New Zealand Four, (a) "Annie Laurie" (Scott); (b) "Loch Lomond" (Parks).
 8.13: Instrumental—1YA Orchestral Octet, "Fair Maid of Perth" Overture (Waddel-Bizet).
 8.22: Bass—Mr. Duncan Black, "The De'il's Awa Wi' the Exciseman" (Traditional).
 8.25: Violin—Duncan McGregor, "Gems of Scottish Melody" (Zono, 250).
 8.28: Soprano—Miss Reta McCullay, "The Scottish Blue-Bells" (Trdtl.).
 8.32: Comedian—Harry Lauder, "Mr. John Mackay" (Lauder) (H.M.V.).
 8.36: Tenor—Mr. James Simpson, "The Nameless Lassie" (Mackenzie).
 8.40: Instrumental—1YA Orchestral Octet, Paraphrase on "Blue Bells of Scotland" (Langey).
 8.48: Vocal duet—Messrs. Dormer and Mannall, "O Wert Thou in the Cauld Blast" (Mendelssohn).
 8.52: Instrumental—Auckland Pipe Band, (a) "Cock o' the North"; (b) "Hielan' Laddie."
 8.58: Weather report.
 9.0 : Baritone—Mr. Eric Mannall, "My Ain Folk" (Lemon).
 9.4 : Instrumental—1YA Orchestral Octet, "Keltic Suite" (Foulds): (1) The Clans, (2) A Lament, (3) The Call.
 9.14: Soprano—Miss Reta McCullay, (a) "Turn Ye to Me" (Old Scottish); (b) "The Rowan Tree" (Nairne).
 9.21: Humour—William McCulloch, "Presentation of Prizes" (McCulloch).
 9.29: Vocal duet—Messrs. Black and Simpson, "Of a' the Airts" (Marshall).

- 9.27: Humour—Mr. W. Yates, "The Liverwing Testimonial" (Spurr).
 9.34: Selection—2YA Salon Orchestra, "The Three Bears" (Coates).
 9.44: Vocal duet—Winnie Melville and Derek Oldham, (a) "Trot Here and There" ("Veronique" (Messenger), (b) "The Swing Song" ("Veronique" (Messenger) (H.M.V. B2939).
 9.50: Vocal quartet—Lyric Quartet, "Aloha-oe" (arrgd. Parks).
 9.54: Instrumental—2YA Salon Orchestra, Dance Novelties.
 10.0 : "Brunswick" Dance Programme:
 Foxtrots—Gerunovich's Roof Garden Orchestra:
 "Stairway of Dreams" (Stone) (4277).
 "I'll Tell the World" (Turk) (4253).
 "That's the Good Old Sunny South" (Ager) (4277).
 Waltz—Hotel Roosevelt Orchestra, "Sweet Suzanne" (Leslie) (4258).
 Waltz—Regent Club Orchestra, "Where is the Song of Songs for Me?" (Berlin) (4257).
 10.15: Vocal solo—Bob Nolan, "Rose of Mandalay" (Magine) (4248).
 Foxtrots—Los Angeles Biltmore Hotel Orchestra:
 "Do You Ever Think of Me?" (Burtnett) (4217).
 "Ploddin' Along" (Caminando) (4217).
 Foxtrots—Colonial Club Orchestra, (a) "Naughty Eyes" (Fork-Locke), (b) "Leave Me with a Beautiful Melody" (Spier) (4256).
 10.30: Vocal solo—Bob Nolan, "Caressing You" (Faziolo-Klages) (4248).
 Foxtrots—Hotel Roosevelt Orchestra, (a) "Mean to Me" (Turk), (b) "My Castle in Spain is a Shack in the Lane" (Caesar-Friend) (4274).
 Foxtrots—Clevelanders, (a) "Shout Hallelujah, 'Cause I'm Home" (Dixon), (b) "There's a Place in the Sun for You" (Green) (4255).
 10.45: Sporting review.
 11.0 : Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SATURDAY, NOVEMBER 30.

- 3.0 : Afternoon session—Selected studio items.
 4.25: Sports results to hand.
 5.0 : Children's session, conducted by Aunt Pat.
 6.0 : Dinner session.
 Waltz—Dajos Bela Orchestra, "You, Only You" (Strauss) (Parlo).
 Dajos Bela Trio—"Meditation" ("Thais") (Massenet) (Parlophone).
 Edith Lorand Orchestra, "Rustle of Spring" (Sinding) (Parlo. EI0591).
 6.12: Tacet.
 6.15: Pianoforte—Lee Sims, "Love Me or Leave Me" (Kahn) (Bruns. 4422).
 Brunswick Salon Orchestra, "Alice Blue Gown" (McCarthy) (Bruns.).
 Wurlitzer organ—Lew White, "Deep Night" (Henderson) (Bruns.).
 Brunswick Salon Orchestra, "With a Song in My Heart" (Hart).
 6.27: Tacet.
 6.30: Dajos Bela Orchestra, "Gypsy Love" (Lehar) (Parlophone A4080).
 Dajos Bela Orchestra, "Eldgaffeln" (Landen) (Parlophone A4009).
 Brunswick Concert Orchestra, "Thousand and One Nights" (Strauss).
 6.42: Tacet.
 6.45: Jazz piano solo—Raie da Costa, "Lucky in Love" (de Sylva) (Parlo.).
 Herman Instrumental Trio, "Pierrette" (Chaminade) (Bruns. 4228).
 Cinema organ—Eddie Horton, "O Mi Paloma" (Merton) (Parlophone).
 Dajos Belo Orchestra, "Electric Girl" (Helmbergh-Holmes) (Parlo.).
 6.55: Tacet.
 7.0 : News session.
 7.30: Sports results.
 8.0 : Chimes.
 Special "Scottish Programme" in commemoration of St. Andrew's Day:
 8.1 : Overture—Studio Instrumental Octet, under the conductorship of Mr. Harold Beck, "Highland Laddie" (arrgd. Seredy).
 8.9 : Vocal quartet—Melodious Four, "We're a' Scottish Here" (McInnes).
 Soprano—Miss Frances Hamerton, (a) "Can Ye Sew Cushions" (Traditional); (b) "Comin' Thro' the Rye" (Traditional).
 8.15: Scottish medley—Debroy Somers Band, "Scottish Medley" (arrgd. Somers) (Columbia 02698).
 8.19: Vocal quartet—Melodious Four, "There was a Lad" (Traditional).
 8.23: Studio Instrumental Octet, "John Anderson" (arrgd. Lake).
 8.27: Contralto—Miss Belle Renaut, "Angus McDonald" (Doeckel).
 8.31: Bag pipes—Pipe Major J. A. Patterson, Three Marches, (a) "A Man's a Man for a' That" (Traditional); (b) "All the Blue Bonnets are Over the Border" (Traditional); (c) "The Bonawe Highlanders" (Bowman).
 8.35: Tenor—Mr. Russell Sumner, "Annie Laurie" (Scottish).
 8.39: Studio Instrumental Octet, (a) "Lassie Valse" (Hesse); (b) "Scots Airs" (Myddleton).
 8.45: Bass—Mr. T. D. Williams, "The Laird o' Cockpen" (Traditional).
 8.49: Medley—H.M. Grenadier Guards Band, "Sir Harry Lauder" Medley (Lauder) (Columbia 02750).
 8.54: Scottish humour in song and patter—Mr. Jock Lockhart, "Ma Bonnie Jean" (Lauder).
 9.0 : Weather report.
 9.2 : Studio Instrumental Octet, "The Thistle" Selection (arrgd. Myddleton).
 9.11: Vocal quartets—Melodious Four, (a) "The Rowan Tree" (Nairne); (b) "Mary of Argyle" (Nelson).
 9.15: Soprano and contralto duet—The Dolce Duo, "O Wert Thou in the Cauld Blast" (Mendelssohn).
 9.18: Highland patrol—Band of the Royal Air Force, "The Wee McGregor" (Amers) (Regal G20479).
 9.21: Bass solo—Mr. T. D. Williams, "The Border Ballad" (Cowan).
 9.25: Medley—Band of H.M. Grenadier Guards, "Sir Harry Lauder" Medley (Lauder) (Columbia 02750).
 9.28: Contralto—Miss Belle Renaut, "Doon the Burn" (Hook).

- 9.32: Bagpipes—Pipe Major J. A. Patterson, (a) "The Campbells are Coming" (Traditional); (b) "Lochiel's Welcome to Glasgow" (Ross); (c) "Athol Highlanders" (Ross).
 9.37: Vocal duet—Dulcet Duo, "The Crookit Bawbee" (trdtl.).
 Vocal solo—Miss Frances Hamerton, "Ye Banks and Braes" (trdtl.).
 9.43: Studio Instrumental Octet (a) "Coronach" (A. Highland Lament) (Barratt), (b) "Hail to the Chief" (arrgd. Lake).
 9.49: Tenor—Mr. Russell Sumner, "Skye Boat Song" (arrgd. Lawson).
 9.51: Vocal quartet—Melodious Four, "Duncan Gray" (trdtl.).
 9.55: Scottish humour in song and patter—Mr. Jock Lockhart, (a) "The Waggle o' the Kilt" (Lauder); (b) "Just a Wee Deoch and Doris" (Lauder).
 Quartet—Melodious Four, "Auld Lang Syne" (trdtl.).
 10.0 : "His Master's Voice" Dance Programme:
 Foxtrot—Bert Pollack's Orchestra, "Louise" (Whiting) (ES543).
 Foxtrot—Horace Heidt's Orchestra, "Wedding of the Painted Doll" (Brown) (EA539).
 Foxtrot—Kassels in the Air, "He, She and Me" (Lombardo) (EA532).
 Foxtrot—Nat Shilkret's Orchestra, "You Were Meant For Me" (Brown) (EA525).
 10.12: Humorous song—Leslie Sarony, "Don't Be Cruel to a Vegetabuel" (Sarony) (B2714).
 Foxtrot—Nat Shilkret's Orchestra, "One For All, All For One" (Alter).
 Foxtrot—Waring's Pennsylvanians, "My Mother's Eyes" (Baer).
 Foxtrot—Nat Shilkret's Orchestra, "I'm Thirsty for Kisses" (Coats).
 Waltz—Nat Shilkret's Orchestra, "Lady Divine" (Kountz).
 Waltz—Connecticut Yankees, "Sweet Suzanne" (Gilbert) (EA523).
 10.30: Comedian—Johnny Marvin, "Sweethearts on Parade" (Newman).
 Foxtrot—Nat Shilkret's Orchestra, "Broadway Melody" (Brown).
 Foxtrot—Park Central Orchestra "Wait Till You See Ma Cherie" (Whiting) (EA543).
 Waltz—Connecticut Yankees, "Coquette" (Berlin) (EA532).
 Waltz—The Troubadours, "Carolina Moon" (Burke) (EA494).
 10.45: Tenor—Maurice Gunsky, "With All Her Faults I Love Her Still" (Rozenfeld) (EE87).
 One-step—Jack Hylton's Orchestra, "Shinanika Da" (Carlton).
 Foxtrot—Jack Hylton's Orchestra, "I Lift Up My Finger" (Sarony).
 Foxtrot—Park Central Hotel Orchestra, "Sally of My Dreams" (Kernell) (EA530).
 Waltz—Troubadours, "Another Kiss" (Schertzinger) (EA489).
 11.0 : Close down.

4YA, DUNEDIN (650 KILOCYCLES)—SATURDAY, NOVEMBER 30.

- 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—"Parlophone" Hour:
 Overture—Berlin State Opera Orchestra, "Mignon" (Thomas).
 Grand Symphony Orchestra, "Tales of Hoffman—Barcarolle" (Offenbach) (A4061).
 6.12: Tacet.
 6.15: Fantasia—Edith Lorand Orchestra, "Faust" (Gounod) (EI0579).
 Pianoforte—Karol Szreter, "Fledermaus" (Strauss) (A4082).
 6.27: Tacet.
 6.30: Selection—Dajos Bela Orchestra, "La Tosca" (Verdi) (A4045).
 Violincello—Orabio de Castro, "Nocturne in E Flat" (Chopin).
 6.42: Tacet.
 6.45: Overture—Grand Symphony Orchestra, "Fra Diavolo" (Auber).
 Grand Symphony Orchestra, "Tales of Hoffman—Entr'acte and Minuet" (Offenbach) (A4061).
 6.57: Tacet.
 7.0 : News session.
 8.0 : Relay of 3YA Christchurch (Vaudeville programme).
 10.0 : "Brunswick Dance Programme from Studio:
 Foxtrot—Jesse Stafford's Orchestra, "Kewpie" (Rose) (4249).
 Foxtrot—Jesse Stafford's Orchestra, "A Precious Little Thing Called Love" (Davis) (4249).
 Foxtrot—Red Nicholls' Five Pennies, "Roses of Picardy" (Haydn Wood) (4286).
 Waltz—Pianoforte solo by Rosita Renard, "Blue Danube" (Strauss).
 10.16: Vocal duet—Francis Luther and Jack Parker, "Carolina Moon" (Davis) (4202).
 Foxtrot—Red Nicholls' Five Pennies, "Allah's Holiday" (Friml).
 Foxtrot—Gerunovich's Roof Garden Orchestra, "I'm Telling You" (Rose) (4190).
 Foxtrot—Jungle Band, "Paducah" (Redman) (4309).
 10.28: Soprano—Marie Tiffany, "Little Grey Home in the West" (Wilmot).
 Foxtrot—Gerunovich's Roof Garden Orchestra, "I Found You Out When I Found You In" (Ponce) (4190).
 Foxtrot—Royal Creolians, "Third Rail" (De Mars) (7072).
 Vocal duet—Francis Luther and Carson Robison, "You Can't Take My Memories From Me" (Davis) (4202).
 10.41: Organ solo—Lew White, "Coquette" (Berlin) (4301).
 Foxtrot—Ray Miller's Orchestra, "No One in the World But you" (Robison) (4194).
 Foxtrot—Brunswick Orchestra, "Dardanella" (Fisher) (4218).
 Waltz—Regent Club Orchestra, "Poor Punchinello" (Lewis) (4206).

- 10.50: Soprano—Marie Tiffany, "Pale Moon" (Indian Love Song) (Logan).
 Foxtrot—Brunswick Orchestra, "Redskin" (4218).
 Waltz—Regent Club Orchestra, "Loneliness" (Pollack) (4206).
 11.0 : Close down.

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.
 4.30: Close down.
 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.
 3.0 : Afternoon session—selected studio items.

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), ("Lacina 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.

Topical Notes

THERE are a few New Zealanders who are still anxious to see radio-vision developed in this country. A prominent expert says:—"The difficulties of radiovision are tremendous, and we must be patient while the problems are being solved. These problems concern electrical and mechanical engineering and optical science. A new kind of photoelectrical cell has had to be developed and new instruments designed. Besides, static has proved more troublesome than in radio. Bearing these facts in mind, it is small wonder that the progress in radiovision has appeared slow. The engineers themselves are not certain what the future holds. However, in an address before a group of engineers at Pittsburgh recently, Mr. David Saranoff, executive vice-president of the Radio Corporation of America, described radiovision as a promising infant, but still too delicate for anything but laboratory experiment."

THE report in the Melbourne daily press that a Melbourne radio amateur overheard conversations on the trans-Atlantic phone is rather interesting in view of the fact that in the next few months a radio telephone service between Australia and Great Britain is to be inaugurated. The facts of the case are that the Marconi Co., and the Radio Corporation of America are at present conducting experiments with various systems of transmission on the short wave London-New York phone link. When the link is completed, the "single side-band" method of transmission will be used to defeat the ends of radio eavesdroppers. A similar system will be used on the Australian beam phone service.

MR. H. MARTIN (Temuka) writes:

"I wrote to you about a week ago telling you of a 'terrible frying noise' I was getting over the air. Last night I think I located the trouble, coming from the main power lines, Coleridge to the south. I was walking along the street, and on passing one of the poles my attention was attracted by a very familiar sizzling. I stopped for about five minutes and listened, then returned home immediately and turned on my set (8 p.m.) just to find it sizzling away in sympathy with the power lines. In about an hour's time when it was dark, I went back to the pole, and one of the insulators was indeed 'sparking' very well. I then went along to the next pole and found three insulators, all sparking merrily. Needless to say, I have written to our radio inspector, hoping that the information will be of some use, and the trouble will soon be rectified." In reply to Mr. Martin's complaint in last week's notes, "Switch" suggested a leakage over an insulator as a possible cause of the noise.

Type-setting by Wire

An Important Invention

A RECENT American invention is the "tele-typesetter," a machine which enables a single typist to operate thousands of linotype and intertype machines in distant cities. Speed has long been recognised as an important factor in the art of printing, and as the demand for the printed page increased, history shows a constant effort to decrease the time of the mechanical processes involved. The recent invention of the tele-typesetter has done much to attain this desired result, and, as an additional advantage, one operator is able to control type-setting machines all over the world.

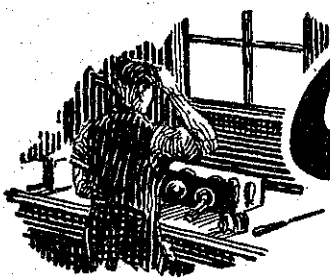
An electric typewriter at the central news dispensing office perforates the tape, each group of perforations corresponding to a letter, numeral or symbol. The tape is led through the transmitting distributor and a series of dots corresponding to the holes in the tape are then sent over the wire in the same manner as code messages are transmitted.

At the receiver is a perforator which punches holes in a tape in exact duplication of those made in the transmitting tape, while an automatic printer types the message as it is being received. The perforated tape thus received is then passed through a device, which, by means of electrical impulses, translates the code into depressions on the keys of the type-setting machines.

The almost unlimited application of this time and labour-saving invention in all fields of printing and news-dispatching services is apparent. Experiments are now being carried out to perfect a similar apparatus which may be operated by radio. With the recent adaptation of radio-transmitted pictures to the newspaper industry, it would be quite reasonable to predict that the time is not far distant when every newspaper in the world, no matter how remote, will have its "radio-typesetter" and its picture receiver for the instantaneous reception from other countries of both current news and pictures of topical events.

Direction Finding

SO good are the results from wireless direction finders, that the International Conference for the Safety of Life at Sea, which was held in London recently, has backed them to the hilt. At the present time it is not compulsory to install direction-receiving apparatus in any ship, but the recommendations of this body are that every passenger ship of 5000 tons gross and upwards must be provided within the next two years with the approved direction-finding apparatus or radio compass. It seems probable that this wise and humane recommendation will soon become law in practically every country in the world.



Questions and Answers



Exponential Horn.

"COULD you tell me where I could obtain particulars of an exponential horn speaker?" asks F.H. (Huntly).
A.: It was fully described in an early issue of the "Radio Record."

Plug Coils.

"HOW many turns are required on a 6-pin coil to tune between ten and twenty-five metres?" asks R.J. (Wellington).

A.: Secondary 3, tickler 4, primary 3. Wound with 18-gauge enamelled wire and tuned with a .0001 variable condenser. The tickler coil and the secondary are made distinct, and it is preferable to wind the tickler with 24-gauge wire. The primary and aerial and secondary are continuous. The connections are as follows: Pin No. 1 (top end of the secondary with the moving plates of the tuning condenser, the grid leak and the grid condenser. Pin No. 2 (secondary primary common) joins with the moving plates of the tuning condenser, the moving plates of the reaction condenser and A plus. The fourth pin, the bottom of the combined and secondary winding, connects directly into the aerial. The end of the tickler coil No. 5 goes through the plate to the detector valve, and the high-frequency choke. The other side of the tickler (6) connects with the fixed plates of the reaction condenser. In order to reduce the capacity of .0005 tuning condenser to .0001 a condenser of .0005 mfd. value must be placed in series with it.

Coils Not Matched.

"I HAVE constructed the 3-valve Brown-ing Drake," writes J.M.D. (Mar-ton) and an using .00035 and .0005 condensers. I get 2YA at 57 on the radio condenser, and on the other condenser this station comes in most strongly with the vanes full in. I have tried reducing the number of turns on the secondary coils, but this makes very little difference."

A.: Quite obviously the coils are not matched. Consult a table giving the specifications for different condensers and wires, such as that published in "All about the all-electric" on page 64.

Crystal and Amplifier.

"WOULD you clear up the following points in connection with the tetrode crystal and amplifier, described in the Radio Record: (1) How many turns are required on a basket coil when an aerial 200ft. long is used?"

A.: If tuned with a .0005 condenser 30 turns of 24 silk-covered wire. If the tuning is not satisfactory reduce the effective length of the aerial by placing a series condenser .00025 in the aerial. However, a plain solenoid has proved equally efficient in this circuit. Such a coil would consist of about 50 turns double cotton covered wire on a 2 1/2 in. former and tuned with a .0005 condenser. The aerial tapping will then come in to the top of the coil, the earth to the bottom and the condenser shunted directly across it.

(2) I do not wish to use two jacks. Kindly show the wiring for one only.

A.: Disregard the wire going to the phone jack from the ground terminal and from the wire coming from that joining the crystal to "P" of the transformer. No other changes are required.

(3) Where would a switch be placed

to cut off the batteries, or can they be turned out by the rheostat?

A.: A switch is not necessary, but a rheostat with a neutral position should be employed.

(4) I have a variable condenser with 7 moving and 6 fixed plates. Could this be used, and, if so, what is its capacity?
A.: The capacity is about .0001, so that a coil with a very large inductance must be used. This will require about 150 turns on a 2 1/2 in. former.

Condenser Problems.

"I HAVE a .00035 variable condenser and wish to remove some of the plates to reduce its capacity to .00005. How many plates shall I remove?" asks "Radio Pro" (Napier).

A.: It would be difficult to say with any degree of exactness how many plates you would require. Probably two fixed and one moving would be as near as possible.

2. In the screen grid short-wave receiver described in the Listeners' Guide, the tuning condensers are rated as .00015 mfd. Is this correct to correspond with the number of coils on the turns?—Yes.

3. What is the value of the third variable condenser, and in it the reaction control?

A.: It is the reaction control and its capacity is about .00025.

4. Should the grid condenser have a value of .0015 or .00015?

A.: .0001.

5. What diameter former should be used for the radio frequency choke, and is this jumble wound or in a single layer?

A.: A plain solenoid choke of about 150 turns will be all that is required.

R.F. Booster.

"SOME time ago," writes A.G.W. (Lyall Bay) "I constructed the screen grid R.F. booster, and have had considerable success. Without altering my set I wish to further improve it. Can I add another booster?"

A.: It is very unlikely that you would secure good results without entirely remodelling your set and perfectly screening it. Even then three stages of radio frequency and two of these screen grid are liable to give trouble.

A.C. Surge.

"I HAVE a crystal set which works perfectly during the day time, but at night exhibits the rather peculiar phenomenon of becoming insensitive if our lighting system is interfered with. The wiring has been inspected and is O.K.—R.Y. (Porirua)."

A.: When the contact is made in the switch a surge is set up which alters the potential of your crystal, causing the two parts in contact to become insensitive. The only cure is to obtain another crystal.

Underground Antenna.

"EARTHQUAKE (Seddonville) asks for the specifications for an underground antenna."

A.: These are not satisfactory, as is set out in an article in another portion of this issue, but if you wish constructional details see an issue of the "Radio Record" dated December 7, 1929.

2. Would aluminium paint be suitable to protect my aerial wire.—Yes.

3. What lubricant would you advise me to put on the valve prongs to prevent

their tendency to stick in their sockets—vaseline?

A.: Probably a little Zam-buk well rubbed in—No, lubricants are insulators.

4. What is your opinion of Baird De Luxe shortwave adapters?

A.: We cannot pass opinion on commercially-made receivers.

5. What shortwave adapter would you advise me to get and fix to my 6-valve receiver?

A.: Either a good one you could make up from specifications given in the "Listeners' Guide" or one made by a good firm who specialise in shortwaves, say Mack's Radio, Wellington.

A Puzzling Statement.

THE following statements published in a dealer's catalogue have puzzled me very much, writes Amateur (Nelson):—

1. "The valves used with dry 'A' batteries have a shorter life than those used with an accumulator." (2) "Accumulator valves should last about 18 months or more, and dry cell valves rather more than half as long."

A.: It appears that the reference is to the low filament consumption valves used in dry batteries and the higher consumption valves used with accumulators. The former do not have to pass as much current as the latter. Consequently they have a thinner filament which cannot stand the same overloading. As it is almost impossible without the use of a rheostat or other resistance to get the exact voltage for dry cell valves when using dry cells there is a tendency to burn them at a temperature too high and ruin them.

A License Question.

CAN I take my radio set to another district for the holidays with my present license?—D.L.C. (Frankton Junction).

A.: Yes, but notify the Auckland district radio inspector that you are doing so.

2. Will shortwave adapter described in the "Radio Listeners' Guide" work with a 7-valve all-electric set?

A.: Yes, quite.

3. What is a resonator?

A.: It is a trade product handled by L. B. Scott, Ltd., Christchurch, consisting probably of a condenser to alter the effective capacity of the aerial, but communicate with this firm for further particulars.

Useful Hints

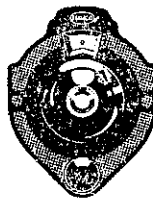
ONE of the disadvantages of using coupling resistances of high value, such as 1 megohm or so, is that small external circuit capacities then begin to exercise a bypassing effect upon the higher musical frequencies, and so destroy the brilliancy of the music.

THE minimum capacity of a good variable condenser is about one-tenth (or less) of its maximum capacity.

KEEP the aerial lead well clear of walls or buildings, with no metal of any kind within a yard of it.

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The "Tongariro" Portable

A Design for a Powerful Set

(By "CATHODE")



ANYONE who essays to design a portable receiver is at once faced with the difficulty that either performance or the advantage of light weight must be sacrificed. In the design presented here it has been considered desirable to aim at a worth-while performance rather than at the reduction of weight, with the result that the completed receiver weighs somewhere round about 30lb. Not the kind of thing a mountaineer would care to add to his pack, but nevertheless quite convenient for the more usual motor or train picnic or the camp. Also, it must be remembered that a receiver which is conveniently portable over long distances makes for unsociability, since its performance is necessarily restricted to headphones reception by reason of the limited "B" voltage available; some people can tolerate the distortion from a badly-overloaded output valve feeding a speaker, but "Cathode" is not one of them.

As will be seen from the circuit diagram of the receiver, four valves are employed, two of the screen-grid variety operating as high-frequency amplifiers, one three-electrode valve operating as a grid detector, and a final amplifier which may be either a three electrode valve, or, where more amplification is desired, a pentode. A point which may be new to many readers is the use of a fixed tune coupling between the two screen-grid valves. The more usual method of using an untuned coupling incorporating a high-frequency choke has been tried, but the fixed tune transformer (its frequency response curve very much flattened by the 600 ohm resistance was found to give appreciably better results. Actually, this transformer peaks at about 400 metres, but the amplification is almost equal over the entire broadcast band.

The dimensions of the carrying case are really fixed by the dimensions of the batteries employed, and in particular by those of the portable accumulator if one is used in preference to dry cells. The writer unhesitatingly recommends the use of an accumulator for filament supply rather than dry cells,

since the consumption of filament current, while by no means excessive is yet such that only a short life could be expected from the ordinary No. 6 cells. Whether a two or four-volt accumulator is employed is a matter for individual preference. Slightly better results may perhaps be obtained from

This week "Cathode" presents the first installment of an article on his portable receiver. It will be concluded in next week's special portable number. However, there is ample here for the set-builder to start constructing.

4-volt valves, but the smaller ampere-hour capacity of a 4-volt accumulator of such a size as to fit in the available space will necessitate more frequent recharging.

One of the special types of portable accumulator is distinctly desirable, although a small light accumulator of ordinary construction may be readily adapted for portable use by the addition to its electrolyte of the recommended quantity of "Jelectro," a liquid which has the property of partially solidifying the acid electrolyte so that it assumes the consistency of a jelly and is free from a tendency to spill. It is, of course, possible to use the ordinary type of accumulator where the receiver will always be maintained in a vertical position, as, for example, where it is only intended to be moved from room to room, or from the house to garden, but where it is to do much real travelling the use of an ordinary accumulator will almost certainly lead to disaster.

As regards "B" supply, the usual

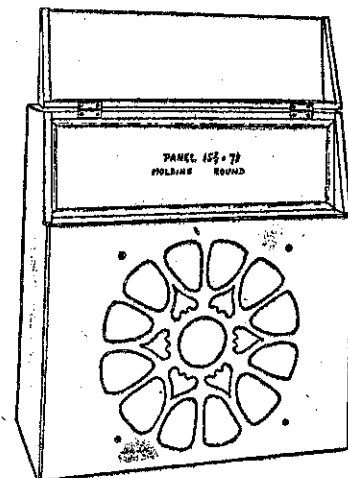
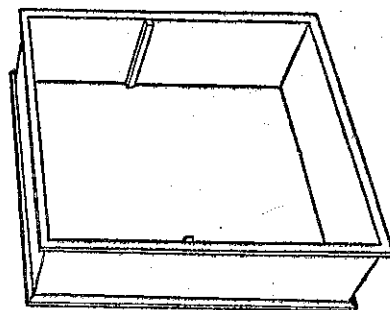
American heavy duty battery is at once ruled out on the score of its size and weight. Most English-made batteries are of a size convenient for use in a portable, the Hellesen being another battery with a high voltage and a fair capacity packed away in a small space. Many English batteries have, in addition, to 120 volts "B" supply, a "C" voltage up to 9 volts tapped off the same block. These are very convenient and compact, but if the dimensions to be given are adhered to, there will be no difficulty in packing away up to 135 volts "B" battery and a separate bias battery of 9 volts.

The performance of this receiver makes it a serious challenger to the more conventional type of home receiver. Many people will wish to use it as a permanent receiver and may consider the rather short life to be obtained from the small batteries contained in the case something of a disadvantage. The remedy for this is the provision of a separate block of heavy-duty "B" batteries or a suitable mains unit, for use when the receiver is at home, the small batteries only being used abroad. A second "B" wander plug may be provided to avoid the necessity of disturbing the one inserted in the small battery, but the positive plugs must be shifted from the small battery to the exterior "B" supply. It is quite permissible to move only the high-voltage tapping from the small battery to the exterior "B" supply, as the current taken from the other tapplings (detector valve and screening grids) is so small that it will have no adverse effect on the small batteries. Some constructors may consider it worth while to put in a two or four-pole double throw switch and a suitable plug and socket arrangement, so as to make the change-over more convenient. These could be mounted immediately below the baseboard.

The Cabinet.

The overall dimensions of the cabinet illustrated are: Length 16½ in.; depth 17½ in.; width 8½ in. As has been previously mentioned, the accommodation for batteries is fairly generous, and it is possible that the depth might be decreased a trifle. It must be remembered, however, that if the dimensions are thus modified, it will be necessary to put another turn or so on the frame aerial to maintain a proper tuning range.

The construction of the cabinet may be carried out in any light timber, a thickness of three-eighths of an inch



Inner frame ready for winding of frame aerial round outer surface. The small battens are to support the baseboard of the receiver, the space beneath this being occupied by the batteries and the back of the speaker.

being suitable. The overall dimensions have already been given and the sketches will render the mode of construction readily apparent. The wooden "panel" which carries the speaker is nearly 16½ inches by 12 inches, so that only the upper five inches or so of the panel is exposed; thus the heads of the screws holding the two horizontally mounted valve-holders are hidden.

The inner framework on which the frame aerial is wound and within which the receiver proper is mounted is but 5-5-8 inches in width; consequently there is a space between the receiver panel and that on which the speaker is mounted, the space being conveniently filled by a narrow wooden shelf.

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The fact that the receiver proper is "sunk" a trifle behind the extreme front of the carrying case permits the attractive and strong-hinged cover shown in the diagrams. The back of the cabinet may also be hinged if desired, but in the original receiver the inner framework was permitted to slide three-eighths of an inch inside the cabinet (by narrowing the shelf in front of the receiver panel), the back then taking up this space and being secured by miniature turnbuckles.

It will be noted that the inner framework (which should be very lightly constructed) has a number of thin laths screwed or glued round its outer edges so as to leave a channel within which the frame aerial is later to be wound. The dimensions of this inner framework must be such that, with the laths in position, it will just slide within the carrying case. Thus, if the

the constructor to beg, borrow or steal one of these useful tools, or else have the fret cut by a tradesman or friend. The designs shown need not be slavishly copied, and an opportunity presents itself for quite artistic treatment by those so inclined. It should be remembered that the fret should neither be so "solid" as to impede the radiation of sound, nor yet so delicate as not to be sufficiently robust to stand an occasional knock. The speaker unit specified is supplied with very full instructions as to the mounting and making of a suitable free-edge cone, so that there is no need to spend space unnecessarily on a description of these operations.

As regards finish, the timber may either be stained and suitably polished or varnished, or it may be covered with imitation leather glued on. The imitation leather is not very satisfactory

going to use the receiver on an outdoor aerial or not. It will be seen that provision for use on an outdoor aerial has been made (dotted) in both theoretical and practical wiring diagrams. Where the frame only is to be used, best results will be secured by having the reaction winding on the frame, but if this arrangement were to be used with an outdoor aerial, it would be capable of causing interference to other listeners if improperly handled, and moreover, would contravene the regulations governing receiving sets. For use with an outdoor aerial, the reaction winding should be transferred to the second high-frequency transformer, the use of an aerial more than compensating for the change. If it is desired to use only the frame aerial and have the reaction winding coupled thereto, this latter should consist of 9 turns of about gauge 26 D.C.C., spaced a little distance (an inch or less) away from the main wiring. The direction of winding is immaterial, since the leads to the reaction winding can readily be reversed if it is found on test that increasing the reaction condenser reduces signal strength.

THE next step is the construction of the high-frequency transformers L2 and L3. The formers for these are built up of three discs or hard rubber, bolted together with a small brass bolt through their centre, the inner disc being 2½ inches in diameter, and the two outer ones 3 inches. In the case of the second, or tuned transformer, a "wing" may be left on one of the larger discs, this subsequently being used for mounting by means of an angle bracket, but the first or fixed tune transformer must be supported in a horizontal position at such a height as to clear the bulb of the first valve which, as will be seen, is mounted in a horizontal position. Thus this fixed tune transformer must be screwed to a short piece of wooden dowelling which is in turn secured to the baseboard by a screw passed up from underneath.

At this point, the writer considers it will be convenient to stop this instal-

Screen-Grid Radio

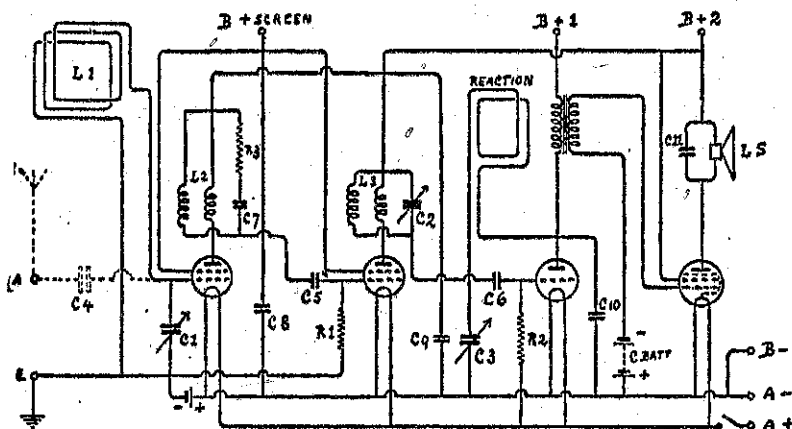
THE following paragraph from an American magazine, relative to the application of the screen grid to the "Majestic" radio receiver, will be of interest. "Approached on the matter of applying the screen-grid valve to 'Majestic' receivers, the directors have stated that their firm will not use this valve until they are satisfied that both circuit and valves are of higher quality than those they are using. The trouble screen grid manufacturers have had, and the fact that there are more 'Majestics' sold than the nearest two competitors, prove they claim, the wisdom of their statement. Majestic, it is stated, will use screen grid only when convinced that these have been perfected, and better results than those at present obtaining may be secured."

A Unique Broadcast

Talkies on the Air

WHEN station 2ZM, Gisborne, broadcast the talkies from a local theatre on Friday last they claimed that this was the first time in New Zealand's radio history that such a broadcast had taken place. It was certainly something entirely novel. We listened to this station, and were surprised at the clarity and general excellence of the broadcast. The "talkie," "The Singing Fool," could be followed throughout, and even the plot could be visualised. Technically, the broadcast was well-nigh perfect, and this station is to be congratulated on its efforts.

In next week's special issue the remaining constructional details will be given.



THEORETICAL CIRCUIT DIAGRAM.

C1, C2, 0.0005 mfd.; C3, 0.0001 mfd.; C4, 0.0002 mfd.; C5, 0.0005 mfd.; C6, 0.0003 mfd.; C7, 0.0001 mfd.; C8, 0.003 mfd. or larger; C9, 2mfd.; C10, C11, 0.002 mfd.; R1, 2 megs.; R2, 2 megs.; R3, 600 ohms. The 600 ohm resistance R3 should be readily procurable, as resistances of about this value are in common use as series grid resistances. A suitable resistance can, however, be made by winding a few yards of very fine Eureka or other resistance wire round a small flat piece of insulating material.

Dimensions given are adhered to, the inner framework will be 15½ inches by 16½ inches over all; the dimensions minus the laths will, of course, be 15½ inches by 16½ inches, since the laths are one-eighth inch thick. Quarter-inch stock may be used for building up the

for covering the speaker fret, and it is perhaps best to leave a circle uncovered, and stain and polish the timber within this area.

With the sketches given and the foregoing notes, the constructor should not have much difficulty in completing the

List of Parts for "Tongariro" Portable

- 1 Panel, 15½ x 7 1-8 x 3-16 in.
- 1 Portable Cabinet with baseboard and loud speaker panel.
- 1 Loud speaker unit (e.g., Blue Spot 66k.).
- 2 Variable Condensers, 0.0005 mfd.
- 1 Reaction Condenser, 0.0001 mfd (midgirt type).
- 1 "On and Off" Switch.
- 4 Valve holders.
- 2 Grid leaks, 2 megohms and holders.
- 1 Resistance, 600 ohms.
- 1 L.F. transformer.
- 1 Dry Cell (Ever Ready "0" type).
- 1 Fixed Condenser, 2 mfd.
- 1 Fixed Condenser, 0.0001 mfd.

- 1 Fixed Condenser, 0.0002 mfd.
- 1 Fixed Condenser, 0.0003 mfd.
- 1 Fixed Condenser, 0.0005 mfd.
- 2 Fixed Condensers, 0.002 mfd.
- 1 Fixed Condenser, 0.003 mfd.
- 1 2-volt Accumulator.
- 1 "B" battery, 120 volts.
- 2 Valves, 2-volt screen-grid.
- 1 Valve, 2-volt detector.
- 1 Valve, 2-volt pentode.
- 5 Wander Plugs.
- 2 Spade Ends.

Wire for coils as specified, Systoflaw or Glazite screws, etc.

inner framework, which, as has been mentioned, is 5-8 inches wide. It is not really necessary to dovetail the corners, which may instead be firmly screwed; even the outer carrying case may be securely screwed together if the constructor is not sufficiently adept with woodworking tools to tackle dovetailing.

The fret for the speaker is centrally located in the panel provided for its accommodation. It is practically impossible to cut this fret without a fret saw, so that it will be necessary for

carrying case and inner framework, and making and mounting the speaker. It is suggested that the winding of the frame aerial should be the next operation.

THE main winding of the frame is a simple, straightforward winding of 13 turns of gauge 20 or 22 D.C.C. the turns being spaced by about the diameter of the wire. Before winding any reaction winding on the frame, however, the constructor must decide once and for all whether he is ever

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Avoiding Unsightly Panels.

WHEN the task of soldering the wiring of a receiver is completed, it is usually necessary to retighten all terminal nuts. This is because the heating of the terminals has softened the ebonite slightly, and thus loosened nuts which may have previously been quite tight. If it has been necessary to hold the soldering iron on the terminal for some time, it will probably be found that the heat has caused a bulging of the ebonite around the terminal head. This disfigurement can be avoided by turning the nuts home only just far enough to keep the terminals steady, while soldering operations are in progress.

An Improved Set-Square.

IN order that the edges of panels and that markings on panels may be made at right angles, set-squares or carpenter's steel squares are always used. But circumstances sometimes arise when neither of these useful instruments is available, as, for instance, when buying a new panel and one wishes to test its "squareness." On these occasions, take a sheet of paper, fold it in half, and make a pin prick through both thicknesses of paper. Unfold the paper, draw a line between the two pin-holes, and the angle between this line and the fold in the paper will be a right angle.

Longer B-Battery Life.

45-VOLT B batteries, connected in series to supply B current to a receiver, do not all run down at the same time. This is because the same amount of current is not drawn from each battery. The one connected to the negative B terminal, for example, carries the maximum load, as it supplies plate current to every valve in the set, including the detector. The battery next to it supplies current to every valve, excluding the detector; and so on, according to the number of blocks and valves used. In order to equalise the load on the batteries so as to obtain maximum service from each block, it is advisable to move, at least once a month, the battery at the positive end to the negative end, not forgetting to reconnect all the leads.

Curing Reaction Overlap.

IT is not much use searching for distant stations on a one or two-valve set if the reaction control is either "ploppy" or has an overlap. On some receivers the usual remedies for this, namely, trying a different size reaction coil or altering the valves of the A and B voltages, are of no avail. If the grid-leak used in the set is, however, of a 2 or 3 megohms value a

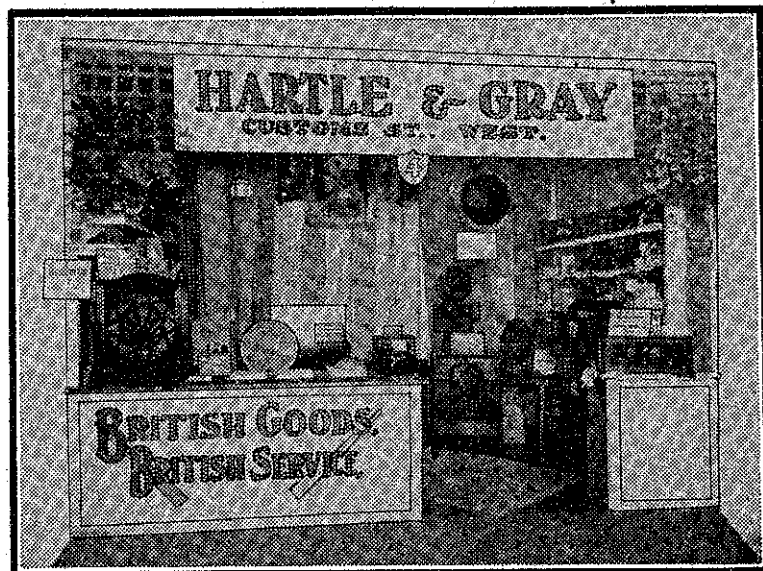
further remedy worth trying is the substitution of a grid-leak of about 5 megohms value. This may not completely cure the trouble, but will materially assist in making the control of reaction quite smooth.

Insulated Aerial Wire.

SO far as reception of ether waves is concerned, it does not matter whether the aerial wire is insulated or bare. It must not be forgotten that air itself is an insulator, and that the ether waves penetrate the insulation round the aerial in just the same way as they penetrate the air. The advantages which are often found in the use

Soldering Water-pipe Earths.

IT is usually a fairly difficult matter to solder an earth wire to a water-pipe, owing to the cooling influence exerted by the water. The task is simplified, however, by the use of a large soldering-iron which will store enough heat to overcome the cooling effect. The surface of the pipe should be thoroughly bright and clean before soldering is commenced. Give the surface of the wire which has to be attached, and the pipe itself, a thin layer of good electrical soldering flux. Tin the wire heavily, and then bind it tightly round the pipe. Have the soldering-iron well heated to a just visible redness, and then lay it on to the junction of the wire and pipe for about a quarter of a minute. Pro-



The home constructor was well catered for by Messrs. Hartle and Gray at the Auckland Exhibition. The photo shows their stand displaying components, with an experimental radiovision set in left foreground.

—C. M. Walls, Ltd., photo.

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of enamelled or other insulated wire are not electrical, but are connected with the deterioration of the copper surface when exposed to the elements.

An ordinary copper or bronze aerial wire, when first erected, is quite bright, but after a time it becomes discoloured, and if examined at the end of six months or more, will be found to be extremely dirty. This is especially the case if the wire has been exposed to the fumes or smoke of a near-by chimney.

This surface corrosion is neither a good conductor nor an insulator, and it may occasion quite appreciable losses. With enamelled wire the original conductivity is preserved almost indefinitely.

A "B" Battery Hint.

BEFORE discarding a run-down B battery, it is advisable to test the individual tappings. This should be done with a voltmeter while the battery is in use on a receiver. If it is found that only some of the cells are run down, while others show nearly their full voltage, it is possible to obtain a new lease of service from the battery by just shorting the cells which are run down. This may be carried out with wander plugs connected with a short piece of wire. If sufficient wander plugs are not available, shorting links may be made out of thick wire.

viding the soldering-iron contains enough heat, a perfect joint will result.

A Panel-drilling Hint.

WHEN drilling a smooth-surfaced ebonite or composition panel many amateurs often experience a very great difficulty in maintaining the drill in a perfectly vertical position, and consequently the hole through the panel is not straight. A good tip to remember when engaged on work of this nature with smooth-surfaced panels is to observe the reflection of the point of the drill on the ebonite surface. If the point of the drill is not entering the panel in a perfectly straight manner the fault will be exaggerated enormously in the reflection. Always, therefore see that the line formed by the drill point and its reflection is perfectly straight, and you will then have no difficulty in obtaining perfectly true holes in the panel. This hint, of course, cannot be applied to dull-surfaced panels, in which

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Automatic Radio Beacons

Along Coasts of Canada

THE first of the eighteen radio beacons which the Canadian Government is installing along the Atlantic and Pacific coasts has recently been completed, and after strenuous testing, has been declared entirely satisfactory. These radio beacons, which are entirely automatic, are now being installed to supply a long-felt want, namely, some reliable means whereby shipping is afforded an adequate measure of protection from the dangerous shoals and fogs which prevail on the Northern Canadian coasts.

These radio beacons are to be installed in every lighthouse along the coasts, and though their transmissions are entirely automatic, it is necessary for the lighthouse-keeper to ensure the constant running of the gasoline unit which supplies the necessary power. The radio apparatus consists of a duplicate automatic transmitter, which emits a set code signal, thus enabling a radio operator on board ship to ascertain his whereabouts with accuracy. In the case of a breakdown, the keeper merely throws a switch over, and thus places a duplicate transmitter on the air.

Each of the beacons will have a special code signal of its own, and when an operator hears one of these signals he can be sure that his ship is near some dangerous location. If his ship carries direction-finding apparatus, he can locate the position of the ship by ascertaining the direction in which the signals are loudest. By taking cross-bearings from another beacon station, the exact position of the ship can be accurately plotted.

The beacon transmitters are so designed that about the only breakdown that is possible is one caused by a burnt-out valve. Should this occur, the keeper immediately places the other set in action, and substitutes another valve in the defective transmitter. Adequate warning is given, should anything go wrong, by a bell, which continues ringing until the transmission recommences.

The operation is entirely controlled by a clock. As the hands reach the set time, special electric contacts close the circuit and start the gasoline unit. When the engine is properly running, electric contacts on the power panel of the transmitter close and start up the motor-generator which supplies the current for the transmitter; the valves light up, and within one minute and forty-five seconds from the time that the clock closed contact the signals are

on the air. They continue for one minute, just sending out the call, such as VGZ, VGZ, VGZ, for a full minute. Then a two-minute pause follows; the signals go on again; another two-minute pause. Then the carrier note which goes out on the air is shut off, as the second contact on the clock closes the circuit. Once an hour, twenty-four times a day, 365 days in the year, that automatic procedure goes on. Only in fog will the transmitter function continuously, twenty-four hours a day.

The beacons operate on a wavelength of 1000 metres, and are powered with four fifty-watt transmitting valves. They have a positive range of 75 miles, while their signals have been heard loudly enough for direction-finding operations up to distances of 200 miles or more. It is expected that this chain of eighteen stations will be completed early in the coming year, and when completed, it will form yet another addition to the already large number of stations which are operated by the Canadian Government for the aid of marine navigation.

Radio "Finesse"

ONE of the lesser-known aids to broadcasting is found in the use of coloured lights in the studio. It is fairly well established that there is a connection between colour and emotional response, and many broadcasting stations in England have recently been experimenting with a view to the use of colour in creating "radio-finesse." In some Continental studios it has been found that artists perform best under lights which show colours most suited, psychologically, to the "mood" of the broadcast.

Helpful Hints

ONE advantage of square wire for set-building is that it offers a larger surface for screw-down connections.

WHEN a set has to be used in a rather dark corner it is not a bad plan to arrange a flashlamp bulb near the tuning dial, with a simple switch which puts it on when required.

WHERE joints are inevitable properly soldered ones must be used, for twisting wires together is certain to lead to trouble with bad contact.

FOR good quality loudspeaker work a power valve, or preferably a super-power valve, must be used in the last valve socket.

ONE advantage of using a small aerial is that you will stand a better chance of picking up foreign stations than when a large aerial is being "swamped" by a nearby transmitter.

ALWAYS bring the lead-in from the aerial straight to the set where it is possible to do so, so as to keep the aerial and earth leads as short as possible.

INSUFFICIENT high-tension voltage is the commonest cause of indifferent reproduction.

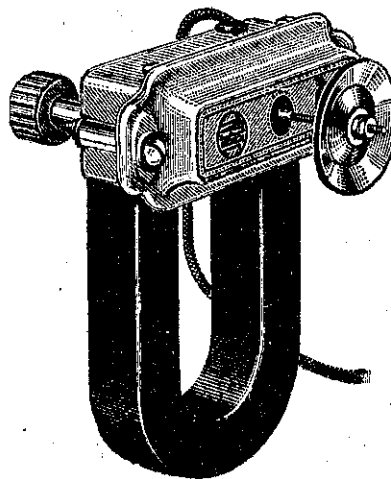
IF you use one of the three terminal fixed condensers, be certain that you wire it up the right way, as although it may work when connected wrongly, results will be very inferior to those obtainable under the correct conditions.

WHEN mounting condensers, etc., in rather inaccessible places, remember it is often an advantage to put the leads in place and screw them down before fixing the component in position.

Table of Valve Equivalents

Type.	Mullard.	Arcturus.	Ce-Co.	Osram.	Phillips.
201A	PM5	—	A	DEL610	A609
112A	PM6	—	F12A	DEP610	B605
171A	AC4	71	J71	P625A	C603
245	DFA9	145	45	P625	E404
210	DFA7	—	L10	—	TB0410
250	DO20	150	L50	LS625	F704
280	DU2	180	R80	—	1560
281	DU10	181	R81	—	1562
226	AC3	120	M26	—	F109
227	102T	127	N27	—	F209
224	—	124	22SG	—	F242

NOTE.—The above are the nearest to the American types, but the characteristics are not exactly the same. However, they may conveniently be substituted for the American valves if the small alterations are observed. These may be obtained from a chart or from the carton of the valve in question.



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66K is essentially a completely discharged 4-pole magnet unit which drives the cone spindle through a perfectly straight line movement. The special steel used for the magnet permits of an enormous flux, thus making the unit exceptionally sensitive. The armature—the only part liable to give a natural resonance—has been carefully damped and is to all intents and purposes dead silent in action. The unit reproduces all audio frequencies from 50 to 7,000 cycles without giving undue prominence to either end of the register. 66K has a special adjuster for regulating the gap between the butterfly piece and the four poles of the magnet.

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The Farthest North!

A SOVIET expedition claims the honour of having erected the world's most northerly wireless station. This has been established at Tranquil Bay, Franz Josef Land.

The station will be used principally for meteorological reports, operating on a wavelength of 43 metres.

A Call from Mexico.

THE Trens News Service, of Mexico City, addresses the world in a circular letter requesting all wireless users to pick up their news report broadcast in morse daily at 9.45 p.m., G.M.T. (9.45 a.m., New Zealand summer time) on 16 metres. The power is 20 kilowatts.

New Belgian Transmitter.

A NEW high-power short-wave station is being erected by the Belgian Government near Bruges for direct communication with the Congo and South America.

Short-Wave Schedules for Britain.

REGULAR short-wave transmissions for test purposes with Great Britain are carried out daily from Schneetady, New York, between the hours of 4 a.m. and 9 a.m., New Zealand summer time, from the following stations:—

W2XAD, on 31.48 metres.

W2XO, on 19.54 metres.

W2XK, on 17.34 metres.

The same programme is transmitted simultaneously from the three American stations.

A Record for One Day.

MR. A. F. GLEDHILL, Christchurch, sends the following list of short-wave stations heard from 5.30 a.m. till midnight on Saturday, November 2:—

2ME, Sydney, duplex with GBX, England.
PCJ, Holland.
5SW, England.
Zeese, Germany.
3ZC, New Zealand.
2XAD, New York.
KDKA, Pittsburg.
2XAC, New York, on air for relay by KDKA.

CJRX, Canada, on air for relay by KDKA.

8XAL, U.S.A., on air for relay by KDKA.

WLW, U.S.A., on air for relay by KDKA.

KGO, U.S.A.

9XF, U.S.A.

CJI, Montreal, for KDKA rebroadcast.

PHI, Holland.

PCL, Holland.

PLE, Java.

KZRM, Manila.

RA97, Russia.

DHC, Germany.

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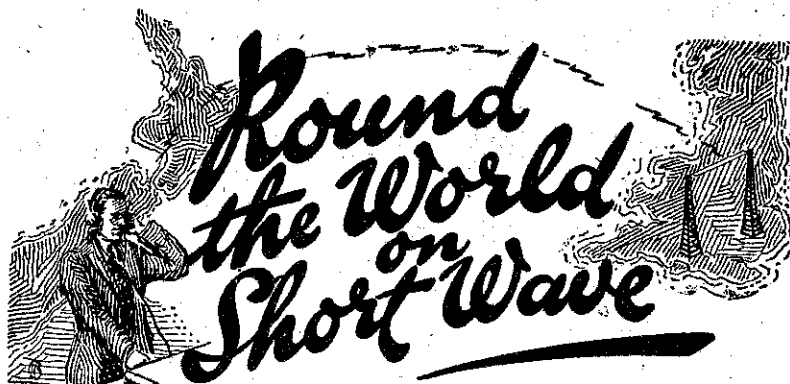
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THIS page is conducted in the interests of shortwave enthusiasts. A weekly log comprising notes of reception and interesting topical events is contributed by Mr. F. W. Sellens, Northland, Wellington, but all listeners are invited to send in paragraphs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

2 U.S.A. station and 2 English stations on duplex on about 32 metres.

Mr. Gledhill adds, there were a few stations too weak to get their call.

Can any reader beat this? Twenty-five short-wave stations on telephony in one day.

Armistice Service.

RECEPTION of this service via 5SW was disappointing after hearing the Chelmsford station testing from just before 10 p.m. A record was received very clearly at R6, also an announcement re closing down for a quarter of an hour, to reopen for the Armistice service relay. At 10.25 p.m. they switched over to London, where the details of the programme were given. The massed bands were composed of the Irish and Scots Guards. Reception for the greater part of the period was R8, but not as clear as it might be. Military orders were readable, as was the prayer by the Bishop of London.

"O God Our Help in Ages Past" came through very well.

Reception during the week ending Saturday, November 9, has again been below the average.

RA97, Siberia, has broadcast several musical programmes during the week; reception R8-9. Static, as usual, has been troublesome.

W9XF, Chicago, is fairly consistent in volume and clarity, reaching about R8 by 7 p.m. Their sign-off song, "When We Come to the end of the Day," is always sung prior to closing down at 8 p.m., our time (2 a.m. in Chicago).

W2XAL, New York, short-wave station of WRNY, was heard on Saturday till 7 p.m. Volume was about R7, but not quite clear enough to hear all that was said. The wavelength was given as 49.7 metres.

Zeese, relaying the Konigswusterhausen programmes, is, according to "Modern Wireless," working on 31.38 metres, but it is a little above PCJ and 2XAF (who are on 31.4 metres). I estimate the wavelength nearer to 31.6 metres. On Thursday and Friday mornings this German was received R8, closing down at 6 a.m. I have not heard them later than this recently, they have apparently altered their hours of transmission.

PCJ, Holland was spoiled on Friday and Saturday with a very strong generator hum. Volume is good when they start at 6 a.m., but rapidly goes off. On Friday morning a special programme was being broadcast for the "World Exhibition" at Barcelona. The Saturday afternoon, special N.Z. and Australian transmission, was only R3 at its best. This was at about 4.30 p.m.

2ME, Sydney, working duplex with GBX, England, continue to come in well. On Wednesday evening at 10.30 p.m. 2ME was on about 15 metres, apparently the new transmitter for duplex with

England when the 28.5 metre transmitter is not suitable.

2XAF Schneetady on Sunday was up to R8 at its best near the close of the transmission with hotel dance music.

KDKA, Pittsburg, was quite good at R7 with a programme for the Byrd Expedition on Sunday. On Saturday (9th inst.), the best was R3-4.

Radio Manila on Tuesday evening broadcast a play from the Rialto Theatre. Volume was R8-9. Each evening, except Monday, they commence at 10 p.m. On Tuesday they were R4 at 8.15 p.m., with records.

7LO, Nairobi, was up to R8 on Tuesday morning at 6.40 a.m. Morse and static spoilt readability. Other mornings volume was about R3-4.

5SW, England, is too weak these mornings to do any good with.

Unidentified. Stations 41.5 metres (about) foreign was heard at R3 on Wednesday morning. 34.4 metres (about).

At 6.45 a.m., Tuesday, a foreign lady was talking quite clearly at R4.

33 metres (about). Duplex telephony at R8 on Monday at 7.40 p.m. in English was heard. Mush and static made reading almost impossible. At the same time another station on about 32.4 metres was transmitting talk at R7. 15 metres (about). Gramophone records from 9.30 till 9.55 p.m. on Saturday were received at R8. A strong generator hum spoilt reception. No calls were given till 9.55 p.m., when a long foreign talk commenced.

Altered Schedules

SHORT-WAVE enthusiasts may be interested in the following notes on reception:—R.A. 9.7 is now transmitting on approximately 37 metres. PMY, Java, is heard nearly every evening after 11 p.m. on 67 metres. Radio, Manila, on short-wave (26 metres) uses the call KGRM, not KZRM. Station 2ME tests duplex telephony from 5 p.m.—7 p.m., and 11 p.m.—2 a.m. (Sydney time) daily. Bangkok, Siam, is heard after 1 a.m. (N.Z. time). RFN on 50 metres was heard on October 26, and also a foreigner on about 60 metres. Strength R.9, probably FSGC, Paris. Several others were heard, but not identified. A. D. Rogers (Wellington).

IF you want an efficient aerial or earth lead make use of one piece of wire and do not permit unnecessary joints.

DO not allow your aerial to swing or sway, as this may tend to give cracking noises in the set if one or more of the strands break.

Synchronising Dial Readings

An Advantage in Set Operation

IT is of the greatest assistance for rapid and successful searching for distant stations if the dials of all tuned circuits are exactly in step, or as nearly so as possible, over the whole range. If one "lags" a little behind the other, the amount of the difference being fairly constant over the whole tuning range, it is possible to obtain almost, if not quite, the same readings at all settings. The method is as follows.

Tune in a station whose dial reading is at about the middle of the scale (in the neighbourhood of 50 on a 0-100 dial or of 90 on one marked in degrees from 0-180). Now loosen the dial of the lagging condenser so that it no longer drives the spindle and rotate it until the readings correspond exactly. After this the dial is tightened up again and it will be found that, over the major part of the scale at any rate, the two sets of readings at very close together.

Still closer agreement between sets of condensers can be obtained by the use of logarithmic condensers. The process of setting the dials is the same as that just described, and once this has been carried out it will be found that the differences over the whole range are usually minute. So closely do the dials correspond that it is often possible to dispense with one of them and to "gang" two or even three condensers, driving them all with a common dial. In very sharply tuned circuits fine adjustments can be made, after the tuning has been done roughly, by means of midget condensers in parallel with each main condenser.

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