

# THE RADIO RECORD

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## Grand Opera Series from all Stations

*"Valkyrie" next week from 3YA and 4YA*

The policy of giving a series of operatic presentations from electrically-reproduced records of the world's greatest singers is announced by the Radio Broadcasting Company. Explanatory matter will be given with each instalment.

**T**HERE are many lovers of grand opera, and there would be many more if operatic performances were more numerous, but it is given to comparatively few people, even in the old lands, to be able to frequent the theatres in order to educate their taste to this form of entertainment. Frequently, those who attend the opera but rarely come away disappointed for the simple reason that they have gone expecting something that is not there. Consequently, they have failed to get the full value of what is there—through their not having noticed it. It is not to be expected that one can attend this exotic form of entertainment and at once comprehend its deepest subtleties. Opera differs from spoken drama in that the "song" is the chief thing and the other factors, as words and action, are sacrificed in greater or less degree.

Operas contain some of the finest music ever composed, and the broadcasting of it is a source both of pleasure and of education, provided it is not overdone. It is therefore intended that the best of the operas should be broadcast in short instalments every week from 2YA, 3YA and 4YA. Each instalment will be accompanied by an explanation of the plot, and listeners who follow these broadcasts will be able to form a due appreciation of the various grand operas.

The radio presentation will not, of course, have the staging which attends a production in a theatre, but as gramophone records will be used, electrically reproduced, listeners will be able to hear the world's most famous singers in the various roles. Accompanied, as the music will be, with a synopsis of the story, the radio presentation will leave little to be desired.

The first opera to be broadcast in this way will be Wagner's "The Valkyrie." The dates arranged will appear in the programmes of the various stations. The first of these broadcasts will take place next week at 3YA and 4YA, on Wednesday and Friday respectively, when the first of the four instalments of the opera will be presented.

### "THE VALKYRIE"

(The name of the opera is pronounced "Vahl-keur-reh")

#### Characters:

Sigmund (Zeeg'-moond) ..... Tenor  
Hundung (Hoond'-ing) ..... Bass  
Wotan (Voh'-tahn) ..... Baritone  
Sieglinde (Zeeg'-lin'-deh) ..... Soprano  
Brunnhilde (Bruen-hill'dsh) ..... Soprano  
Fricka (Frik'-ah) ..... Soprano  
Valkyries—Gerhilde, Ortlinde, Waltraute, Schwertleite, Helmwige, Siegrune, Grimgerde, Rossweise.



Brunnhilde bearing a wounded warrior to Walhalla.

#### ACT I.

**I**NTERIOR of Hundung's Hut in the forest—a large tree rises through the roof.

A terrible storm is raging. Sigmund, weaponless, wounded, spent, finds his way into the house of Hundung, where he is received and comforted by Sieglinde. When Hundung returns he perceives an extraordinary likeness between the two, and learns that the stranger was brought up by his father Wolsung in the woods, whither they had fled after their home had been ravaged and his infant sister carried off by the Neidungs. Knowing now that he entertains a mortal enemy, Hundung, out of hospitality, permits Sigmund to remain for the night, but declares that on the morrow he shall die. Sieglinde is dismissed, but she glances significantly at the ash-tree, the pillar of the hut, where the hilt of a sword is visible. She mixes with Hundung's night-draught a potion to make him sleep

—Continued on page 2.

(Continued from page 1.)

soundly. When all is quiet she returns to Siegmund, telling him of the sword, which has been stuck into the tree, at the time of her wedding, by a one-eyed warrior, whom Siegmund recognises to have been his own father, Wolsung. The storm clears, and when the door is opened a wonderful spring night is revealed. The two compare stories, and find that beside being lovers they are also brother and sister. Their love song is one of the most beautiful of melodies.

The mating of Siegmund with Sieglinde has awakened bitter criticism. But it is well to remember such matings are common in mythology—Oriental, Greek, Roman, as well as Teutonic, and it is absolutely essential that the race founded by Wotan shall be of immortal strain through earthly parents. It supplies one of the greatest love-scenes in music. Toward its close Siegmund, with a mighty effort, draws the sword Nothung from the tree, and the lovers escape into the woods. The sword-theme, which plays such an important part in this scene, is heard frequently in subsequent dramas. Derived from the Rheingold-Fanfare, it will make new themes in turn.

**ACT 2.**

Scene: A Wild and Rocky Pass.

**WOTAN**, the one-eyed father-god, chief of the immortals, the Jupiter of Rome, the Zeus of the Greeks, and the Indra of Brahmanism, confers with his daughter Brunnhilde, commanding her to protect Siegmund in the forthcoming combat. Brunnhilde is one of the nine daughters of Wotan and Erda, goddess of the earth, whose mission is to bring the souls of heroes to Walhalla for protection against Fafner. The Valkyrie warns him that his plan will offend his wife Fricka, the protector of the Nidungs and the goddess who specially protects the marriage institution. Arrayed from head to foot in armour, and mounted on her steed Grani, Brunnhilde then goes off shouting her weird battle cry, "Ho, yo, to, ho" (Brunnhilde's battle cry).

This wild and technically difficult number is founded on the battle cry which plays so significant a part in the "Ride of the Valkyries" from the third act. It is hard to sing with the required force and accuracy, from the leaping width of its intervals and the unusual harmonies upon which it is founded. It ascends to "high C." No sooner is Brunnhilde gone than Fricka approaches on her chariot drawn by two rams. She is furious at the injustice done to Hundung, in the illicit union of Siegmund and Sieglinde. Wotan, for once no god, but only a husband, explains his purpose, when Fricka shrewdly points out that his children are in fact himself, and that his protection virtually amounts to a breach of his contract with Fafner—which may lead to the downfall of the gods.

Forced to agree, he finally swears that Siegmund shall be punished. Fricka then triumphantly recalls Brunnhilde, who is dismayed when Wotan revokes his order. Wotan explains, at great length, of the circumstances told in "Das Rheingold," and she departs to warn Siegmund of his approaching doom. Wotan, at parting, enjoins obedience.

**BRUNNHILDE** discovers Siegmund and Sieglinde still fleeing from Hundung and his hounds. While Sieglinde sleeps, the Valkyrie warns Siegmund of his fate, and in some of the noblest music ever conceived, she promises him happiness in Walhalla. When Siegmund learns, however, that Sieglinde may not join him there, he spurns all hope of it, defying Wotan himself. Brunnhilde is deeply moved. She knows that Wotan loves these fearless children of his, and she herself is struck with Siegmund's indomitable courage. The scene gradually unfolds. Brunnhilde, more than half human, disobeys divine command, promising help to Siegmund in the forthcoming struggle. Hundung arrives, and the fight takes place, Brunnhilde hovering above the hero, who trusts fearlessly in the sword from the ash-tree. But Wotan has learned of Brunnhilde's disobedience, and through the riven skies he comes rag-

ing, upon his wild steed. He fends off the sword with his own spear, shattering it into fragments. Siegmund is felled by Hundung; then the outraged god, having accomplished the will of Fricka, contemptuously slays Hundung with a motion of his spear. Brunnhilde has already escaped with Sieglinde, but Wotan, bent on punishment, rides into the skies in full pursuit.

**ACT 3.**

Scene: The Summit of a Rocky Mountain.

**THE** meeting-place of the Valkyries, and their wild ride through the skies, is pictured by Wagner in an orchestral prelude of thrilling power, the so-called "Ride of the Valkyries." This is possibly the most imaginative of all orchestral compositions; certainly nothing approaching it for wild and savage energy has ever been written into any opera. Several themes work out simultaneously; a trilling theme, the neighing of the Valkyries' horses, a "snorting" theme over a musical interval of a fourth; a gallop theme, and the motive of the "Walkurenittes," or the ride itself, banded about, like a minor bugle-call, between trombones and trumpets, finally emphasised by the tuba. In the midst of it appears the Valkyries' shout, later sung by the eight Valkyries in the heroic garb, with great winged helmets, shields, and spears.

As the Valkyries one by one alight upon the great rock where they congregate, they behold Brunnhilde, their favourite sister, careering toward them, bearing not a dead hero but a woman at her saddle bow. Alighting, she runs from one to the other, asking protection, but none dares offer it. Brunnhilde gives to Sieglinde the pieces of the broken sword, bidding her flee to the woods, where Fafner dwells; there she may give birth to her child, who shall become the inheritor of the world.

**THE** Valkyries hurriedly conceal Brunnhilde in their midst as the outraged Wotan springs from his horse. Brunnhilde is compelled to come forth. The other Valkyries separate with cries of woe. Left alone, Brunnhilde pleads with Wotan. Was it such a dreadful thing to do, knowing his love for his mortal children, and the deceit practised on poor Siegmund with the sword? She pleads with tender eloquence, and Wotan is deeply moved. But he must remain inexorable. She must lose her power as a goddess, put off divinity, and lapse into a mere earthly woman; she must sleep to become the bride of anyone who awakens her. The shame of this arouses Brunnhilde, and she pleads at least that she be surrounded with fire so that only a hero may break through. This is granted her, and Wotan bids her farewell in music of unexampled power, and almost heart-breaking pathos, the great Wotan's "Abschied" (Wotan's Farewell).

**BRUNNHILDE** sinks rapt and transfixed upon Wotan's breast, and

he holds her in a long embrace. She throws her head back, gazing with solemn emotion into her father's eyes. He assists her to lie upon a low, mossy bank, closes her helmet and covers her over with her great steel shield. Slowly moving off, he touches a rock with his magic spear, and summons Loge, the God of Fire. A stream of answering flame issues from the rock, surrounding Wotan and leaping wildly and touching the skies to a red volcanic glow. This scene is the thrilling "Magic Fire Spell."

It begins with the end of "Wotan's Farewell," and develops one of the most amazing passages of tone-painting ever imagined by mortal musician. The leaping, whistling flames writhe up before one's very eyes, subsiding as peace enfolds the sleeping woman.

**THERE** is heard the motive of the Twilight of the Gods, a kind of premonition; Brunnhilde's godhead lost, others will inevitably follow, through the working out of the Curse placed by Alberich upon the stolen gold of the Rhine. The farewell is heartrending—but sorrow, like all sorrow, is deeper and finer than joy. The cruelty of this parting seems dramatically unnecessary; but as its consciousness steals over the listener, there is heard as Wotan disappears the stern three-note motive of the Decree of Fate—it is Fate working, Fate which is stronger than life or death, stronger than joy or suffering, Fate which was stronger yet than the will of the gods. This is one of Wagner's sublimest scenes. As with the "Ride of the Valkyries," a number of motives are worked out together. Almost the last is the heroic theme of Siegfried, Guardian of the Sword, or, as many call it, Siegfried, the Inheritor of the World, which trumpets magnificently through the dying mazes of the Fire-music. Had Wagner never written another scene, this would have sufficed to yield him place among the greatest three composers of the modern world.

**Waistcoat Pocket-Sets**

**WIRELESS** in a waistcoat pocket is the latest news from Berlin. This claim has been made by a professor of Jena University, as the result of experiments he has carried out during the last twelve months.

According to the professor, he uses ultra-short waves, three metres and less, and he believes that also his discoveries will be of invaluable service to medicine.

He has succeeded, he says, with a fraction of a watt, using ordinary valves, without aerials, in covering distances of nearly sixteen miles, and with higher energy he has covered two hundred and fifty miles. The professor also says he has succeeded in telephoning by use of these short waves.

The transmitter is stated to be no larger than a cigar-box, and he has constructed a receiver which solves with amazing simplicity the problem of detecting ultra-short waves.

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**Why? Why?**

# The Elimination of Static

## The Story of Man's Accomplishments in His Struggle against Nature

**O**f all the problems that have confronted radio engineers since wireless was, the elimination of static, has been the most baffling. To-day its successful elimination remains an unsolved problem though static-reducing devices by the score have come on the market. Certainly static has been reduced, but at the expense of the signal-strength. Those which have attained moderate success have been very complicated and add greatly to the cost and complication of the receiver. The fundamental problem lies in the very nature of static.

A few months back there appeared in the "Radio Record" an article explaining the phenomenon as it is known at the present time. Static, to briefly reiterate, is a charge of electricity at liberty in the air. It is entirely different to the electricity known to us by use. Static is a charge, while electricity in use is a flow. Alternating current of the latter type is used to convey the signals from their point of origin to our receiving sets. Alternating current signifies a rapidly fluctuating voltage which rises and falls at a definite rate. This definite rate (frequency) particular to each station permits of selectivity.

Static electricity on the other hand is not a flow, and for this reason cannot have a frequency. Were it to be of a definite frequency it could be tuned out of any set just as an unwanted station can be.

### Static Elimination.

**F**ROM its very nature then, the elimination of static is a problem of

some dimensions. As it enters the set with the signals, it is difficult if not impossible to separate it from the signals, for anything that tends to reduce static will reduce the strength of the signals. The most logical method of reducing this annoyance is to increase the power used in broadcasting. If the signal strength can be made consider-

**C**ORRESPONDENTS have asked for means of reducing static, and, after an exhaustive search, the following article is presented as a brief resume of the accomplishments of man in his struggle against unsympathetic Nature. While some of the methods may sound a little technical to some listeners, yet an endeavour has been made to use as few technicalities as possible and to give, where possible, the suggestions of those who have pioneered the field. There are great possibilities and opportunities for those interested to do some interesting research work.

ably greater, then the amplification may be reduced while still giving satisfactory signals. This explains why those situated near a powerful station do not suffer with the annoyance like a listener situated more remotely from the transmitting station. There is, however, an obvious limit to this method of control.

### Underground Antennae.

**O**F the various devices to combat static the most successful is perhaps the underground antennae. In this direction great research has been carried out by Dr. J. H. Rodgers, Hyattsville, United States, and to him one has to refer for the most authentic information on the subject.

The principal claim covering this type of antenna defines the system "comprising an antenna extending horizontally, substantially parallel to the surface of the earth, and insulated therefrom, a metallic covering the antenna but insulated therefrom, and in intimate contact with the earth throughout its length, signal instruments associated with the antenna and a balancing connection at the other end." Such is the definition given by the inventor.

Actually the antenna consists of a length of insulated wire enclosed in a metal sheath, such as a lead cable buried sufficiently to that the sheath makes good contact with the ground, and parallel to its surface, the lead-in being brought to one side of the coupling inductance, or, as is usual, the aerial coil. The other end of the coil is grounded in the usual manner.

Of this there are many variations. One can place the shielded cable on top of the ground, but in contact therewith, the cable on supports so that it is supported a few inches above the earth, and several arrangements, including the grounding of the farther end of the cable. In another type the ground connection is replaced by a length of cable, as is used for the antenna.

There are many other variations of the underground antenna, but most of them have proved less satisfactory than the original Rogers antenna.

### Experiments.

**E**XPERIMENTS with a real Rogers antenna, using a sensitive heterodyne, showed that a range of 500 miles at night in the winter might be expected with loudspeaker volume, from a station having a power of 1000 watts. The static level was very much lower

the aerial could not be heard with the underground antenna, and this was made with the underground antenna arranged in such a manner as to receive the signals of the station to the best advantage. On the local stations, however, the performance of the set was very satisfactory, and while the static level on the aerial was so far down as to be barely noticeable, a difference could be noticed when the underground antenna was employed.

Experimenting with other than the Rogers system proved them (the Rogers) vastly superior to any other.

### Other Underground Antennae.

**A** CORRESPONDENT to "Radio News" suggested another underground antenna, or rather two. The first was to consist of four four-inch cylinders; around each was to be wound 60 feet of insulated rubber-covered wire, these to be soldered to the lead-in wire. This lead-in wire was to be protected from atmospherics by a lead tube running from one foot under the ground to the aerial terminal of the set. The apparatus was to be buried five feet under the ground in porous soil.

Secondly, a rubber-covered wire was to be lowered into a well 75 feet deep, the lower end to be sealed to make it impervious to water. The receiver was to be shielded to prevent the picking up of static.

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Dr. Rodgers gave his opinion on the proposition. Commenting on the four coils he said that in his opinion one of larger size would be better, adding, "By the use of underground and underwater antennae, static is reduced, and this is the most effective means yet found. I believe it is only a question of time before someone will devise some form of earth antenna that will further reduce or eliminate atmospheric disturbances. Best results with any form of these collectors are only attained when buried deep, at least to the depth of 'water earth.'

"As it is a well-known fact that intensity of signals remains almost constant even when antennas are lowered far below the surface of the earth, and, conversely, 'atmospheric static' reduces rapidly; if a form of antenna could be devised which would take advantage of this, static would be greatly reduced. Shielding the receiver and certain parts of the leads might help to solve the problem."

Dr. Rodgers has been quoted fully because his ideas are somewhat contrary to the accepted theory that radio signals decrease rapidly as they descend the earth. The problem is interesting and deserves some thoughtful consideration and experiment.

The ground antenna, although receiving less power than that collected by an aerial, has a number of compensating advantages. They are strongly di-

rectional, receiving most power when they lie in the direction of the station or stations to be received. Also, they do not develop the usual trouble during local thunderstorms.

#### Dimensions of a Rodgers Antenna.

THE length of wire to be used as an underground antenna depends on the wave-length of the station to be received. Thus, for the longer wave-lengths, longer wires should be used than for the shorter wave-lengths. The wire should be heavily insulated, and where possible encased in a lead conduit. In earth of the average range of moisture, 75 feet long may be expected to give satisfactory reception from 150 metres to 500 metres. Wire such as used for the ordinary aerial, stranded or solid, is suitable. Of necessity it should be used only where a good amplification system is in use.

#### Other Methods.

A HIGH resistance of 100,000 ohms or more, connected between the antenna and the ground terminals of the receiver will bypass a greater proportion of static than signal because the signal frequency is the frequency at which the receiver circuit is resonant. This scheme gives the effect of reducing the static, although reducing the signals at the same time.

Considerable improvement may sometimes be effected by loosening the coup-

ling between the aerial coil and the rest of the circuit and tuning the aerial circuit. The loosening of the coupling reduces the amount of energy both signal and static entering the secondary circuit; but the tuning of the aerial circuit improves the strength of the signal in that circuit.

A crystal detector may be included in the aerial circuit in parallel with the aerial coil. In this case the peak crashes are considerably reduced, but signal strength will also be reduced.

The use of the loop and indoor aerial will improve the ratio of signal strength to static, but as the set itself has to be more sensitive static is often brought up to where it would have been otherwise. Still, if one has a good set the indoor aerial will effect a very considerable improvement.

A long low outdoor aerial, especially if the set has a coarse aerial tuning arrangement, is preferable to the usual type.

## Auckland Notes

(By "Listener.")

IN rendering special service to the community 1YA was again to the fore this week. Presbyterians throughout the Dominion were interested in the deliberations of their General Assembly, which this year met in Auckland, and it was a happy thought which led to the abandonment of the usual silent night on Monday, and the relaying of the special service in connection with home and foreign missions which the Assembly had arranged in the Town Hall. By this means the whole of New Zealand was able to hear several fine addresses, and a splendid rendering of the anthem, "Send Out Thy Light," by the combined choirs of several local churches.

"Le Cloches de Corneville" selections, as presented by Madame Ainsley's party on Tuesday night, must have brought back pleasant memories of olden day light operas and past favourites to the many who enjoyed the tuneful melodies from the ever popular opening to the finale.

IT is a recognised impossibility to satisfy the whole of an adult radio audience with any programme, or even with any series of programmes, and one is bound to hear a grumble of discontent from some person whose own individual tastes are not, in his opinion, sufficiently catered for. Such is not the case, however, among juvenile listeners, for in connection with the usual children's hours, one hears nothing but the most favourable comment. "Cinderella" and her keen assistants seem to have the peculiar charm of maintaining undiminished interest over the air, and arousing in their young listeners that same spirit of enthusiasm which they themselves radiate. The children's hours at 1YA are undoubtedly bright spots.

THE St. Andrew's quartet evenings are always enjoyable, and last Thursday's was quite up to the high standard of the talent body of vocalists who are the backbone of the musical services in our oldest Presbyterian Church. On the same evening listeners were also glad to welcome back to the microphone Mr. Drayton Venables, who, in the days

of the old 1YA, and during the first year of the present station, was often heard in popular baritone numbers. Mr. Venables, who is now teaching in Whangarei, was the first programme organiser and director of our present station.

THE Auckland Comedy Players scored the greatest success of their radio careers on Wednesday, when they presented Wilde's "The Importance of Being Earnest," a delightful comedy eminently suited, by the nature of its dialogue, for broadcast presentation. The occasion was a triumph for Mr. Moutague and his associates. The comedy went with a sparkle for fully two and a quarter hours, and left listeners thoroughly satisfied with a refreshing evening's entertainment. All of the characters were well sustained, and despite the absence of that applause which means so much to the actor, seemed keyed up to the fullest interpretation of every line of a piece in which witty sallies came hot-foot in succession. Further comedies such as this will be eagerly awaited.

DISTANT reception has been very poor here of late, but Tuesday last was an exception. Seldom in the depths of winter has 2YA come in with better volume and clarity than it did quite early on that night.

THERE has been much newspaper copy made of a nebulous suggestion that another high-power broadcasting station may be established in Auckland. One is inclined to parody the late Mr. Asquith's famous "Wait and see," by offering the suggestion, "Wait and hear," with an indication that the waiting may be long, and the hearing not all that the preliminary puffing has been.

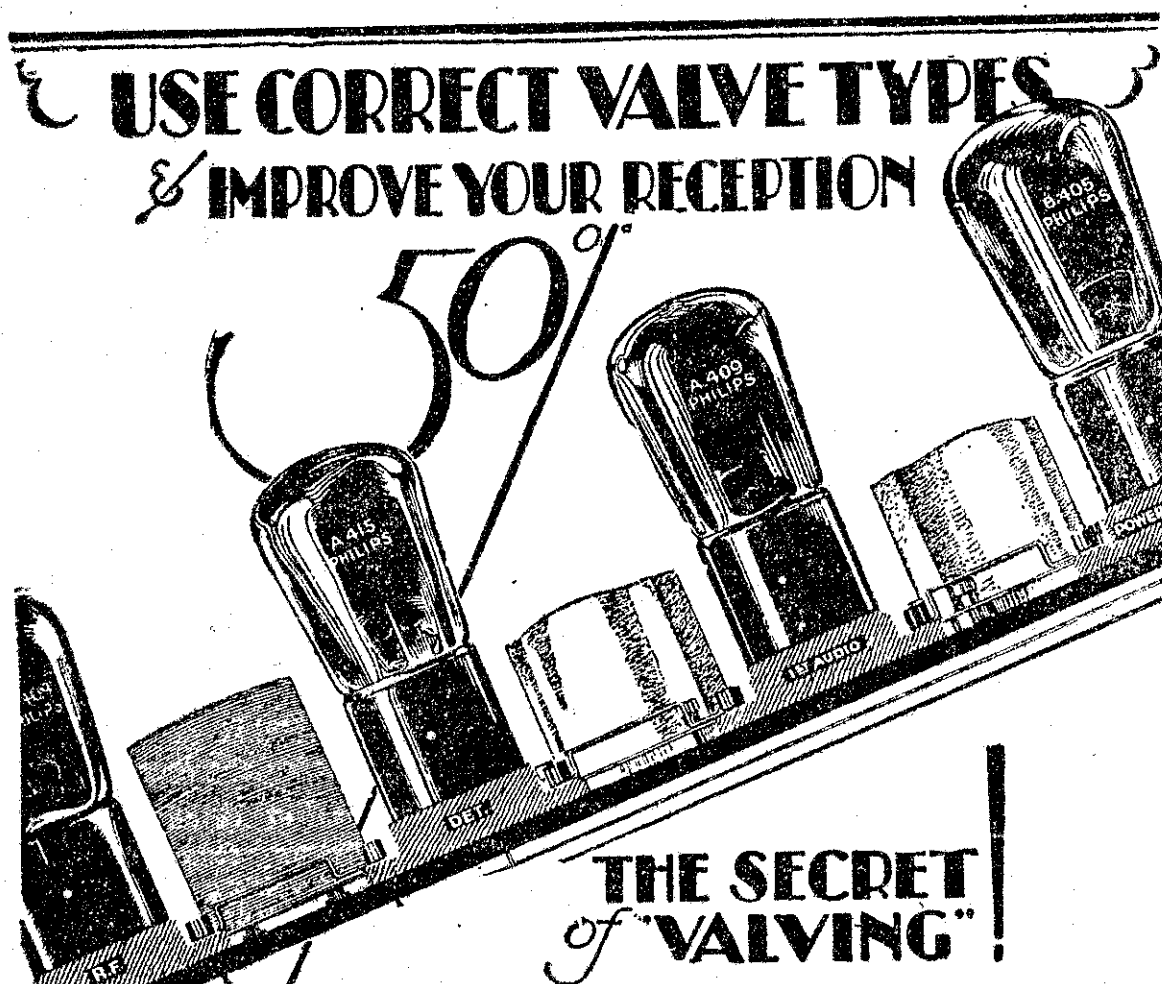
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# Radio Round the World

"RADIO will make fools of us," says "Chant-parleur" (Paris). "We learn that measurements of longitude made by wireless signals, between Paris and London have shown a variance of 50 feet. In other words, Paris is 50 feet closer to London on some days than on others. At the same time, it is said that Greenland is moving towards the west at a rate of 30 yards a year."

THE North Taranaki Radio Society's "Trouble Shooting Gang" raided the upper Carrington Road one evening recently, and located the cause of the bad interference being experienced by radio listeners in that district. A remedy was promptly effected. Reported interference is promptly investigated by the energetic "Gang."

THE conductor of a large American Orchestra is planning to use a television apparatus to control two orchestras in the rendering of Maher's Symphony No. 2 which requires a small orchestra in addition to the main one. The smaller one has to be situated some distance away in a small closed room so that the strains will come to the listener but faintly. On previous occasions the second orchestra has been guided through a small aperture in the wall. The new arrangement will allow of perfect harmony as well as a more pleasing rendering owing to the conductor's personality being in evidence in the room.

AT a gathering of wireless operators of the French Navy at Toulouse, Joan of Arc has been proclaimed the Patron Saint of wireless operators. Wireless men decided they must have a patron saint and so their choice fell upon Joan. The proclamation of the Saint of Wireless was marked by an elaborate historical procession.

AUSTRIA now claims to be the most progressive country in the world so far as percentage of registered listeners is concerned; 300,000 out of the 6½ millions population are registered radio listeners. Radio manufacturing is also developing rapidly, and exports in radio goods are four times greater than imports.

ALL kinds of broadcast microphones can now be obtained for experimental purposes from the Universal Microphone Co., Chamber of Commerce Building, Inglewood, California. These include the 2-button broadcast type at 15 dollars; this can be used with or without amplification, and operates on 5 to 15 mills per button. Full particulars may be obtained by writing to the firm mentioned at the above address. Experimenters should note that a special license must be obtained before any type of transmitting experiments are conducted.

WINNIPEG has been linked up with the Eastern Broadcasting chain of the Canadian National Railway Radio Stations. From Thursday, October 4, CNRW will be included in the weekly chain broadcast, which includes CNRT, Toronto; CNRO, Ottawa; CNRM, Montreal; and CNRQ, Quebec. Studio programmes will originate from Winnipeg, Toronto, Montreal, and Ottawa, and will be broadcast simultaneously from five stations, being carried by wire between the cities.

THE German authorities have decided to begin the experimental broadcasting of pictures on the Fulton system. Receiving sets are to be supplied by the Reichs-Rundfunk-Gesellschaft and the Fultograph-Gesellschaft to the German broadcasting companies, as well as to other competent people, and results will be examined with a view to deciding what place, if any, picture broadcasting should occupy in the broadcasting programmes.

RECENTLY Madrid Station, EAJ7, has inaugurated a "radio-agricultural" service, to include in the afternoon or evening programme every Saturday the state of the most important Spanish centres of agriculture, together with the market prices of produce, state of the land, tendency of markets, etc. This information is furnished by agricultural specialists. To supplement this new service conferences are being organised to study the most interesting problems of modern agriculture.

THE Graf Zeppelin, which crossed the Atlantic ocean at the time Kingsford Smith and his crew were crossing the Tasman, provided a somewhat similar treat for the listener in Germany and indeed for the Continent as the trans-Tasman flight provided for us of the antipodes. The start of the great venture was put on the air by all German stations. The airship carried two transmitters, one for short and the other for long wave transmission; similar to the plan of the New Zealand stations, hourly reports were broadcast. The landing of the plane in America was rebroadcast with brilliant success. The New York announcer described in enthusiastic terms the appearance and evolutions of the airship above the city and the harbour, and his words came through with wonderful clearness. It is stated that this was the most complete, clear, and successful intercontinental relay which has so far taken place.

ITALY has recently undergone a change in the broadcasting administration with the result that broadcasting in that country is more or less stabilised. The broadcasting rights have been ceded to a private company for 25 years. A license fee of approximately 16s. is charged but this is supplemented by a tax on the municipalities and on the hotels, kinemas, cafes and restaurants. In addition a special tax is payable on valves. The state retains 4 per cent. of the license money collected for administrative purposes. Several high-powered stations are in operation and others are planned. Italian broadcasting has certainly been set on its feet and Italy promises to develop very rapidly into one of Europe's most important

broadcasting countries. The total number of licenses is not yet available but it is known that there are many who, not realising their obligations, act as petty thieves and "pirates."

THE Manawatu district was treated to a very efficient service on election night. Going on the air as soon as the first results were available, station 2ZF (Palmerston North) kept local listeners posted with the results as they became available until the final result came to hand at 1.4 a.m., when the station closed down. Three boys had been employed by the society to keep the announcer posted with the results as they came to hand at the Post Office. For several hours they were kept very busy, rapidly plying between the station and the C.P.O., a distance of a few hundred yards. The announcing was capably performed by the president, Mr. Waters, and the secretary, Mr. Leet. During the evening the returned members for Palmerston and Manawatu, and the Opposition candidate, went on the air to address the electors.

A MAN in distress rang up 2FC, Sydney, the other day. "What am I to do?" he asked. "There is a large swarm of bees in the garden; I don't want them, and I cannot get rid of them. Can you help me?" The station had no bee expert on the premises, so sent out a broadcast appeal. Almost instantly the telephone bell rang. "Tell that chap at Kogarah," said a voice, "to get a kerosene tin and beat it as hard as he can. He'll soon have the bees inside." The suggestion—old as it was—proved effective, for the station had a note of thanks next day from the unwilling owner of the bees.

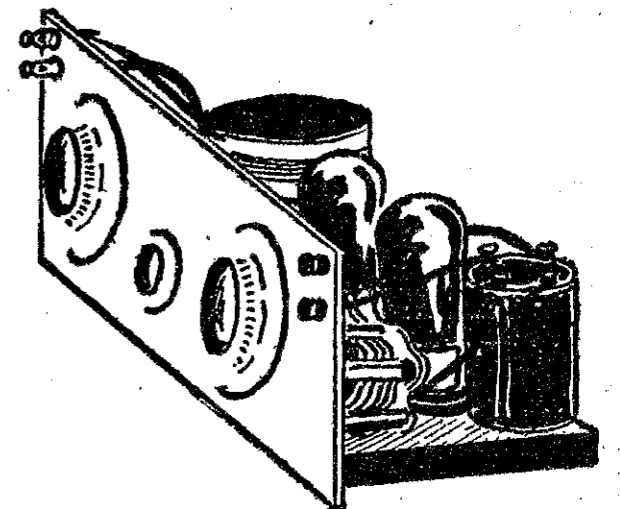
ONE of the thrills in a drama called "Ringside," now running in New York, is a broadcast running commentary (says the "Wireless World"). The second scene of the third act is laid at the boxing ring in Madison Square Garden, where a championship battle is in progress. Ashley Cooper, the actor, who takes the part of the broadcast announcer, gives an impersonation of Graham McNamee, one of the most popular announcers in America. A real microphone is used, and the audience hears the "radio" account of the bout on loudspeakers while witnessing it on the stage.

THE Melbourne Cup aroused great interest among Australian listeners. The descriptions from Melbourne were very vivid, and the announcer kept up a constant flow of interesting speech. Not once did he falter. Newspapers were at one time sadly smitten by radio, yet on this occasion the Sydney "Sun" had the results in their papers, which were being sold within five minutes of the finish of the race. A writer in Melbourne bemoaned the fact that radio would keep thousands away from the Flemington racecourse, yet there were many who blessed the invention that saved them no small sum.

RECENTLY the New South Wales Broadcasting Company received a letter written in a child's handwriting, asking that Station 2BL, during the usual Sunday morning musical pro-

gramme should play "Melancholy Baby," followed by an item described as "Sunshine." The small correspondent further requested that her sister—the baby of the family—"Emily Ann," aged 18 months, might have a few words addressed to her by the announcer at lunch time "as she was having trouble with her first teeth!" The announcer on that occasion was not a deputy uncle for nothing, and he rose nobly to the occasion (says 2BL).

FOR the first time in history, a play, acted at Schenectady, was simultaneously broadcast and televised. The play, a one-act comedy, was acted by two artists in a small studio, while listeners far-removed could see the actions on a screen and hear the voices of the actors.



## 2-Valve set for 39/6

Or complete with Valves, Batteries and Amplion Dragonfly Loudspeaker.

### £5-15-0

The circuit employs the now well-known and justly-popular N.Z.R. Circuit and will give good loudspeaker reception from local station, and headphone reception of Australian Stations. The same circuit built as a

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Terms if desired. Satisfaction guaranteed. MAIL COUPON NOW.

## AMATEUR RADIO SOCIETY OF WELLINGTON.

A MEETING of the Society will be held on Tuesday, December 11, 1928, at 7.45 p.m., in the Congregational Church Hall, Cambridge Terrace, Wellington.

Interesting lecture by Mr. C. C. K. Fear on the subject of "Crystal Sets and How to Get the Best out of Them, Aerial and Earth Installation, etc."

Every Listener made Welcome.  
W. H. TAYLOR,  
Hon. Secretary.

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# The New Zealand Radio Record

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Published Weekly. Subscription Post Free in advance, 10s. per annum;  
booked 12s. 6d.

WELLINGTON, FRIDAY, DECEMBER 7, 1928.

## EDITORIAL NOTES.

CONGRATULATIONS may be extended to the Hastings Radio Society on having carried to completion its plans for the installation of radio in the local hospital. Medical opinion has recorded definitely favourable views regarding the therapeutic value of radio. Apart from that the mental relief and entertainment afforded patients is marked and lightens many weary hours for the victims of ill-health. It is sincerely to be hoped that as time goes on all hospitals will be similarly equipped. It is gratifying also to note that sufficient money is now in hand to complete the installation of radio throughout the Wellington Hospital. The public has provided the final £600 required, and soon all wards in the big institution will be fitted with radio.

SOME indications have been given in the radio Press from time to time that the attitude of the newspaper authorities in Britain was antagonistic to the broadcasting of news by radio. It has long been a subject of comment that the news service of the British stations is below par, and what might be expected. This has been because the daily Press have been averse to making available to the broadcasting authorities items of real merit or news value. Specifically, too, objection was taken by the newspaper people to the broadcasting by 5SW of the new session of 2LO, their thought being that distant listeners to the short-wave broadcast might pick up items direct and so affect the value of the cabled news. To our mind this policy is wholly short-sighted. It is in marked contrast to the American attitude. There the daily Press show a desire to feed the radio service with exclusive items of news for the sake of the publicity value attaching to the announcement. An outstanding instance of this occurred at the time of the German flight of the Atlantic. The "New York Times" secured a "scoop" on the news of their definite landing in Newfoundland. The news reached their office at 8 p.m. and a junior reporter suggested that it be broadcast. The idea was accepted—the "cub" was given fifty dollars for his idea—it was put over the air, credit being given to the newspaper for its information, and its sales next day jumped nearly 50,000 copies. American newspapers give radio credit for contributing definitely to an increase in circulation of 33 1-3 per cent. over the last seven years.

A LATE item indicates, however, that the tide may be beginning to turn in Britain. Mr. R. D. Blumenfeld, the distinguished editor of the "Daily Express," in a recent address to the Institute of Journalists, said he did not believe there was the slightest ground for fears that the development of the broadcasting wireless system, with its news-carrying possibilities, would lead to the wireless word superseding the printed word; to a great revolution in journalism involving the displacement of thousands of people engaged in the newspaper industry. "On the contrary," he added, "I believe that the broadcasting of news will simply serve to increase the demand

for newspapers. You may broadcast an event as much as you can, but there will always remain that indefinable human desire to see it in print, to see it amplified, explained, illustrated. People like to hear what is going on in the world, but they want to believe it, too, and no amount of ethereal asseveration will prevent them the next day from looking into a newspaper to see it set out in legible type." He thought they might confidently look upon broadcasting as a most effective means of adding circulation to the daily Press.

WE think that view is thoroughly sound. Keen as we are to further radio we cannot see that it will displace the newspaper. The time factor is wholly against it. People must get their news at their own convenience. To achieve that it must in visual, conveyable form. The ear never will displace the eye.

## Mid-day Session

### 12-2 Broadcasts Arranged

Commencing from Monday, December 3, midday sessions will be a feature at the New Zealand stations prior to Christmas. Last year there was a similar extension of hours to suit the convenience of the radio traders who thus were able to demonstrate their wares to prospective buyers during the lunch hours. The midday session was greatly appreciated last year, and the Company has willingly arranged the same session this year.

Following is the schedule to be followed by the four stations:

1YA, Tuesday, Wednesday, Friday.

2YA, Tuesday, Thursday, Saturday.

3YA, Monday, Wednesday, Friday.

4YA, Tuesday, Wednesday, Friday.

By observing this schedule, dealers everywhere will be able to tune in any day to a station.

## Special "Crystal and Portable" Issue of "Radio Record" Next Week

WITH the approach of the Christmas season a great number of radio presents will be made in the larger centres, particularly in families where there are youthful enthusiasts for radio. In response to many requests to cater for this demand and issue a publication embodying a complete summary of information relating to crystal sets, we will next week devote special pages to completely traversing the installation of crystal sets and crystal sets with amplification in order to give satisfactory service on a loudspeaker. The number will be specially interesting to all crystal enthusiasts, as the full range of information and hints will be valuable for reference. Non-subscribers to the "Radio Record" in the cities should make a special point of securing a copy for filing and future use.

IN addition, to meet the needs of holidaymakers who, while indulging in the enjoyment of the seaside or camping sites, are averse to being deprived of wireless and wish a handy portable installation, our technical expert "Pentode" will describe a special set which can be readily assembled in a convenient satchel and carried with ease. Full constructional details will be given, with particulars of the necessary parts. "Pentode" will, of course, describe a set he has actually constructed and used, so that reliance may be placed on the instructions given.

From all points of view next week's number of the "Radio Record" will be of special interest.

## Amateur Transmitters

SOMEWHAT inclement weather prevented the attendance at the last monthly meeting of the Second District N.Z.A.R.T. (Amateur Radio Transmitters' Association) being up to normal. Mr. Johnson (2GA) presided, and following the disposal of the ordinary business a suggestion was brought forward that the association should inaugurate a systematic series of tests with portable transmitters and receivers during the summer months with the object of gaining information as to the most suitable apparatus and

location for reliable communication. A considerable amount of discussion ensued and, while no immediate finality was reached, it is hoped to lay down a definite schedule of transmissions at the next meeting.

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THE MASTER VALVE

The only Valve with  
the wonderful P.M.  
Filament. Gives longer  
life — more power —  
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**B.B.C. Handbook**

**Fitting Production of a Year of Progress**

THE second annual edition of the B.B.C.'s Handbook, that for 1929, has come to hand and is truly representative of the progress achieved by the B.B.C. Printed on good paper, well bound, and profusely illustrated, this edition forms no mean asset to the bookshelf of the wireless enthusiast.

The book is divided into four main sections—special articles (Finance, Empire Broadcasting, the Regional Station, etc.), a general section which is subdivided, a technical and a reference section.

THE special articles, forming as they do a unique editorial introduction, forecast a great future for wireless. The aim of the British Broadcasting Corporation has been to educate, not merely in the narrow sense of teaching but in the wider and more general sense.

Realising that wireless is in millions of homes, the Corporation has realised its importance and provided a unique system. This has been developed in the Handbook, and editorial pages express the determination to keep this view before them and steadily advance upon it.

In the general section, almost every topic associated with wireless, apart from the technical aspect is treated, programmes, broadcasting in the English counties sport, music, drama and variety, teaching dancing by wireless, religion, education, home and garden, and a hundred other topics could be selected merely from the index. A chapter is devoted to bands, orchestras and instruments. Following, a discussion of the bands put on the air by the B.B.C. is a more detailed description of each instrument. Two plates are included to add to the interest. This chapter alone would grace a book with far greater pretensions.

One could prolong an article to great length, merely by commenting on some of the more important sections, and even then justice could not be done to the book.

This section is concluded by a brief account of the two English magazines which are its official organs, and to which we frequently refer—"Radio Times" and "World Radio."

THE technical section is very comprehensive, embodying as it does most of the phases of broadcasting, transmission and reception. Such topics as man-made static, how to

**The Radio Competition Christmas and New Year**

**Results to be Published Next Week**

THE work of calculating the averages from the marks awarded the items has been particularly long. No less than 3,015 valid coupons have been received, and by next week the full details of the results will be available through the special issue of the "Radio Record."

**The Wanganui Concert All Ready for Long Relay**

THERE is perhaps little need to give readers a final reminder of the concert which is to be relayed from Wanganui on Friday, December 7. This will be the longest land line, 125 miles, yet used by the Broadcasting Company, and it will be a particularly interesting event from a broadcasting point of view.

The relay will mean the conversion of the Wanganui Opera House into a studio. Much broadcasting equipment will be sent up from Wellington. This equipment will include two microphones of the condenser type, a "mixer," and an elaborate amplifier of the studio type.

Mr. J. Ball, Editor-Announcer, will visit Wanganui for the occasion, and the Company's Chief Engineer, Mr. J. M. Bingham, will have charge of the broadcasting equipment. He will have the assistance of a well-known Wanganui amateur, Mr. George Carrad.

It is anticipated that the concert programme will be one of the finest yet broadcast. 3YA will rebroadcast 2YA.

listen to foreign stations, technical aspects of world broadcasting and artificial echo are considered. In keeping with the rest of the book this section is well illustrated with technical diagrams, charts, tables and sketches. Some of the latter are very humorous and titles such as—"Suspected," "Frigidity on the 9.15," "Erecting an Aerial," and "How to avoid Electric Shocks," are sufficiently suggestive, without attempting a description.

The reference section includes, the diagrams of receivers, charts of studio hours, technical tables and formulae, a glossary, and symbols used in wireless.

Altogether the Handbook is a splendid volume, reflecting great credit on its originators, the B.B.C.

**Details of Publication**

WE have to advise readers and the trade that the following arrangements will apply for publication of the "Radio Record" over the Christmas and New Year period.

The issue of Friday, December 28, will be printed and published on the preceding Saturday, December 22, in order to avoid clashing with Christmas and Boxing Days, and allow of distribution throughout the Dominion prior to the period covered by the programmes, viz., December 30 to January 6. Changes of advertisements and other notices desired for insertion in this issue should reach us not later than Thursday, December 20.

The issue bearing date January 4, will be printed and published on the preceding Saturday, December 29. Changes of advertisements and other matter should reach us not later than Thursday, December 27, and earlier, if possible.

SUBSCRIBERS who may change their addresses for the holiday period are advised that we will be glad to meet their convenience by altering their address for the period in question, if notification is given us.

The same facility will be given to dealers. If any of their regular subscribers are going away for a few weeks' holiday, and desire the paper posted on to them, we will undertake the service from this office at the ordinary wholesale rate.

**After Church**

**Broadcast by 3YA**

An after-church concert, given by the boys band of Auckland Jubilee Institute for Blind, was broadcast by 3YA on Sunday evening. While the concert was on listeners-in rang up the theatre and promised donations to the funds. These gifts were announced over the air, as also was the offer by another anonymous donor that he would give ten pounds if nine other people would give similarly by Tuesday evening. The visit of the boys' band to Christchurch was very successful, and broadcasting helped it materially.

**Commander Byrd**

**Broadcast by 4YA**

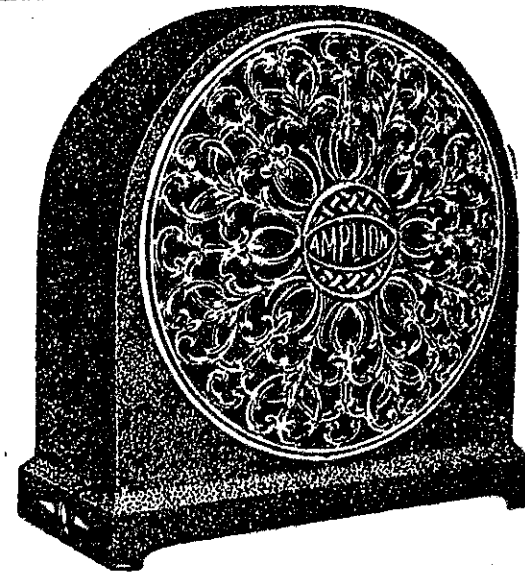
4YA was very successful with the Byrd Antarctic Expedition. The famous American is a very difficult man to get to the microphone, but 4YA got him at the civic reception which Dunedin tendered to him on Thursday evening last. The speeches of Commander Byrd and Chief Officer Lofgren came through exceptionally well, owing to the fact that both men addressed the microphone, whereas other speakers unaccustomed to broadcasting kept turning round. 4YA also broadcast a description of the departure of the two ships of the expedition, the City of New York and the Eleanor Bolling, which left Sunday morning. 3YA rebroadcast the civic reception, but the daylight transmission on Sunday was not suitable for rebroadcasting.

**Interesting Lectures**

TWO interesting lectures are announced for Thursday and Friday of this week from 2YA.

At 7.30 on December 6 Dr. P. Marshall, the well-known geologist and formerly head of Wanganui College, will lecture on "The Pageant of Education."

At 7.40 on the evening of December 7 Mr. N. R. Jacobsen, M.Sc., will give a very timely talk on "What a Parent Wants for His Boy or Girl at School and How to Get It."



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**SPECIAL XMAS Half-price OFFER AMPLION LOUD SPEAKERS from 12/6.**

Here's a wonderful opportunity to purchase a genuine Amplion Speaker for Half Price.

- Dragonfly AR 102 ..... 12/6
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- Radiolux Metal RS 1 ... £3/10/-
- Radiolux Oak RS 1..... £3/12/6

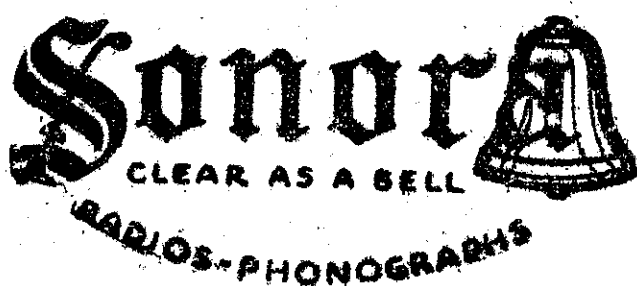
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## Notes and Comments

By "Switch"

A WELLINGTONIAN who is on a visit to Sydney writes: "Stations 2FC and 2BL have not the children's sessions of 2YA, Wellington. They have practically no system of organisation for the children, but are bright and impart a great deal of little banter into the kiddies' sessions. 2GB's are the best children's sessions in Sydney." The last-mentioned are conducted by George Saunders, who for years was familiar to New Zealand listeners as announcer and "Uncle George" at 2BL, Sydney. "Switch" has always maintained that the children's sessions at 2YA, Wellington, are not equalled by any station on this side or the other side of the Tasman.

A NEUTRODYNE enthusiast was telling the writer the other day that he has always had a set with that type of circuit since he first obtained the circuit diagram and constructional data about five years ago, when Professor Louis A. Hazeltine, of New York City, first published his circuit. The said neutrodyne enthusiast said that, despite anything that has been said to the contrary, he has found that an aerial of 90 feet, including the lead-in, gives the best results with a neutrodyne. He has also employed a 3-foot loop aerial with great success, although he has always used an earth with the loop and a .0005 variable condenser across the leads of the loop.

"SWITCH" has often to explain to beginners that residents within a mile or a mile and a half of the centre of Wellington, unless perched upon some hill-top, are unable to obtain anything like the strength of reception from long-distance stations accomplished by listeners just outside the city and up-country. The skipper of a coastal steamer, which runs in and out of Wellington regularly, informed "Switch" that as soon as his vessel gets outside the Wellington heads reception of the Australian broadcast stations increases almost three times in volume. He finds reception in the Taranaki Bight simply wonderful. The basin-like effect of the hills surrounding Wellington screens local aeri-als more or less.

2BL, Sydney, recently put on a novel innovation in announcing. A rather humorous gentleman introduced each performer and mentioned the various items, following with an amusing description of each artist. For instance, he said, "Mr. — will now sing —. He is a sad-eyed gentleman who looks as though he would cry if he won £20,000." Then later he said, "Miss — will now go and change

her dress for her next song. You know how much the ladies wear nowadays, so you will realise how long she will take to change her dress." It is questionable if this style of announcing would conform to the dignity of some of our New Zealand officials!

SEVERAL Wellington listeners have informed "Switch" that they heard a foreign broadcast station transmitting on top of the Japanese station, JOHK, one evening last week. "Switch" also heard the strange station, and, although the language used was foreign, it was apparently European. Possibly it was one of the Antarctic whaling vessels working on 'phone. No music was heard by the writer, but a heavy guttural voice kept up an unbroken sequence of sentences for about ten minutes.

A YOUNG married Wellingtonian informs "Switch" that he has discovered a sovereign method of appeasing the anguish of his five-months-old offspring. When the youngster howls, as only the human infant knows how, if 2YA is on the air, he places the headphones on the baby's head. Almost immediately, the youngster ceases wailing, and listens attentively to the music, speech, or whatever happens to be saturating the ether. This is not a new idea; "Switch" saw it work three years ago, on a particularly blattant infant, which, on that occasion, fell asleep listening to a report of the wool sales!

THE recent large-sized freckle on the face of Old Sol played the very dickens with reception of the Australian stations; at least, the appearance of the sunspot coincided with a period of exceedingly poor signals from Australia. Anyhow, scientists have found that sunspots are frequently associated with terrestrial magnetic storms, and we all know that these affairs not only disorganise submarine cable services, but also affect radio more or less. Lately, however, things have greatly improved, and the Aussies are trooping in again with very fair volume.

NO tears were shed by Wellington listeners when H.M.S. Dunedin left port last week. Several times during New Zealand broadcasting hours the cruiser's morse transmitter shattered reception from "outside" stations. It had the habit of emitting crashing "harmonics" or re-radiations on certain points of the dials, while missing 2YA's wave-lengths, but on occasions it

thundered also on top of 2YA. One Wellington sufferer remarked to "Switch": "Allah be praised for not making Wellington a naval base," and so say several of us.

ONE cannot but help admiring the persistence of some of the Japanese entertainers at the Japanese broadcast stations. The other evening a seemingly lyric tenor, singing falsetto, and accompanied by a guitar-like instrument, commenced a whining song at 10 minutes to 11, and kept at it until 11.15 p.m. Possibly it was an aria from a Japanese opera, but at any rate it was a test of endurance for European listeners, if not for the vocalist himself.

THIS reminds "Switch" of an impromptu entertainment provided for him by two Japanese sub-lieutenants on the occasion of his visit to one of the Japanese warships while they were at Wellington a few months ago. The two officers played a duet on Japanese flutes, which occupied twenty minutes, and there was scarcely a dull moment in the entire performance. The Japs. ambled along, not always together, up and down chromatic scales, performed "turns," tremolos, and tonal somersaults ad lib., until finally the "music" died away in a quivering D flat, away up in the fourth octave above the clef. "Switch" suggested that they should broadcast from 2YA, but they pleaded lack of practice to do themselves justice.

WELLINGTON dwellers are as a rule up against a difficulty in placing their masts sufficiently far apart to obtain a respectable length of aerial, owing to the smallness of the average section. The way out is to obtain the permission of a neighbour to erect a mast in his section. "Switch" has heard of only one such request being refused, but later when the ill-humoured neighbour took up radio the request was then granted. "A fellow-feeling makes us wondrous kind," and folk soon realise the difficulty of others when they are placed in a similar position.

For the writer's part he found no objection to planting a hefty Oregon mast in the section of a neighbour three doors away, and the owners of the intervening sections cordially granted permission to erect the aerial over their yards. The said mast is now a sort of community mast, for no fewer than three other aeri-als are attached to it. In erecting a new mast in his own section "Switch" ran up a spare block and halyards for use by any neighbour who desires to erect an aerial. Additional aeri-als generally help to stay a mast against Wellington's violent gales, and the assistance lent to neighbours fosters the friendly relations which should subsist among all listeners.

SOME of the Wellington yachtsmen who are planning to spend their Christmas holidays cruising in the Marlborough Sounds are contemplating taking broadcast receivers with them. A yachtsman informed "Switch" that last Christmas he had a receiving set with him in the Sounds, and much

pleasure was derived from listening to 2YA during the long evenings. Some portions of the Sounds were found to be somewhat screened from 2YA, while at other places first-class reception was available every evening.

PECULIARLY enough there are beginners who persist in using a gas pipe for an "earth." A neighbour proudly showed "Switch" what a good job he had made of his "earth"—it was soldered to a gas pipe! The principal objection to the use of a gas pipe as an "earth" is the fact that the joints are "red-leaded," which reduces the conductivity. There is another, but more serious objection to a gas-pipe earth, and that is the risk of fire. A heavy static discharge may occur in the aerial, and running to earth it may cause sparks at bad joints in the gas pipe. The water pipe is far better for reception and safety.

ON Thursday night (November 29) Wellington listeners who chanced to tune down below 3YA Christchurch, received a surprise. A station was coming in with a powerful punch, broadcasting music by an excellent picture orchestra. True, every four or five minutes the station faded to inaudibility, but these fades were of only 20 seconds' duration. At seven minutes to nine, finally, the announcer said it was 2ZM Gisborne, broadcasting music by the orchestra at the Palace Picture Theatre. This was the best transmission yet heard by "Switch" from Gisborne.

WELLINGTON owners of valve sets are looking forward to the ushering-in of the New Year by the New Zealand broadcast stations. Last year the New Zealand stations gave us plenty of entertainment, and the Australian stations were subsequently heard celebrating the birth of the New Year. On one occasion, "Switch" heard the arrival of the New Year celebrated in New Zealand, and an hour and a half later at Sydney and Melbourne, and half an hour later, in Adelaide.

THOSE who are novices with regard to a.c. sets, were warned by Mr. Billing in his lecture at the last meeting of the Wellington Radio Society, not to place their hands inside the sets while the current is switched on, owing to the risk of a painful shock. "Familiarity breeds contempt," and even the lecturer confessed to having been caught in a thoughtless moment, and was punished by a nasty burn on one of his hands. Electrical burns, however, are peculiarly unlike other burns, as they heal very quickly, and are painful for a brief while only.

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MEAN DEPENDABILITY.  
Installed at 2YA Wellington

All sizes. From 9/ each

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## Hawke's Bay Notes

FIVE tenders were received for the Hastings Memorial Hospital radio equipment, and the committee, and then the general meeting, had a great time sorting out the final set. One of the tenders was given the "go-by" on account of the price trying to emulate "Smithy's" high flying. The other four sets and their equipment were demonstrated to the Selection Committee at the residence of Mr. B. M. Kessell, and after a demonstration, which lasted about three hours, two were eliminated. The two left in were referred to a general meeting, also at Mr. Kessell's residence, and after another all-night sitting the tender of the Hector Jones Electrical Company, with a 7-valve Grebe, was selected. The work of installing the outfit will probably be well under way by the time these notes are read, and everything should be well completed long before Christmas. In fact, it is hoped to have the installation officially opened by December 12, as soon after that date the president of the H.B. Radio Society, who was last Sunday consecrated as the Bishop of Aotea-roa, leaves for Gisborne, and will not return until Christmas Eve. There is every indication of a successful installation, for the contractors are very keen and are using only the best material.

SOME time back the H.B. Radio Society made a move to erect a broadcasting station in Hastings, but the poor support given the movement resulted in it going to the wall. Since, however, a number of keen members have been "feeling their way" and are keen to have the proposal brought up again. It is to be discussed at the next meeting of the society on December 18. This is a matter which needs a lot of threshing out before being carried, and unless every member of the society is prepared to give the thing his full support, it is far better to leave it untouched.

ANOTHER matter which the society is to discuss at the meeting on the 18th is a proposal to hold a ladies' night. This is worth considering, for if the ladies can be made to take an interest in the Society it must go ahead.

AT the last meeting of the society, favourable comment was expressed concerning the recent competition gramophone programme, and a resolution was passed urging the R.B.C. to put on more similar programmes at intervals.

IN this quarter, reception generally remains much the same as in the past couple of weeks. There is still plenty of distortion with 2YA, but the other New Zealand stations are good. No one seems to worry much about the "Aussies" just now, and Yanks are out in the cold.

WHAT'S the matter with radio fans in Napier? There was a time when they possessed quite a strong society there, but now they have gone right to the pack. A little while back, a number of Napier enthusiasts accepted an invitation to attend a meeting of the Hastings Society, and at that meeting, the Napier people expressed the opinion that their club would soon get moving again. There

is no sign of it yet, however, which is a great pity, for there is no doubt that two societies, one in Napier, and the other in Hastings, could work well together for the good of listeners generally. With the coming of the New Year, it is hoped that Napier listeners will make a move. Great good would undoubtedly result from an interchange of visits from such societies.

## Wellington Amateur Radio Society

THE next lecture of the Wellington Amateur Radio Society is specially adapted to interest the beginner in radio or the crystal set user. It will be an address by Mr. C. C. K. Fear on "Crystal Sets and How to Get the Best Out of Them, Aerial and Earth Installation, etc." The meeting will be held in the Kent Terrace Congregational Church Hall at 7.45 p.m. on December 11. Mr. Fear is a recognised expert on radio, and his last

lecture on the Browning-Drake circuit given in the same hall showed that he has a ready command of language and the ability to make his subject interesting. It is confidently expected that in spite of the approach of summer evenings, a large attendance will be present. Mr. Fear's lecture should particularly appeal to the young idea anxious to instal a crystal set at Christmas.

## Christmas and New Year Holidays

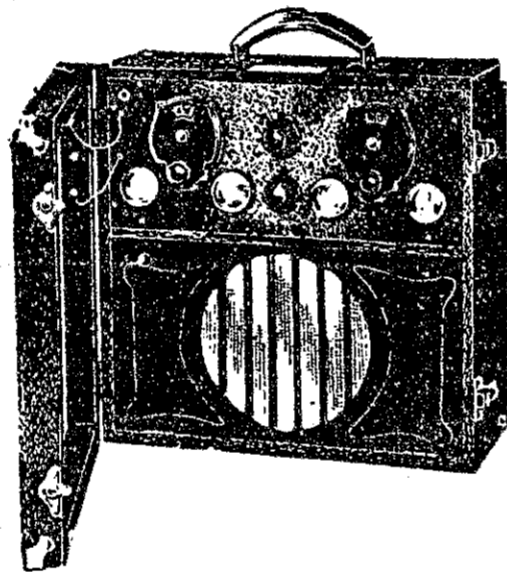
FIGURES supplied by the Railway Department are interesting as indicating the huge passenger traffic which its services are called upon to handle during the Christmas holiday season. Last year the number of passengers carried during the period covered by the festive season reached the surprising total of 1,851,000. When it is remembered that the bulk of the journeys made were concentrated on

the days immediately prior to Christmas Day, some idea of the magnitude of the organisation necessary to provide suitable and adequate services can be gained. Present indications are that this year's Christmas traffic will be exceptionally heavy, particularly during the period from December 14 to January 5, when excursion rates will apply. The various officials responsible for the arranging of the holiday timetable have been working at high pressure for some weeks. The task is now completed, and Christmas travellers can rest assured that no pains have been spared by the Railway Department to ensure that an adequate train service awaits their convenience.

## Sunday Morning Service

ON Sunday, December 9, station 1YA will broadcast a morning church service at 11 a.m. from the Auckland Unitarian Church on the occasion of a farewell to the present minister, the Rev. Albert Thornhill.

# Take an "Airzone" with you



Magnavox Dynamic Power Speakers differ from other speakers, both in principle of operation and in construction. They are made under exclusive Magnavox patents, covering principles which are acknowledged by experts as the only type of speaker construction capable of accurate radio reproduction. While these speakers are made primarily to provide more natural and enjoyable music or speech in the home, the volume is available from a low whisper to a volume far in excess of any normal home requirements—all without distortion. Get all the volume needed for the largest interior with Magnavox Dynamic . . . Get all your set can give.

Beverley (as illustrated), for 230 Volts A.C., £19.

Beverley (as illustrated), for 6 Volts D.C., £15.

Units for A.C., 230 Volts, £14.

Units for D.C., 6 Volts, £8/15/-.

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MAGNAVOX  
DYNAMIC  
A.C.  
SPEAKER



As necessary as a power tube. It gives not only volume without distortion but full and faithful reproductions over the full tonal range.

CALL AND HAVE A DEMONSTRATION

IDEAL CHRISTMAS GIFTS

KIRKCALDIE & STAINS

RADIO DEPARTMENT  
WELLINGTON

### Trouble with Crystal Sets.

THE following interesting letter dealing with trouble finding, has been received from A. C. Loach (Christchurch):—

"I notice that in the "Record" you repeatedly impress on owners of small sets the need of an efficient aerial and earth system, but apparently with some people it does not sink in very far. Friends often bring crystal sets along for me to overhaul, and as a rule when I hook the sets to my aerial they are quite efficient. So then I return the set to the owner with some free advice on the care of the aerial. In nine cases out of ten lightning conductors are the cause of the trouble due to corrosion at the terminals. Other causes are leads-in unsoldered, and ground wires unsoldered.

The most striking case I dealt with was that of a fellow who moved out our way from the city. He brought

his set along to me with the usual tale of woe, "It won't go!" Hooked it up at my place one evening and the result was terrific 3YA came in with a great rattle, and was quite audible on the speaker direct, and from the crystal whilst on a two-stage amplifier it was beautiful. 2YA was clear and distinct on the crystal alone. I began to get

interested in this set, so when 2YA closed down their news session I connected the amplifier up and landed 2FC on news. Waited till 3YA closed down for the night and then bagged the following:—2FC, 2BL, 3AR, 3LO, 4QG, 2GB all at good 'phone strength, except 2GB.

I wrote out the list of stations heard also names of various items announced from same and handed it to the set owner with some more advice on aerials, etc. His aerial comprised a 100ft. length of wire from the top of a 30ft. pole on to a chimney, lead-in twisted round aerial wire, not soldered! The earth was a 2ft. of galvanised pipe driven into stony soil.

My own aerial is as follows:—A single pole, height 56ft., with an ordinary telephone pattern insulator at the top. The aerial wires radiate out in four directions from the insulator, acting as the top stays for the pole, the lead-in being taken from the lead nearest the set. This type of aerial should be ideal in cities where enthusiasts are cramped for room. The earth used is 4ft. of copper piping buried in cinders.

The method of erecting is to place a 15ft. length of oregon, 6in. x 3in. with its two hardwood legs 18in. to 2ft. in the ground and then to place the 40ft. pole 3in. x 3in. alongside, and secure with the clamps. Secure the stays and slide pole straight up through clamps slackening stays as required. The aerial wires are carefully insulated to prevent contact with the lower portion which acts as stay wires. The whole is like an umbrella.

I hope this will be of some interest to you, and wishing you the best of luck in your good work." This is certainly of interest, and the letter is passed on to listeners with the writer's commendation. The aerial should be very useful in congested areas.

### Undesirable Conductors.

A CORRESPONDENT writes of a peculiar source of trouble which caused him great expenditure and much delay.

At the end of the usual programme the station closed down and his receiver was perfectly in order, but on attempting to tune in the following day it was found that the signals were painfully weak, too weak to satisfy the loudspeaker. The usual channels were searched without avail. An expert was summoned, components replaced, yet no improvement.

Finally a most inoffensive-looking spider-web was discovered between the lead-in and the ground connection, both of which were bare. On sweeping this away the set went as though nothing had happened.

Spider webs have extraordinary conductivity and should be kept clear of all wireless apparatus.

WHILE as a rule rain makes not one iota of difference to a properly insulated aerial, it sometimes happens that during a rain storm (or even only part of the day) a loud noise, fierce and crackling, will accompany the rain. On such occasions it may be taken for granted that there is a certain amount of suspended electricity leaking to earth through the rain. Dirty, ineffective insulators have been known to cause a similar effect.

### Electrical Measurement.

A WORKING knowledge of the fundamental relation between volts, amperes, and ohms, the three basic units of electrical measurement, will prove useful to the radio beginner. The volt is the unit of electrical pressure; the ampere, of volume; and the ohm, of resistance. In any electrical circuit, the voltage or pressure is what forces the amperes or volume through the ohms or resistance. It takes one volt to force one ampere of current through a resistance of one ohm; hence you can figure the current or amperes in any circuit by dividing the voltage or pressure by the ohms or resistance. Similarly, you can figure out the resistance of any circuit by dividing the number of volts by the number of amperes. And if you wish to know how many volts would be required to force a certain number of amperes through a specified resistance, multiply the number of amperes by the number of ohms.

### Positive and Negative.

ELECTRICITY as we understand it is of two kinds, positive and negative. The positive tends to flow to the negative and the negative to the positive. The attraction of the positive pole is strong enough to entice the negative electricity through the entire radio set. The positive flows to the negative through the battery, which is composed of little cylinders of zinc (—), a paste and a central rod of carbon (+).

If the + pole, which is usually coloured red on accumulators, marked + on dry blocks, or in the centre of 1½ volt cells, is connected to the negative pole by a low resistance, comparable to connecting an empty tank to a full one by a wide pipe, the electricity will rush from one pole to the other at such a rate that before long the power will be lost.

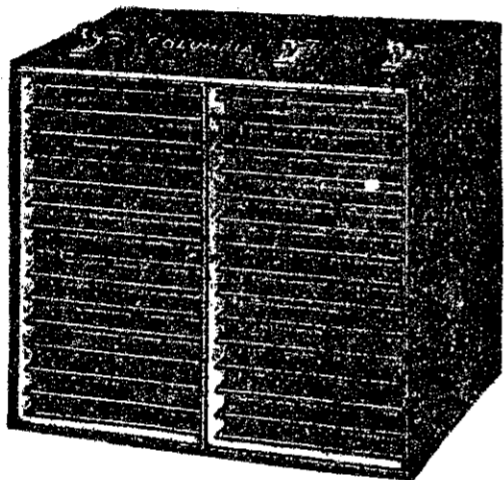
If connected through the set, or through the high resistance filament of the valve, the flow is slow and the cells last longer. The flow is caused by a chemical reaction being set up in the zinc, paste and carbon. A battery is in no sense a store of electricity, it is a manufacturer. When the manufacturing elements become worked out the battery does not function. To renew it the elements, zinc and paste, for carbon does not rapidly deteriorate, would have to be replaced. This is virtually a new cell.

### Testing Polarity.

IN view that electricity flows from the negative to the positive, outside the cell, it is necessary, then, that the positive be connected on to the terminals of the set, those designated by the designers as being the most appropriate for receiving the current.

This usually presents no difficulty, as the batteries, accumulators or eliminators, are always clearly marked, while terminals on the set are always marked and wires usually coloured and labelled.

One word of warning—don't connect up batteries in a dark cupboard by



Here is the Most Popular Radio Battery in the World

—The Columbia Layerbilt

NEVER before has it been possible to utilize every cubic inch of battery to produce power. The new Columbia Layerbilt "B" Battery has accomplished this.

Made of flat layers of current-producing material instead of the usual round cells, not a cubic inch of space is wasted. You get more battery for your money, far more energy, greater clarity, volume and distance from your receiving set. There is not another battery like the Columbia Layerbilt—insist upon it.

**Columbia**  
RADIO BATTERIES

GREATEST CLARITY—  
VOLUME—DISTANCE

Factory Representatives  
ELLIS & COMPANY, LTD.  
Chancery Chambers, O'Connell St.  
Auckland

1701

feeling or attempting to identify the wires by an insufficient light. You may have a little more light than you require thrown on the subject.

It is when a lead is taken any considerable distance from the set that a difficulty arises. Some flex is bi-coloured, and this presents no difficulty, but with ordinary light flex there is.

To determine "which from t'other" of these wires there are several methods, some a little more efficient than others.

One radio enthusiast, or should we say "amateur," for one does not feel inclined to say whom, was compelled, while experimenting, to have the B battery some few feet from the receiver. Flex was used to make the connection, and one end was duly joined to the battery. Half an hour later the other end was connected to the set. The method of determining which was which of the wires won't be described. It is not wise to suggest the wrong way.

A simple way, having connected two strands at one end on to the battery, is to dip those at the other end in a glass of salt solution (salt and water). Bubbles will rise from both wires, but more from the negative.

This method should be employed whenever the wires are not separately coloured. In making speaker extensions, a battery could be temporarily attached to the set end to determine the wires.

**A Story with a Sting.**

THE same radio enthusiast tells another story — of a method of increasing volume, which failed. A crystal amplified by one valve (double grid) was not working too well, and it was considered desirable to increase the voltage, and two 22½-volt blocks were used on the plate and auxiliary grid instead of the customary one.

Signals increased but little. Desiring to experiment further, the amateur went about comparing two speakers. One was fitted with a plug. Instead of removing the plug and using the terminals, this novice twisted pieces of wire round the end and round the body of the plug, and with one speaker already connected set about experimenting. Unfortunately, something slipped, a bright flash—!

Another of these relatively expensive valves were purchased, and the job of fitting it commenced upon. Unfortunately, the valve in question has a five-prong base, for which holders are not obtainable in this country, or, at the least, are very difficult to obtain, though quite easy to make.

Everything promised well till it came to fitting the valve, of which the improvised base had not been secured. A slip, and away went the valve to the floor. "All good for trade," remarked the dealer.

Now a cardboard safe has been made, and until everything is ready the valve has to wait. One of the old ones is used for fitting, and each wire double-checked. Above all, experiments are carefully conducted. A proper base has been made.

THE loud-speaker should never be turned in order to face the receiver, otherwise a howl may result. Sometimes during a loud musical passage the diaphragm of the speaker hits the magnet and is held there, so it is advisable to adjust the milled screw of the speaker if after a loud passage distortion becomes evident.

**Questions and Answers**

**READERS** are invited to submit to "Observer" questions that can be answered in this column. The questions should be short and concise and capable of a reasonably short answer.

**Concerning the B.D.**

I AM building a four-valve B.D. but am at a loss to know how many turns primary and tickler coils require. I am using a V. 199 Radiotron valve for RF. amp. and a Philips 415 detector. How many turns would you suggest?—S.G.H. (Christchurch.)

The primary of the R.F. transformer requires 25 turns of 30 wire when a U 199 is used as the H.F. valve. 16 turns of 30 wire is recommended for the tickler but this should be added to or subtracted from till the best results are obtained.

**To Improve Reception.**

HAVING purchased a factory made machine, I am not securing satisfactory results. My aerial which is approximately 30 feet high runs due east and west. The earth wire is fastened to a water pipe running into the house and is not buried. I propose to alter my aerial, making it between 50 and 60 feet high, and running in a south-westerly direction, and also sink a five gallon can into the ground to the depth of three feet, filling it with water, and securing the earth wire to same. Do you think this will result in better receptions?—J.F.W. (Pelorus Sounds).

The italics are ours and would seem to indicate the cause of the unsatisfactory reception although rumour has it that the sounds are notoriously bad for reception. A ground which is not grounded! sounds Irish. Yes, J.F.W., we believe you have located your trouble and are going the right way to get results. You have a good machine and should get good results.

**English Sets.**

IN the "N.Z. Radio Record" of the 16th instant there is an article dealing with the radio exhibition held at Olympia in September last. The reading of this article prompts me to seek information on the following points:—

1. Whether, generally speaking, English radio sets are suited to New Zealand conditions.

2. The name of any good English radio periodical.—Reader (North Auckland).

A. 1. With slight adaptation of rails, English radio sets are suitable. The provision for high wave-lengths such as used by Daventry is unnecessary here. 2. The constructor and more or less technical man will find "Popular Wireless" (weekly), "Modern Wireless" (monthly), and the "Wireless World" very useful publications.

**Life of the Valve.**

"COULD you tell me how long my valves should last?"

That depends—tinker round with a screw-driver, and they won't last long. Burn the filaments too brightly, and

the useful life will be lessened considerably. If reasonable care is taken of valves, a minimum of 3000 hours may be assured. That is with a good make of dull emitter. Using the valves long hours, providing the rheostat is turned well down, will not shorten life in respect to hours, though certainly with respect to days.

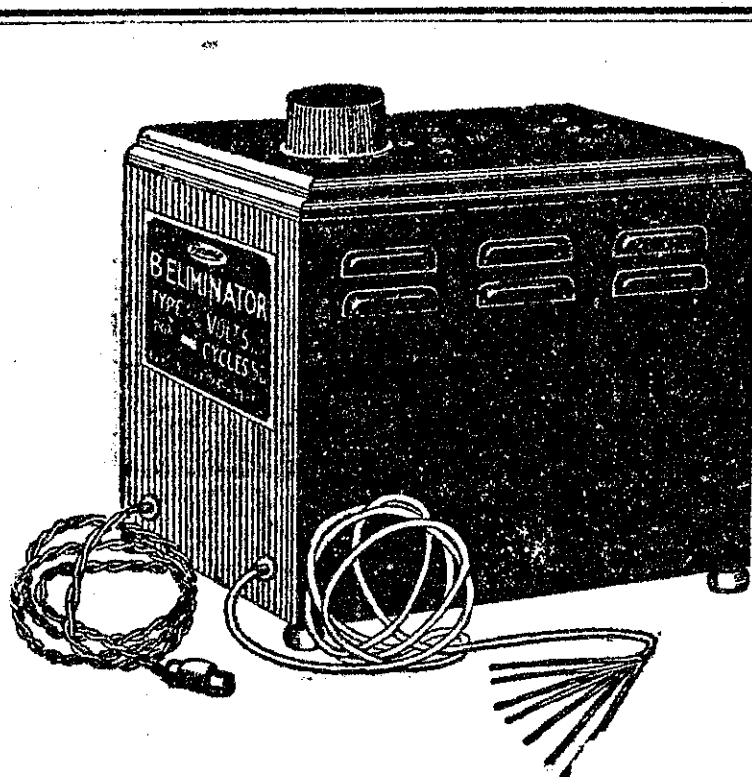
Some valves have functioned well for over 7000 hours, while one correspondent reports, he has been using his valves for five years, though they must have, by now, passed the point of maximum efficiency.

**Fitting a Low Voltage Valve.**

AN advertisement says that a four-volt valve of a new type can be used in any circuit without alteration. You say that a four-volt valve if used with six volt valves must be protected with a resistance; I don't understand."

THE advertisement was right, and so was the writer. That particular valve is intended for a four-volt battery. In that case no adjustment is necessary to fit the valve to the ordinary circuit. In the case of a six-volt set it is necessary to protect the four-volt valve by a rheostat (variable resistance) of not less than 30 ohms. These are fitted in the wire going from the terminal on the socket marked + by lifting the wire from the holder, joining one leg of the rheostat to this terminal and the other leg to the wire removed from the socket. Such a rheostat is inexpensive, and the little trouble taken in fitting it is well worth while, as the rheostat should be kept fully turned on.

OWING to pressure on space a few replies have had to be held over till next week. There are still a few replies to be sent by post.



**Maxum 'B' Socket Power. An improved 'B' Eliminator.**

Unexcelled by any imported make.

**Improve Your Radio Receiving**

**with EMMCO POWER UNITS**

The new Emmco "MAXUM" B Eliminator surpasses higher priced eliminators like a new luminary.

THE MAXUM IS DESIGNED TO OPERATE SETS UP TO, AND INCLUDING, SEVEN VALVES.

By the knob control on the top of the case a variation of 20 volts for all tappings, together with the total output, is obtainable. This control is invaluable in checking line voltage variations.

It is a recognised fact that voltages must often be adjusted to meet local conditions, and in this eliminator the voltages can be changed to different values by altering the connection to resistance strip inside the case.

AT ALL DEALERS.

MADE BY ELECTRICITY METER MFG. CO., LTD.

Exclusive Factory Representatives;

139 Clarence St. Sydney TELE. BW 1328 **Manufacturers Products Pty Ltd** Suggden Place off Little Collins St. MELBOURNE

# THE WOMAN'S POINT OF VIEW

By "VERITY"



## The Sweetness of Summer

### Distilled Fragrance

THERE are many methods of making pot pourri, all more or less successful. Here is one which, if followed carefully, will give complete satisfaction:—

Although roses are the favourites, any sweet-scented flowers can be added with advantage. Carnations, stocks, syringa, perfumed violas, heliotrope, and scented peonies are admirable.

The blossoms should be picked early in the morning with the dew on them, the petals stripped from bigger ones, little ones having their heads nipped off, for stems have no part in the scheme. At the same time, lemon verbena, lavender with some leaves as well as flowers, rosemary, scented geranium leaves, and sweet briar should be picked, dried, and kept separate from the blossoms; in closed tins does very well.

Pick the petals and tiny flowers over, so that any faded or diseased ones are rejected. Spread the perfect ones on white paper in the sun to dry while they are fresh. Much pot pourri is ruined because flowers half dead to begin with are used.

#### "Pickling" Blossoms.

WHEN quite dry put them into a jar, covering the bottom to a depth of three inches. Then sprinkle on a handful of salt, more or less according to the size of the jar; and go on filling it with three-inch layers separated with salt, morning by morning, until the jar is quite full. Its contents then should be pressed well down.

Keep it covered all the time, so that the sweetness may be kept in and the dust out, and when it is full cover carefully, and leave for ten days, stirring the flowers and salt about every day, so that they mix well. It is by this "pickling" that the pot pourri becomes immune from damp and heat and cold.

At the end of the ten days turn the pickled petals out on a big tray so that they are roughly an inch thick, and leave them in a very dry place to allow any moisture from the salt, etc., to evaporate.

#### Scent and Spice.

THEN comes the time for adding the spicy and scented ingredients. There is considerable latitude here for individual fancy. An excellent mixture is made by shaking together 2oz. each of the scented verbena, of sweet briar, of crushed cinnamon bark, and of powdered orris root; 1oz. each of

myrrh, roughly ground allspice, scented geranium leaves, and rosemary mixed; add half-a-pound lavender.

Put the flowers on to a coarse sieve to shake out some of the salt, and mix with the scented leaves and spices in a big basin. Then press closely into a jar, or jars, cover very closely (fill any space which may occur between the top of the mixture and the cover with tightly-pressed tissue paper, so that all air is excluded) and leave well tied down for six or eight weeks.

#### The Final Touch.

THEN comes the final touch, in the form of some favourite essential oil—lavender, violet, or what not—added drop by drop while the mixture is being stirred about, so that it is evenly distributed; and the pot pourri is ready.

Quantities are rather difficult to dictate; but a good guide is to use the scented leaves and spices suggested with sufficient flowers to fill an ordinary washing basin, adding to it a large teaspoonful of the essence.

Pot pourri made like this will keep for years, distilling its fragrance when the cover of its jar is lifted. If it begins to lessen, turn it into a basin, and stir it about in the sunshine for a few minutes, when its perfume will return.

But do not add fresh leaves, etc. Pot pourri should always be made fresh in one instalment, as it were, though the making extends, as we have seen, over several weeks.

### Jam and Jelly

THE preserving season will soon be upon us, and the family recipes for jam and jelly are brought from the corner of the drawer, where, yellow with age, they exist for 51 weeks of the year. Even following these instructions most carefully, it sometimes happens that the jelly refuses to "jell," and the jam begins to ferment after a few weeks.

In the case of the jelly, it may be:—

(1) Because the jelly was under-boiled.

(2) The fruit too ripe or bruised.

(3) Boiled too quickly and too long.

The first is easily remedied. Just cook slowly and carefully for a little time longer; but no amount of boiling will make fruit jelly set once it has lost its powers of gelatinising through too much cooking.

Over-ripe fruit no longer contains the "pectose" which is the jelly-like substance found in all fruits. The only remedy, therefore, is to add ½oz. of gelatine to each pint of juice, boil till dissolved, and do not keep it too long.

Some fruits contain more pectose than others, notably apples, therefore apple water or juice may be added to other fruits which "jelly" less easily.

If your jam ferments soon after being made, perhaps it is being stored

in too warm a place, or the fruit may have been damaged or over-ripe.

When this happens, open all the pots and remove the mildew, turn the jam into a clean pan, add a little more sugar, and boil slowly for about an hour, skimming carefully.

### Cookery Corner

#### Good Lady Eggs.

CHOP up a moderate-sized onion and fry it with butter till a light brown; add a teaspoonful of lemon juice. Coat the inside of a shallow dish with butter, spread the onions therein; gently add the right number of eggs and cook in the oven. When done, or almost done, strew over them baked breadcrumbs and a few spots of tomato ketchup.

#### Savoury Egg.

Boil half-a-dozen eggs hard and let them get cold. Shell them, brush them with beaten white of another egg, roll them in baked breadcrumbs in which there are salt, pepper and a taste of nutmeg; see they get a real thick coating. Let them get dry. Then fry them deep in butter, quick. Eat with a thickened brown gravy.

#### Parsley Eggs.

Cut some hard-boiled eggs into quarters, add pepper and salt. Melt a little butter in a shallow dish, and put in a little minced shallot and parsley with a teacup of white stock. Thicken with flour, add the juice of half a lemon and stir carefully. Serve with toast.

#### "Anchor" Pikelets.

Mix together dry: Two breakfast cups flour, 2 heaped teaspoons baking powder, 2 tablespoons "Anchor" skim milk powder. Put in a dish and thoroughly mix: One egg, 2 tablespoons sugar. Use sufficient water to make into an easy running batter (not too soft) with the dry ingredients. Cook as usual. Pikelets made by this method will be found to be as rich as if several eggs were used, the milk powder acting as an excellent substitute. The recipe is largely used by leading confectioners.

### A Pale Dog

A little girl had been in the habit of taking a neighbour's small dog out for walks each day, and one day she called for the dog as usual, but was told the dog could not come out that day as it was ill. The child asked what was the matter with the dog, and was told by the owner that she thought the dog had distemper coming.

On returning home the child told her mother she was so sorry she was unable to take the dog out to-day as Mrs. — believed the dog was suffering from an attack of whitewash.



For Christmas!

## Just what I wanted!

A 'Kodak'! A gift  
that means lasting  
fun—perpetual joy  
—intimate friend-  
ships.

Make this a 'Kodak'  
Christmas.

Get a 'KODAK' No. 1 Pocket 'Kodak' 50/-  
Give a 'KODAK' No. 1 'Kodak' Juniors 63/6  
Vanity 'Kodaks' £8/17/6.

Modern 'Kodaks' from 30/-; Brownies from 10/6. Catalogue Free.

OF ALL KODAK DEALERS

# Annotations of Annabel

## Books.

"SWAN SONG."  
(John Galsworthy)

ALL things, physical and spiritual, happy and heartrending, sooner or later draw to a close. A truism, and a sad one. It is with a sigh one realises that in "Swan Song" the concluding note is sounded of that long series which has delighted thousands of readers, those subtle and intuitive tales of generations of English Forsytes whom we have grown to know so well.

In this last of the saga, the beautiful Fleur Mont, efficient, flippant and selfish, lives amidst the unrest and excitement that are concomitants, it would seem, of post-war society; old standards of fastidiousness of conduct and code having long gone down the wind. More or less happily mated to Michael, that latter-day Quixote, mother of an attractive three-year-old, Fleur is not content with these gifts of the gods; and, meeting again the lover of her girlhood, tracks him with persistence and ingenuity until—momentarily—she brings down her quarry. But Jon, as it happens, is a loyal soul, and loves the gentle American girl he married, if not with the "first, fine, careless rapture" evoked by Fleur in the rose-haloed past, yet with true and loving allegiance. So he returns to his brown-eyed Ann, who apparently is of that rare order of women who, understanding all, forgive all. Fleur, insatiable egoist as she has become, is left lamenting, and we feel no pang of pity; even when we remember the perfect love-story between her and the boy Jon that was frustrated by so evil a fate, but in its first blossoming loveliness of youth and hope and springtide was lovely enough to rank beside the immortal tale of Richard and Lucy Feverel.

There is discussion of social conditions, and incidentally a scheme is hatched for mirage-like reform of vast territory of London slums. Also, as is to be expected from Mr. Galsworthy, much of the English countryside; lanes and larches, valleys of bluebells, cuckoos in the nest, and all the lovely paraphernalia of out-of-doors presented with a meticulous observation and perfection of phraseology that are the delight and despair of lesser craftsmen.

A nice young man is the altruistic Michael. A chivalrous, delightful type, and one happily not yet extinct, in spite of wars and rumours of wars. Then there is Soames once more. Still single-hearted, dogged, full of prejudice; growing old, and tugging at the strings of pathos in his realisation of belonging to other times, other manners. Inarticulate and remote, in spirit he deplors the passing of his old order, but finds consolation and delight in the fickle Fleur, that idolised daughter to save whom he takes heroic farewell of a world that has passed him by.—R.U.R.

ing upon facile and charming romances by the Irish author, particularly those concerned with the distressful country of his heart. As played in London, the seductive Creole, great amoureuse who conquered and kept restless heart of her Corsican, is played, one hears, with consummate art by Miss Edith Evans. He who essays the part of the Man of Destiny will have a hard row to hoe, to satisfy students of the life of that dominating, cajoling, un-resting genius, about whom many women have dreamed dreams.

EVANGELIST Aimee McPherson, fresh from triumphal tour of other lands than ours, tried her hand on a London audience, so apt to be calm and cool in presence of religious hysteria. It viewed with a tolerant eye the effectively-gowned lady, her acrobatic antics, nods and becks and wreathed smiles; turning an un-responsive ear, however, to ejaculatory appeals to swell the ranks of souls saved by good offices of Mrs. McPherson. Nor did it enjoy the communistic singing, particularly the following:—

*"I've been 'listening-in' to Heaven,  
And I've had a glorious time!  
I have heard such wondrous singing,  
And the music it was fine.  
Saints can see as well as listen  
When Heaven's broadcast news is on;  
And we always get a blessing  
After listening-in to God!"*

Do you blame a British audience for its apathy

Your

ANNABEL LEE.

## The Return of Lace

Lace is coming into fashion again. Next winter it will be used freely for the trimming of afternoon and evening dresses.

Those engaged in the English lace industry are cheerful at the prospect of better trade during the next twelve months than they have known for some time.

This view was confirmed by the lace experts in a large number of London stores recently. Women are tired of plain silks and satins, unrelieved by any hint of filmy lace. Nine women out of ten love lace.

There is going to be a tremendous demand for lace next winter. Three or four manufacturers in Nottingham are turning out high-grade lace as fast as they can.

**Tonking's Linseed Emulsion**  
is a Certain Cure for Coughs and Colds

secure, who possesses the genius of Worth and comes in by the day, fashion frills and flutters for future beguilement of Richard or Jonathan or Lancelot of the Lake.

MY own hefty seamstress is unpromising of manner, and during hectic sojourn eats us out of house and home and rules the household with a rod of iron. With a terrifying frown, and her mouth full of pins, now and again, however, she proves a magician of cut and colour and achieves a masterpiece. Just completed is a frock for Margot, at present sharing my un-Sybaritish flat. Gorse-coloured and shimmering, graceful sleeves that cling to slender wrists, a dozen wide tucks wandering around lovely slimness of fleeting fashion, V-shaped corsage, and "arty" dagger, studded with almost rhinestones and clasping one-sided draperies that dip to the feet, it is desirable indeed. With it will go a string of the great gold beads that are a mode of the moment, providentially discovered in old, Ginevra-like chest long relegated to the box-room. Margot's copper-beech-coloured eyes and hair will look their best when she wears this gown, so that I am convinced her best budding poet, a Keatsian wild-eyed youth, will tell her she is like some bright being "newly drest for Paradise." A modern Paradise, be it noted, of cabaret and cocktail, or Margot will have none of it.

MR. Conal O'Riordan, forsaking the art of the novel, has produced a drama of an historic era, with its fascination of intrigue and amour, plotting and counter-plotting, its Napoleon and its Josephine. Delightfully written, one surmises, reflect-

## The Fire Tenders

(By Grace Noll Crowell.)

*Women through the years have stood  
Watch above a flame,  
Keeping it a glowing thing  
For the ones who came  
Tired, hungry, when the night  
Marked a kitchen's warm, red light.*

*Nothing lovelier, I think,  
Than a woman's face,  
Calmly bent above a fire,  
As with quiet grace  
She moves clean, deft hands to make  
Food more wholesome for Love's sake.*

*Something great and beautiful  
In her simple art—  
Something to delight the mind,  
And make glad the heart;  
Women tending fires that men  
May be strong to work again.*

## DEAREST:

Fashions fluctuate and see-saw as unexpectedly as the latest turn of political screw. One ventures the supposition, however, that despite the talk 'twixt thee and me, 'tis much ado about nothing, and there will be no lengthening of skirts; nor, it is hoped, or faces either, despite adjuration of recent counsel of depression anent manners and morals—in this case the poor old kinema being the stick that beat the dog.

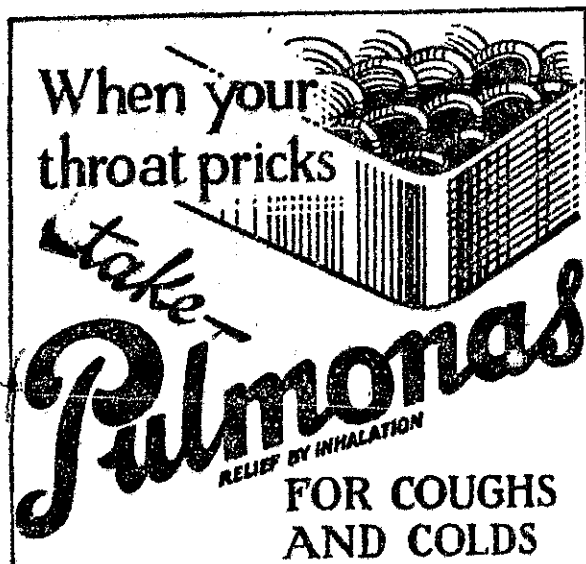
HERE and there adroitly swishes an ankle-length skirt, now and again eye is intrigued by coiled or plaited demureness of coiffure. We all realise, however, that one swallow does not make a summer or even a spring-tide; and having reached a charm and sanity of dress and head-dress, the Cassandra-like assertion is ventured that women will will not revert to type of great-grandmother, ravishing beauty though sometimes she appeared.

VALIANTLY men stick to unbeautiful uniformity of clothes. And how nice they look, to be sure! Which brings a dark doubt that perchance in looks, as in all else, they have the advantage of what was once called the fair sex. Think of best female friend in masculine garb! Needs must she be slim and fresh and very fair to survive that ordeal of clothes with chic and aplomb.

SO let us cherish our chances and make wise purchases of silks and laces, radiant of colour and quality, that are to be purchased at quite moderate cost; and, with the aid of that "little dressmaker" we hope to

## Mrs. Ross Brodie to Sing for 3YA

A SPECIAL Christmas attraction at 3YA will be the appearance for the first time in radio of Mrs. Ross Brodie, of Rangitata. She is taking part in the Sunday evening concert on December 23, and music-lovers can look forward to a treat from this fine singer, who has been specially engaged by 3YA for the purpose of this after-church studio concert.



When your throat pricks  
Take Pulmonas  
RELIEF BY INHALATION  
FOR COUGHS AND COLDS

# Features of Next Week's Programmes

## Notes from 1YA

THE pleasure of hearing the Lyric Quartet will be afforded listeners-in on Tuesday. This programme will be quite a change from the usual. The concerted numbers will include "Sunset," "All Through the Night," and "Peggy." "Neptune's Toll," "The Minstrel Boy," and "My Dreams," will be solos by members of the quartet. Miss Christina Ormiston, whose beautiful soprano voice has been such a delight to listeners, will sing "Ave Maria," "Don't Hurry," and Puccini's "A Little Birdie." The orchestral programme for the evening will be particularly good, "Semiramide," "Dance of the Hours," and "Tip-toes" being included. The humour of the evening will be provided by Mr. Alan McElwain.

THE customs of the Maori will form the subject of Mr. A. B. Chappell's talk on Tuesday evening.

"THE GONDOLIERS" will be broadcast by 1YA on Wednesday evening. The whole evening will be devoted to this sparkling opera, and it will be an occasion on which everyone who appreciates the works of Gilbert and Sullivan will listen-in. For this will be a radio production of the highest order, the whole of the music and vocal score being rendered per medium of gramophone records. Mr. Karl Atkinson will be responsible for this lecture-recital. The story of "The Gondoliers" will be told, and the plot explained, the recital being illustrated by records made by the D'Oyly Carte Opera Company under the personal supervision of Mr. Rupert D'Oyly Carte.

ON Thursday evening there will be another treat for listeners, when excerpts from "The Chocolate Soldier" will be presented, the vocalists being Miss Nancye Hanna, Miss Violet Harrison, Mr. Arthur Ripley, and Mr. Ernest Snell.

IN the supporting miscellaneous programme the Griffiths Duo will appear, first in a dramatic sketch, "New Year's Eve," and then in some humorous sketches. Miss Nancye Hanna will sing "Lament of Isis," and Miss Marjorie Fair will sing Chaminade's "Ritournelle." "Five Eyes" will be sung by Mr. Ernest Snell, and "Yesterday and To-day" by Mr. Arthur Ripley.

TWO one-act plays will be presented on Friday evening by the Auckland Comedy Players. These plays are entitled "The Discovery" and "A Perfect Pair."

THE vocalists on Friday evening will be Madame Mary Towsey, Miss Irma Schollum, Miss Beryl Barker, Miss Edna Peace, Mr. John McDougall, and Mr. John Bree. They will sing

a variety of songs. The popular Asquiths will give one of their half-hour drawing-room entertainments, which have made them so well and favourably known. The orchestral items will be a feature of the evening.

FOR the week-end concert on Saturday evening some capital studio items will be presented by Miss Beth Whitelaw, Mr. Clinton Williams, and Mr. Frank Sutherland. Mr. F. W. Barker will give a Dickens character sketch, "Jonas Chuzzlewit comes Home Drunk." Listeners will also enjoy his rendition of the Lord Chancellor's song in "Iolanthe," a very humorous number.

o'clock to permit of a broadcast of the Macalister v. Taylor boxing match.

TUESDAY afternoon's programme will be out of the ordinary. This has been arranged by Messrs. F. J. Pinny, Limited, who have engaged Miss Gretta Stark (soprano), Mr. H. E. Wilson (baritone) and Mr. S. Barrett (clarinet), who will be accompanied on the Meltona Recording Expression Player.

SOME months ago, when 2YA broadcast on relay from the Lower Hutt a concert given by the Hutt Valley Choral Society, correspondents

"THE Greek Slave," a musical comedy of the highest order, will be presented in radio form on Friday evening. This will be a particularly enjoyable portion of the programme. The vocalists will be the Orpheus Quartet, who have not been heard for some time.

ALSO appearing this evening will be Mr. and Mrs. Albert Russell, whose three contributions are entitled "On Your Honeymoon," "The Croony Melody" and "Impressions of Vaudeville," concert and grand opera.

AGAIN a popular programme will be broadcast on Saturday evening, the vocalists being the Melodie Four, and a very bright programme will be played by the Studio Orchestra. Two sketches will be acted by Miss Gwen Shepherd and Mr. Wynne Watkins—"Cross Calling" and "Light and Shade."

## Notes from 3YA

VOCALISTS not regularly heard at 3YA are appearing on Monday in a very bright and attractive programme. One of these singers will be Mrs. Wilfred Owen, who has a very pretty and flexible mezzo-soprano voice. She will sing "The Sweetest Flower that Blows," also two songs by Easthope Martin, and "An Eriskay Love Lilt." Another vocalist will be Miss Marian Woodhouse, the well-known Christchurch teacher of singing. Her mezzo-contralto voice has previously been heard with much appreciation from 3YA. One of Miss Woodhouse's songs will be "The Sands of Dee." She will also sing Brahms' "In Summer Fields," and Needham's "Little Blue Pigeon."

THE male voices to be heard on Monday evening will include Mr. W. J. Trewern's, a popular singer at 3YA. He has chosen three songs in which his voice will be heard to advantage. "Yes, Let Me Like a Soldier Fall," is well known as a solo from the opera "Mariana." Liddle's "A Farewell" and Cowen's stirring "Border Ballad" are his other numbers. The always popular "Father O'Flynn" is to be sung by that fine baritone Mr. J. Francis Jones. His other items will be "The Wedding of Shon McLean" and "Cargoes."

IT is now some time since Mr. H. Instone added to the gaiety of a 3YA programme, but he will be heard again on Monday in "The Cricket Club at Red Nose Flat" and "I'm Excited."

THE instrumental music of Monday's programme will prove a treat to all listeners. The performers will be the Woolston Band, under Mr. R. J. Estall, and the Studio Trio. There will also be a cornet duet by Bandsmen Barber and Annand, "Convent Bells," with band accompaniment.



Mrs. Mildred Kenny's Juvenile Orchestra, whose admirable performances from 2YA are greatly appreciated.

Photo, Vinsen.

## Features from 2YA

ON Monday evening the singing circle of the Pioneer Club will present a special programme. Some splendid glees and choruses will be sung and the soloists will comprise a number of artists who will be heard in radio for the first time. Among these may be mentioned Mrs. Ramsay, Miss Penny, Mrs. Mitchell and Mrs. P. J. Townley. Miss Nora Gray is another vocalist well known at 2YA. Miss Lena Van Staveren will be heard in monologues. The Studio Orchestra will this evening present a splendid programme, while Mrs. Vickery and Mr. George Ellwood will play pianoforte and cello items respectively.

MONDAY evening's programme will be interrupted at 9

from one end of New Zealand to the other proclaimed that it was the most enjoyable concert programme they had listened to. This broadcast was therefore evidently one of the radio events of the year. On Tuesday, there is to be another such broadcast. The concert will take place in the King George Theatre, Lower Hutt. The conductor of the society is Mr. Douglas E. Taylor, F.R.C.O., A.R.C.M. The society will be assisted by 2YA Orchestra.

ONCE again the Fellows who have added much to the enjoyment of many a Thursday evening will be associated with the Band of the First Battalion Wellington Regiment, under Conductor Lieutenant B. J. Shardlow. They will be heard individually and collectively in many diverse items, grave and gay. Elocutionary numbers will be given by Mr. Peter Dorrian.

S. P. ANDREW, Photographer, QUEEN ST., AUCKLAND.	STEFFANO WEBB, Photographer, HIGH ST., CHRISTCHURCH.	OFFICIAL PHOTOGRAPHERS To N.Z. RADIO BROADCASTING CO., LTD.	S. P. ANDREW, Photographer, WILLIS ST., WELLINGTON.	ART-LITE STUDIOS (Chas. M. Brown), 91A PRINCES ST., DUNEDIN (Above the Ritz).
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MISS Thelma Ayres, a gifted young soprano singer, will make a welcome reappearance on Wednesday evening. She will sing "Loreley," "The Flower Song" from "Faust," and "Love the Jester." Miss Mary Taylor, contralto, will also be welcomed. Her items will be "O Lovely Night," "Sombre Woods," and Sanderson's "Harbour Night Songs." Mr. Douglas Suckling (tenor) and Mr. Fred C. Penfold (baritone) are the male singers.

MR. L. T. J. RYAN will give two humorous numbers on Wednesday evening, one of which, "The Colonel," will have piano accompaniment.

WOODFORD-FINDEN'S charming song-cycle "The Pagoda of Flowers" will be given on Thursday evening. The presentation of these pretty melodies will occupy the major portion of the first half of the programme. The vocalists will be the popular Melodious Four. The members of this quartet will also present a number of miscellaneous numbers. Assisting the Melodious Four will be Mr. R. R. Wills, whose elocutionary numbers will be "Napoleon's Tomb," and "Brutus Addresses the Mob" (from Shakespeare's "Julius Caesar").

"KISSING TIME" is the musical play which the popular Radiolians will present in radio form on Friday evening. This is another of Caryl's musical comedies in which the Radiolians have scored such hits at 3YA, and "Kissing Time" will be no exception.

TWO elocutionary numbers will be given by Mr. Alan Brown on Friday evening, "The Barrister" and "Mafferty Has an Hair Cut." Friday will be late night for 3YA, the dance music for the evening being supplied by the Wiliams' Dance Band.

ON Saturday evening 3YA will re-broadcast the week-end programme of 2YA.

ON Sunday evening, after church, 3YA will present Sir Arthur Sullivan's "The Prodigal Son." The vocalists will be the Melodious Four.

## Features from 4YA

THE divine service from the Hanover Street Baptist Church will be relayed on Sunday evening, and will be followed by a relay of the St. Kilda Band's open-air concert, should the weather be suitable.

THE band concert on Tuesday evening will commence with the very popular march, "On the Quarter Deck" (Alford). Other numbers by the band will be Rossini's overture, "Tancredi," selections of "Irish Melodies" and "Community Songs," and the popular Irish song, "Danny Boy," arranged as a cornet solo with band accompaniment. Miss Gwenda Burt (contralto), Mr. A. Bicknell (baritone), and Mr. J. McNaughton (bass) will contribute the vocal numbers, interspersed between the band items. Miss Roberta Williams will recite "The Little Quaker Sinner" and "Public Conversations."

THE Serenaders' Quartet will make its second appearance on Wednesday evening again with a group of old darkie songs, including "Ise Gwine

Back to Dixie," "Oh, Dem Golden Slippers," and "My Old Kentucky Home." Miss Mae Matheson (soprano), Miss Dorothy Allen (contralto), Mr. W. Harrison (tenor), and Mr. R. B. McDonald (baritone), comprising the individual members of the quartet, will each render solo numbers. The 4YA Broadcasting Trio will present Drigo's "Serenade" and Brahms' "Hungarian Dances, No. 6." Violin, cello, and piano solos will also be heard. Three humorous elocutionary numbers will be presented by Miss Rona Scott.

THE programme for Friday evening will be of an interesting type, during which Mr. Clarence Paine will recite some humorous elocutionary numbers, and Mrs. Ernest Drake will play on the piano "Romance," from "Tannhauser." Some leading vocalists have also been engaged for this programme. At the conclusion of the studio concert dance music will be relayed from the Savoy.

SATURDAY'S programme as usual will be of the vaudeville type. Miss Eileen Cooper, in songs at the piano, will entertain with "Plumstones," "Slipper and Shoes," and "Putting Up With It," the three being most humorous numbers. Mr. Norman Scurr will sing popular song hits. Comic Scottish songs will be rendered by Mr. J. Paterson, and humorous sketches will be enacted by Miss Anita Winkel and Major F. H. Lampen.

DURING the evening orchestral music under the direction of Monsieur Henri De Rose, Mus. Bac., will be relayed from the Octagon Theatre.

## Children's Sessions

AT 1YA.

TUESDAY, DECEMBER 11.—Uncle George has good news for to-night. Miss Tayler and her orchestra will be present and will entertain the Radio Family with their bright music.

WEDNESDAY—Uncle Tom once again with stories, songs and birthday greetings. Cousins will also be present with songs and recitations.

THURSDAY—We're off to foreign countries to-night, so all aboard. Peter Pan will be at the helm, and you will learn much about other countries, and have wonderful adventures getting there.

FRIDAY—Nod and Aunt Jean in charge. They will have jokes, stories, and songs and cousins will be present playing the piano.

SATURDAY—Cinderella will be assisted this evening by cousins playing duets and solos. If you listen very carefully you will learn all sorts about the sun, moon and stars.

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

AT 2YA.

MONDAY, DECEMBER 10—Girls and boys from the Petone Cen-

tral School are coming to give a bright little hour of songs and recitations, and they have an orchestra which should be very enjoyable. The orchestra will be conducted by Mr. G. C. Smith. Uncle Jeff will greet you with the best of birthday wishes, and Aunt Gwen will be there, too.

TUESDAY—Pupils of Miss Edna Snedder will entertain to-night, with pianoforte duos and solos. Cousin Constance is singing. She always gives pleasure, and last but not least is Cousin Gladys—a new cousin who will recite. Big Brother Jack will be there with—Robinson—who always crowns his welcome to Radioland.

THURSDAY—For this hour we have some old friends—the girls and boys of Standard 6, Thorndon Normal School, under Mr. Kennedy—so we can look forward to a very happy time. Aunt Gwen will be there, too, with greetings and maybe a little bedtime story.

FRIDAY—A relay children's hour to-night from the Girls' Presbyterian Orphanage. The girls have lots of jolly songs to sing and Uncle George (our new Uncle) will wish the little birthday folk many happy returns of the day.

SATURDAY—A cheery little hour, to-night. There will be recitations about fairies by Mrs. Martyn Williams's pupils and songs and banjo-mandolin solos from Cousins Nola and Molly. Uncle Toby will be there with greetings and the good-night song.

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

AT 3YA.

MONDAY, DECEMBER 10.—Maori music, songs, customs and legends will be the feature of this hour with Scatterjoy. Our friends, Atawhai and Puingatai, will sing for you, and little Cousin Kathleen will give you

the "Waiata Poi." So there you are, with some joy before you.

WEDNESDAY.—Mother Hubbard and Uncle Peter providing a specially good hour for you all before they go for their holidays. And Auntie Robbin will tell you more of her delightful nature stories.

THURSDAY.—Uncle Hal with a box full of songs and stories. Cousins Victor, Marie, Joan, Geoff. and Pat to help make the time merry with their songs, stories and music.

FRIDAY.—Big Brother will have something interesting to tell you to-night, and Mr. Keys something special for the boy who is just leaving school. The pupils of Mr. J. Lester will provide the rest of the programme: dialogues, recitations and music.

SATURDAY—Chuckle and Aunt Pat, "How-do-you-doing everybody," and Mrs. Frye's pupils helping with funny stories and songs.

SUNDAY—Children's Song Service, conducted by Uncle David, assisted by the children from the Moorhouse Avenue Church of Christ Sunday School.

AT 4YA.

TUESDAY, DECEMBER 11.—When children prepare an anniversary concert it is a pity to waste all the good things by giving them only once. Here is a party of children who will repeat their anniversary concert so that all the family can hear. The Roslyn Church of Christ School will entertain the family.

FRIDAY—Here is another concert party of children who will please you by the manner in which they sing and recite. Brother Bill has heard them, and thinks they are worth the whole family listening to their songs and recitations. Tune in at 6 promptly or you may miss some of the items. Aunt Sheila will tell a story, and there will be the letters and birthdays.

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# Full Programmes for Next

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## Sunday, December 9

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

- 11 a.m.: Relay of service from Auckland Unitarian Church—the occasion being the farewell to the present minister, the Rev. Albert Thornhill.  
 3 p.m.: Afternoon session—selected studio items.  
 4.0: Literary selection by the Announcer.  
 4.8 Selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session, conducted by Uncle Leo.  
 6.55: Relay of service from Mt. Eden Congregational Church—Preacher: Mr. R. C. Roberts, B.A., B.D. Organist and choirmaster: Mr. Hawkin.  
 8.30: Gramophone lecture-recital by Mr. A. Fairburn.  
 9.30: Close down.

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

- 3 p.m.: Afternoon session—selected studio items.  
 4.30: Close down.  
 6.0: Children's Sunday Service, conducted by Uncle Ernest.  
 7.0: Relay of evening service from Terrace Congregational Church—Preacher: Rev. Ernest R. Weeks. Organist and choirmaster: Mr. H. Brusey. (This will be the last service to be broadcast by the Rev. Weeks before he leaves for England).  
 8.35: (Approx.)—Studio concert.  
 Overture—Mengelberg's Concertgebouw Orchestra, "Anacreon" (Cherubini) (Columbia Record 04054/5).  
 Mezzo-soprano solo—Mrs. G. Millward, "Ave Maria" (Mascagni).  
 Orchestral—National Symphony Orchestra, "Prelude—La Traviata" (Verdi) (H.M.V. Record EB24).  
 Quartet—Galli-Curci, Homer, Gigli and De Luca, "Bella Figlia Dell'Amore" (from "Rigoletto"), (Verdi) (H.M.V. Record DQ102).  
 Pianoforte solos—William Murdoch, (a) "Song Without Words" (Mendelssohn); (b) "Minuet in G" (Paderewski), (Columbia Record 02666).  
 Duet—Mr. and Mrs. George Millward, "Miserere" Duet (from "Il Trovatore") (Verdi).  
 Cello with orchestra—Giulhermina Suggia, "Kol Nidrei" (Bruch) (H.M.V. Record DB1083).  
 Tenor solo—Mr. George Millward, "Comfort Ye, My People" (from "The Messiah") (Handel).  
 Overture—London Symphony Orchestra, "Coriolan" (Beethoven) (H.M.V. Record D1409).  
 Mezzo-soprano solo—Mrs. G. Millward, "Song of Ruth" (Gounod).

- Organ solos—Reginald Goss-Custard, F.R.C.O. (a) "The Question" (Wolstenholme); (b) "The Answer" (Wolstenholme) (H.M.V. Record B415).  
 Baritone solo—Peter Dawson, "Six Australian Bush Songs" (James) (H.M.V. Record C1125).  
 Violin solo—Joseph Szigeti, "Slavonic Dance in G Minor" (Dvorak-Kreisler) (Columbia Record 04129).  
 Duet—Mr. and Mrs. Geo. Millward, "Barcarolle" (from "Tales of Hoffman") (Offenbach).  
 Band—H.M. Grenadier Guards, "The Rose" (Myddelton) (Columbia Record 02521).  
 Tenor solo—Mr. Geo. Millward, "Down in the Forest" (Landon Ronald).  
 Orchestral—Royal Opera Orchestra, "1812" Overture (Tchaikowsky) (H.M.V. Records 1280/1).  
 Close down.

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

- 8 p.m.: Gramophone recital of selected items, electrically reproduced.  
 4.30: Close down.  
 5.30: Children's song service, conducted by Uncle David.  
 6.30: Relay of service from Trinity Congregational Church—Preacher: Rev. Gardner Miller. Choirmaster: Mr. A. G. Thompson, B.A.  
 7.45: (approx) Overture—Halle Orchestra, "Rosamunde" (Schubert) (Columbia Record 04056).  
 7.53: Tenor solo—Mr. H. Blakeley, "I Arise from Dreams of Thee" (Salaman).  
 7.58: Choir—Sheffield Choir, "The Sun Shall be no More" (Woodward) (Columbia Record 02584).  
 8.2: Bass solo—Mr. E. J. Johnston, "For all Eternity" (Mascheroni).  
 8.6: Tenor and bass duet—Lyric Duo, "Watchman, What of the Night?" (Sargeant).  
 8.10: Orchestra—London Symphony Orchestra, "Coriolan Overture" (Beethoven) (H.M.V. Record D1409).  
 8.18: Tenor solo—Mr. H. Blakeley, "Oft in the Stilly Night" (Trdtl).  
 8.22: Bass solo—Mr. E. J. Johnston, "The Norseman's Song" (Allitsen).  
 Relay from Municipal Concert Hall of the Schubert Centenary (repeat) programme, produced by Messrs. Chas. Begg and Co., in aid of Bandmen's Memorial Fund.  
 9.30: Close down.

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

- 5.30 p.m.: Children's song service, conducted by Big Brother Bill.  
 6.30: Relay of service from Hanover Street Baptist Church—Preacher: Rev. E. S. Tuckwell. Choirmaster: Mr. H. P. Desmoulin. Organist: Mr. Upton Harvey.  
 8.0: Relay from St. Kilda, of concert by the St. Kilda Band.  
 9.15: Close down.

## Monday, December 10

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

SILENT DAY.

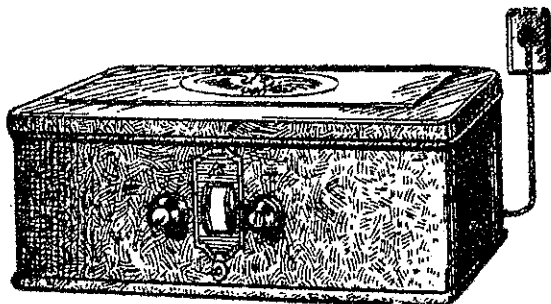
### 2YA, WELLINGTON (420 METRES)—MONDAY, DECEMBER 10.

- 3 p.m.: Chimes of the G.P.O. clock.  
 3.1: Selected gramophone items.  
 4.30 and 4.55: Sports results to hand.  
 5.0: Close down.  
 6.0: Children's session, conducted by Uncle Jeff and Aunt Gwen.  
 7.0: News session—market reports and sports results.  
 7.40: Lecturette—Mr. T. Bryce Wilson, "Care of the Feet."  
 8.0: Chimes of the G.P.O. clock.  
 A special programme by the Singing Circle of the Pioneer Club (Accompanist, Mrs. Clinton Hunt).  
 8.1: Overture—Orchestra, "Oberon" (Weber).  
 8.9: Glee—Singing Circle, "Tuscan Folk Songs" (Caracciolo).  
 8.16: Pianoforte solo—Mrs. Vickery, "Spinning Song" (Wagner).  
 8.20: Vocal solo—Mrs. Ramsay, "Invocation to the Nile" (Bantock).  
 8.23: Monologue—Miss Lena Van Staveren, "Old Pierrot" (Levey).  
 8.26: Vocal solo—Mrs. Mitchell, "I Will Await Thee" (Clarke).  
 8.30: Cello solo with orchestral accompaniment, Mr. George Ellwood, "Prelude and Clare de Lune" (Massenet).  
 8.36: Soprano solo—Miss Nora Gray, "Spring Song."  
 8.40: Vibraphone novelty—"Diane" (Parlophone Record A2548).  
 8.44: Vocal solo—Miss Penny, "I Am Longing for the Spring" (Mostyn).  
 8.47: Glee—Singing Circle, "Twenty Love Sick Maidens" (Sullivan).

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# Week-all Stations-to Dec. 16

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- 8.51: Mezzo-contralto solo—Mrs. P. J. Townley, "The Fortune Hunter" (Wilby).  
 8.55: Weather forecast.  
 8.57: Orchestral—Repeat number.  
 9.5: Vocal solo—Mrs. Ramsay, "Trees" (Rasbach).  
 9.8: Recitals—Miss Lena Van Staveren, (a) "His First Long Trousers" (Mayer); (b) "Johnny, Me and You" (Grain).  
 9.16: Vocal solo—Mrs. Mitchell, "My Heart's Desire" (Clarke).  
 9.20: Brees—Singing Circle, (a) "Three Little Maids," "School Girls' Chorus" (from "The Mikado") (Sullivan); (b) "Barcarolle" (from "Tales of Hoffman") (Offenbach).  
 9.27: Soprano solo—Miss Nora Gray, "Bird of Blue" (German).  
 9.30: Suite—Orchestra, "Pelleas et Melisande" (Part 1).  
 1. At the Castle Gate.  
 2. Melisande.  
 3. At the Sea Shore.  
 4. A Spring in the Park.  
 5. The Three Blind Sisters.  
 6. Pastorale.  
 9.47: Mezzo-contralto solo—Mrs. P. J. Townley, "Land of the Sky-Blue Water" (Cadman).  
 9.50: Glee—Singing Circle, (a) "Within My Garden" (Schumann); (b) "Fall On Me Like a Silent Dew" (Cadman); (c) "Canon" (Martini).  
 10.0: Suite 9 Orchestra, "Three Spanish Dances" (Moszkowski).  
 10.10: God Save the King.  
 (Note: This programme will be interrupted at 9 o'clock to permit of a description being given of the boxing match—Macalister v. Frank Taylor.)

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

- 3 p.m.: Afternoon session—Selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session, conducted by Scatterjoy.  
 7.15: News session.  
 7.30: Talk—Mr. E. J. Bell, "Books."  
 8.0: Chimes.  
 Band night, featuring Woolston Brass Band, under the conductorship of Mr. R. J. Estall, and items by assisting artists.  
 8.1: March—Band, "London Pride" (Moorehouse).  
 Overture—Band, "Raymond" (Thomas).  
 8.13: Mezzo-soprano solos—Mrs. Wilfred Owen, (a) "The Sweetest Flower that Blows" (Hawley); (b) "All For You" (Easthope Martin).  
 8.17: Instrumental trios—Christchurch Broadcasting Trio, (a) "Dialogue" (Bachman); (b) "Polish Dance" (Schawrenka).  
 8.26: Tenor solo—Mr. W. J. Trewern, "Yes, Let Me Like a Soldier Fall" (Wallace).  
 8.30: Cornet duet, followed by mezzo-contralto solo—Bandsmen Barber and Annand, Miss Marian Woodhouse, (a) "Convent Bells" (band accompaniment) (Blockley); (b) "The Sands o' Dee" (Clay).  
 8.39: Male voice quartet—Goodrich Silvertown Quartet, "Who's Blue Now?" (Meyer and Caesar) (Columbia Record 01192).  
 8.43: Humorous recital—Mr. H. Instone, "The Cricket Club at Red Nose Flat" (Hickory-Wood).  
 8.49: Selection—Band, "Il Trovatore" (Verdi).  
 9.0: Weather forecast.  
 9.2: Overture—Royal Philharmonic Orchestra, "Rienzi Overture" (Wagner) (Columbia Records L1820/1).  
 9.18: Baritone solo, followed by mezzo-soprano solos—Mr. J. Francis Jones and Mrs. Wilfred Owen, (a) "Father O'Flynn" (Stanford); (b) "An Erisky Love Lilt" (Kennedy-Fraser); (c) "How Wonderful" (Easthope-Martin).  
 9.27: Instrumental trios—Christchurch Broadcasting Trio, (a) "Russian Valse" (Bantock); (b) "Minuetto" (Borresen).  
 9.35: Tenor solos—Mr. W. J. Trewern, (a) "A Farewell" (Liddle); (b) "Border Ballad" (Cowen).  
 9.42: Valse—Band, "Donnan Wellan" (Ivanovici).  
 Foxtrot—Band, "Hot Roasted Peanuts" (Tobias).  
 9.51: Mezzo-contralto solos, Miss Marian Woodhouse, (a) "In Summer Fields" (Brahms); (a) "Little Blue Pigeon" (Needham).  
 9.57: Humorous recital—Mr. H. Instone, "I'm Excited" (Tom Foy).  
 10.2: Baritone solos—Mr. J. Francis Jones, (a) "The Wedding of Shon McLean" (Hatton); (b) "Cargoes" (Coningsby Clarke).  
 10.7: Intermezzo—Band, "Melinda's Fairy Bower" (Ord Hume).  
 March—Band, "The Victor's Return" (Rimmer).  
 God Save the King.

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

SILENT DAY.

## Tuesday, December 11

### IYA AUCKLAND (333 METRES)—TUESDAY, DECEMBER 11.

- 3.0 p.m.: Afternoon session—selected studio items  
 4.0: Literary selection by the Announcer.  
 4.8: Selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session conducted by Uncle George.  
 7.15: News and market reports; book review.  
 8.0: Chimes.  
 8.1: Overture—Orchestra, "Semiramis" (Rossini).  
 8.11: Soprano solo—Miss Christina Ormiston, "Ave Maria" (Schubert).  
 8.15: Pianoforte solo—Mr. Cyril Towsey, "Impromptu in B Flat" (Schubert).  
 8.22: Quartette—Lyric Quartet, "Sunset" (Vander-Water).  
 8.26: Bass solo—Mr. Ernest Thomas, "Neptune's Toll" (Jude).  
 8.30: Relay of musical entr'acte from Majestic Theatre Orchestra under the direction of Mr. J. Whiteford-Waugh).  
 8.36: Tenor solo—Mr. Arthur Ripley, "The Minstrel Boy" (Moore).  
 8.40: Suite—Orchestra, "Dance of the Hours" (Ponchielli).  
 8.50: Humour—Mr. Alan McElwain—Some Humour.  
 8.55: Quartette—Lyric Quartet, "All Through the Night" (Welsh Air).  
 8.59: Weather forecast.  
 9.1: Lecture—Mr. A. B. Chappell M.A., "The Maori—His Notable Customs."  
 9.16: Male quartette and choruses—Parlophone Melody Coy., ("Convivial Songs") (Parlophone Record A2511):  
 1. "There is a Tavern in the Town."  
 2. "Drink to Me Only."  
 3. "Little Brown Jug."  
 4. "Loch Lomond."  
 5. "Happy is the Day."  
 Bagpipes—Pipe-Major Wm. Ross, (a) March—"Caledonian Society of Winnipeg," (b) March—"The Glengarry Gathering" (Parlophone Record A2320).  
 9.24: Soprano solos—Miss Christina Ormiston, (a) "Don't Hurry" (Sanderson), (b) "A Little Birdie" (Puccini).  
 9.31: Song suite—Orchestra, "Haydn Wood's Songs":  
 1. "Khaki and Gold."  
 2. "Leafland Lullabay."  
 3. "Fluerette, I Shall Never Forget."  
 4. "Silver Clouds."  
 5. "Wonderful World of Romance."  
 6. "I Bring You Joy."  
 7. "It is Only a Tiny Garden."  
 8. "Love's a Garden of Roses."  
 9. "When the Daisy Opens Her Eyes."

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10. "I Love Your Eyes of Grey."  
 11. "There's a Song Down Every Roadway."  
 12. "Roses of Picardy."  
 13. "Jimmy Sale Rag."  
 9.48: Humour—Mr. Alan McElwain—Some Humour.  
 9.48: Relay of musical entr'acte from Majestic Theatre Orchestra.  
 9.54: Tenor solo—Mr. Herbert Richards, "My Dreams" (Tosti).  
 9.58: Vibraphone novelty—"Diane" (Parlophone Record A2548).  
 10.2: Quartet—Lyric Quartet, "Peggy" (Thomas).  
 10.6: Musical comedy selection—Orchestra, "Tip Toes" (Gershwin).

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

- 8.0 p.m.: Chimes of the G.P.O. clock.  
 Special programme from Messrs. F. J. Pinny Ltd. (Piano selections and accompaniments will be played on the Meltona Recording Expression Player, super de Luxe model).  
 Selections from "Rose Marie" (Friml).  
 Soprano solo—Miss Gretta Stark, "The Lass With the Delicate Air" (Arne).  
 Pianoforte selection—"Amoureuse" (Berger).  
 Clarinet solo—Mr. S. Barrett, "Valse Triste" (Sibelius).  
 Pianoforte selection—"Coquetueoa" (Larregla).  
 Baritone solo—Mr. H. E. Wilson, "Macushla" (MacMurrrough).  
 Pianoforte solo—"Posthumous Polonaise" (Chopin).  
 Duet—Miss Gretta Stark and Mr. H. E. Wilson, "None Shall Part Us" (from "Iolanthe") (Gilbert and Sullivan).  
 Pianoforte selections from "The Student Prince" (Romberg).  
 Selected gramophone items.  
 5.0: Close down.  
 6.0: Children's session conducted by Big Brother Jack.  
 7.0: News session—market reports and sports results.  
 7.40: Lecture by a representative of the Agricultural Department—"For the Man on the Land."  
 8.0: Chimes of the G.P.O. clock.  
 9.1: Relay of concert by the Hutt Valley Choral Society from the King George Theatre, Lower Hutt (Conductor, Mr. Douglas E. Tayler, F.R.C.O., A.R.C.M.). The society will be assisted by the 2YA Orchestra.

#### HUTT VALLEY CHORAL SOCIETY.

(Hon. Conductor, Mr. E. Douglas Tayler, F.R.C.O., A.R.C.M.)

SEASON 1928.

Programme of Third Concert TUESDAY, December 11, in King George Theatre, Lower Hutt, at 8 p.m. (for words of songs see page 30-31.)

- "My Land" (a song of New Zealand) ..... A. A. Wedde  
 "Hiawatha" ballet music ..... Coleridge-Taylor  
 "The Wooing"; "The Marriage Feast"; "Bird Scene"; "Conjuror's Dance"; "Departure"; "Reunion."  
 2YA Orchestra (Conductor, Mr. Geo. Ellwood).  
 7. "Hiawatha's Wedding Feast" (Chorus and Orchestra) (Coleridge-Taylor. Solo: Mr. Roy Hill.

Interval.

4. Part songs (a) "O Happy Eyes" ..... Elgar  
 (b) "The Silver Swan" (Madrigal) Orlando Gibbons (1612)  
 (c) "My Bonnie Lass, She Smileth" ..... E. German  
 5. Ballet music, "Ascanio" ..... Saint-Saens  
 Love appears to Psyche; Ensemble; Variation, Love Theme; Entry of Dragon of Hesperides, carrying Golden Apple; Goddesses, Bacchantes, Naida and Dryads.  
 2YA Orchestra (Conductor Mr. Geo. Ellwood.)  
 6. Part songs (a) "All in the April Evening" ..... Robertson  
 (b) "Snowflakes Falling" (Carol, with Orchestra) Bainton.  
 7. Songs (a) "Linden Lea" ..... Vaughan Williams  
 (b) "Now is my Chloris Fresh as May" ..... C. A. Lidgley.  
 Mr. Roy Hill.  
 8. Part songs (a) "O Can Ye Sew Cushions" .... Arrd. by Bantock  
 (Female voices)  
 (b) "After Many a Dusty Mile" ..... Elgar  
 (Male voices)  
 (c) "Come, Sisters, Come" ..... MacKenzie  
 (Female voices and orchestra)  
 9. "The Challenge of Thor," from "King Olaf" ..... Elgar  
 (Chorus and Orchestra)  
 God Save the King.  
 Close down.

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

SILENT DAY.

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

- 3 p.m.: Town Hall chimes.  
 3.1: Gramophone concert.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Town Hall chimes.  
 6.1: Children's session, conducted by Big Brother Bill.  
 7.15: News session.  
 7.30: Address by Mr. R. W. Marshall of Government Tourist Office—"Tourist Resorts."

- 8.0: Town Hall chimes.  
 Concert by St. Kilda Band, under the conductorship of Mr. James Dixon, and assisting artists.  
 8.1: March—Band, "Beauty's Bower" (Greenwood).  
 8.15: Bass solos—Mr. J. McNaughton, (a) "Will o' the Wisp" (Cherr); (b) "Until" (Sanderson).  
 8.21: Scottish comedian, with orchestra—Sir Harry Lauder, "The Boss o' the Hoose" (Lauder) (Zonophone Record GO79).  
 8.25: Contralto solo—Miss Gwenda Burt, "Far Across the Desert Sand" (Woodford-Finden).  
 8.28: Overture—Band, "Tancredi" (Rossini).  
 8.38: Recital—Miss Roberta Williams, "The Little Quaker Sinner."  
 8.44: Baritone, with male quartet—Jno Goss and Cathedral Male Voice Quartet, (a) "Lowlands"; (b) "Highland Laddie" (Arrgd. Harris) (H.M.V. Record B2698).  
 8.48: Baritone solos—Mr. Albert Bicknell, (a) "Oh, Could I in Song" (Malashkin); (b) "Whither?" (Schubert).  
 8.54: Air with variations—Band, "Sandon" (Rimmer).  
 9.2: Weather forecast.  
 9.4: Address—Pastor W. D. More, "More Ghost Stories."  
 9.19: Cornet solo with band accompaniment, "Danny Boy" (Weatherley).  
 9.24: Selection—Band, "Community Songs" (Rimmer).  
 9.30: Bass solo—Mr. J. McNaughton, "McGregor's Gathering."  
 9.34: Violin solo—Fritz Kreisler, "From the Land of the Sky-Blue Water" (Cadman) (H.M.V. Record DA745).  
 9.38: Contralto solos—Miss Gwenda Burt, (a) "The Great Awakening" (Kramer); (b) "Pot Pourri" (Oliver).  
 9.43: Selection—Band, "Irish Melodies" (Hume).  
 9.53: Recitals—Miss Roberta Williams, (a) "Serial Story"; (b) "Public Conversations."  
 9.59: Soprano and male quartet—Norah Blaney and the Ramblers, "Sweet Suzanne" (Leslie and Gilbert) (Columbia Record 01170).  
 10.3: Baritone solo—Mr. Albert Bicknell, "Even Bravest Heart" (Gounod).  
 10.5: March—Band, "Queen of the South" (Rimmer).  
 10.9: God Save the King.

## Wednesday, December 12

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

- 3 p.m.: Afternoon session—Selected studio items.  
 4.0: Literary selection by the Announcer.  
 4.8: Selected studio items.  
 4.25: Sports results to hand.  
 4.30: Close down.  
 6.0: Children's session, conducted by Peter Pan.  
 7.15: News and market reports—book review.  
 7.45: Lecture—"Gargoyle"—"Motor Car Lubrication."  
 8.0: Gramophone lecture-recital—Mr. Karl Atkinson, Gilbert and Sullivan's sparkling opera, "The Gondoliers."

Cast.

Duke of Plaza-Toro (a grandee of Spain) ..... Baritone  
 Duchess of Plaza-Toro ..... Contralto  
 Casilda, their daughter ..... Soprano  
 Luiz (the Duke's attendant) ..... Baritone  
 Don Alhambra del Bolero (the Grand Inquisitor) ..... Bass  
 Marco,  
 Guiseppe Palmiere ..... Tenor  
 Gianetta ..... Soprano  
 Tessa ..... Contralto  
 nez, the King's foster mother ..... Contralto  
 The story of "The Gondoliers"—"The Heavenly Twins of English Opera," will be briefly sketched—the plot of the opera will be explained, and the recital will be illustrated with "His Master's Voice" records (D1834-45, inclusive), made by the D'Oyly Carte Opera Company, under the personal supervision of Mr. Rupert D'Oyly Carte.

10.0: God Save the King.

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

SILENT DAY.

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

- 3 p.m.: Afternoon session—selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session conducted by Uncle Peter and Mother Hubbard.  
 7.15: News session.  
 7.30: Addington stock market reports.  
 8.0: Chimes.  
 8.1: GRAND OPERA.—A special presentation of "The Valkyrie" (Wagner) Act I. (H.M.V. Records D1820/3).  
 Tenor with orchestra—Walter Widdop and London Symphony orchestra, "Prelude—Siegmond Seeks Shelter in Hunding's Dwelling."  
 Tenor with orchestra—"The Sword Hilt Gleams in the Firelight."  
 Soprano and tenor with orchestra—G. Ljungberg and W. Widdop, (a) "Sieglinde Comes to Siegmund"; (b) "Siegmond Greets the Spring Night."

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- Soprano and tenor with orchestra—Love duet (a) "You are the Spring!" (b) "How Broad is Your Brow."
- Soprano and tenor with orchestra—"Siegmond Draws the Sword From the Tree: The Lovers Fly into the Night."
- 8.29: Instrumental quintet—Bohemian Quintet, (a) "Valse Triste" (Sibelius); (b) "Scarf Dance" (Delibes).
- 8.38: Soprano solos—Miss Thelma Ayres, (a) "The Loreley" (Liszt); (b) "Love the Jester" (Montagu Phillips).
- 8.43: Tenor solo—Mr. Douglas Suckling, "She is Far From the Land" (Lambert).
- 8.47: Humorous recital, followed by baritone solo—Mr. L. T. J. Ryan, Mr. Fred. Penfold, (a) "Bertram's Maiden Speech" (Rutherford); (b) "The Bandolero" (Leslie Stuart).
- 8.56: Contralto solo—Miss Mary Taylor, "O Lovely Night" (Landon Ronald).
- 9.0: Weather forecast.
- 9.1: Orchestral—Columbia Symphony Orchestra, "March of the Bojaren" (Halvorsen) (Columbia Record 02622).
- 9.5: Soprano solo—Miss Thelma Ayres, "Flower Song" (from "Faust") (Gounod).
- 9.9: Organ solo—G. T. Pattman, "Sanctuary of the Heart" (Ketelbey), (Columbia Record 02683).
- 9.14: Tenor solos—Mr. Douglas Suckling, (a) "God Touched the Rose" (Helen Boon); (b) "You've Got Your Mother's Eyes" (Drummond).
- 9.20: Vocal solo and chorus—Raymond Newell, (a) "Johnny Come Down to Hilo"; (b) "The Hog's Eye Man" (Terry), (Columbia Record 01024).
- 9.24: Humorous recital to piano accompaniment—Mr. L. T. J. Ryan, "The Colonel" (Winter).
- 9.33: Instrumental quintet—Bohemian Quintet, "Three Dances" (from "Henry VIII.") (German).
- 9.43: Contralto solos, followed by baritone solos—Miss Mary Taylor and Mr. F. C. Penfold, (a) "Sombre Woods" (Lully); (b) "Harbour Night Song" (Sanderson); (c) "The Devout Lover" (White); (d) "Give a Man a Horse he can Ride" (Head).
- 9.56: March—H.M. Grenadier Guards Band, "Bond of Friendship" (Rogan) (Columbia Record 4359).
- 10.0: Close down.

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

- 7 p.m.: Town Hall chimes.
- 7.1: Request gramophone concert.
- 7.40: News session—Burnside stock sales report.
- 8.0: Town Hall chimes.
- 8.1: Military Band selection—H.M. Coldstream Guards, "H.M.S. Pinafore" (Sullivan) (H.M.V. Record C1283).
- 8.9: Vocal quartets—Serenaders, (a) "Ise Gwine Back to Dixie" (White); (b) "Oh, Dem Golden Slippers" (Bland).
- 8.17: Violin solo—Miss Eva Judd, "La Serenata" (Braga).
- 8.21: Contralto solo—Miss Dorothy Allen, "Golden Slumbers" (Liza Lehmann).
- 8.24: Wurlitzer organ solos—Chas. W. Saxby, (a) "Can't you Hear Me say I Love You?" (Derickson, Brown); (b) "Janette" (Waltz) (Nicholls) (Zonophone Record 5094).
- 8.32: Baritone solo—Mr. R. B. Macdonald, "One of the Guards" (Fisher).
- 8.36: Instrumental trio—4YA Broadcasting Trio, "Serenade" (Drigo).
- 8.41: Soprano solo—Miss Mae Matheson, "Had You But Known" (Denza).
- 8.44: Recitals—Miss Rona Scott, (a) "Setting a Hen" (Anon); (b) "The Lovers" (Anon).
- 8.50: Tenor solo—Mr. W. Harrison, "I Did Not Know" (Trottere).
- 8.53: Cello solo—Mr. P. J. Palmer, "Romance Sans Parole" (Van Goen).
- 8.58: Weather forecast.
- 9.0: Selection—National Symphony Orchestra, "Aida" (Verdi), (Zonophone Record A340).
- 9.9: Vocal quartet—Serenaders, "My Old Kentucky Home" (Foster).
- 9.13: Pianoforte solo—Mrs. Ernest Drake, "Starlight" (MacDowell).
- 9.18: Contralto solo—Miss Dorothy Allen, "Queen Mary Songs" (Elgar).
- 9.21: Concerted with orchestra—Light Opera Company, "Gems From 'The Bohemian Girl'" (Balfe) (H.M.V. Record EB9).
- 9.29: Baritone solo—Mr. R. B. Macdonald, "Nita Gitana" (Newtown).
- 9.32: Instrumental trios—4YA Broadcasting Trio, (a) "Song of the Volga Boatmen"; (b) "Hungarian Dance No. 6" (Brahms).
- 9.42: Soprano solo—Miss Mae Matheson, "Not Understood" (Houghton).
- 9.46: Hawaiian selection—Hilo Orchestra, "Lou'siana Lullaby" (Zoeller, Bernhard) (H.M.V. Record EA374).
- 9.50: Recital—Miss Rona Scott, "A Kiss is as Good as a Smile" (West).
- 9.54: Tenor solo—Mr. W. Harrison, "Mother of Mine" (Goetz).
- 9.57: Violin solo—Miss Eva Judd, "Andante Allegro" from "Sonata in B Minor" (Bach).
- 10.1: Concerted with orchestra—Light Opera Company, (a) Vocal Gems from "The Vagabond King" (Friml); (b) Vocal Gems from "Lady Luck" (Hedley) (H.M.V. Record C1346).
- 10.9: God Save the King.

**Thursday, December 13**

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

- 3 p.m.: Afternoon session—selected studio items
- 4.0: Literary selection by the Announcer.

- 4.8: Selected studio items.
- 4.25: Sports results to hand.
- 4.30: Close down.
- 6.0: Children's session, conducted by Peter Pan.
- 7.15: Gardening talk—Mr. L. A. Griffiths, F.R.H.S., "The Wonders of Nature."
- 6.30: News and market reports—book review.
- 8.0: Chimes.
- 8.1: Bell solos—Billy Whitlock, (a) "Lullaby Waltz" (Whitlock); (b) "The Joker" (Whitlock) (Parlophone Record A2503).
- 8.8: Baritone solo—Mr. Ernest Snell, "Five Eyes" (Armstrong Gibbs).
- 8.12: Instrumental trio—Auckland Trio, "Andante and Scherzo" (Reissiger).
- 8.20: Soprano solo—Miss Nancye Hanna, "Lament of Isis" (Bantock).
- 8.24: Orchestral—Berlin State Opera Orchestra, "Battle Symphony" (Beethoven) (Parlophone Record E10555).
- 8.32: Dramatic sketch—Griffiths Duo, "New Year's Eve" (MS.).
- 8.47: Violin solo—Miss Ina Bosworth, "Tambourin" (Leclair-Kreisler).
- 8.51: Tenor solo—Mr. Arthur Ripley, "Yesterday and To-morrow" (Spross).
- 8.55: Soprano solo—Miss Marjorie Fair, "Ritournelle" (Chaminade).
- 8.59: Weather forecast.
- 9.0: Instrumental trio—Auckland Trio, "Naila Valse" (Delibes).
- 9.8: Humour and sketch—Griffiths Duo, (a) "Funny Phrases" (MS.); (b) "Good King Arthur" (MS.).
- 9.23: Orchestral—Twins Grand Orchestra, "Chocolate Soldier" (Waltz), (Strauss) (Zonophone Record 370).
- 9.27: Presentation of excerpts from "The Chocolate Soldier" (Strauss), produced under the direction of Madame Irene Ainsley.

**Cast.**

- Naida ..... Miss Nancye Hanna
- Mascha ..... Miss Violet Harrison
- Alexis ..... Mr. Arthur Ripley
- Bumerli ..... Mr. Ernest Snell

- "We are Marching Through the Night"..... Chorus
- "We, Too, are Lonely"..... Trio
- "My Hero"..... Soprano
- "Sympathy" ..... Soprano and baritone
- "Seek the Spy"..... Ensemble
- Orchestral—Dajos Bela Orchestra, "Eldgaffeln" (Landen) (Parlophone Record A4009).
- "Three Women Singing"..... Trio
- "The Fatherland is Free"..... Chorus
- "Never was There Such a Lover"..... Tenor and soprano
- "The Chocolate Soldier"..... Baritone and soprano
- Orchestral—Dajos Bela Orchestra, "Electric Girl" (Parlophone Record A4009).
- "That Would be Lovely"..... Baritone and soprano
- "I Love You Only"..... Chorus
- "Falling in Love"..... Tenor and soprano
- "Letter Song"..... Soprano solo and duet
- "Thank the Lord the War is Over"..... Chorus
- God Save the King.

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

- 3 p.m.: Afternoon session—Selected studio items.
- 4.30 and 4.55: Sports results.
- 5.0: Close down.
- 6.0: Children's session conducted by Aunt Gwen.
- 7.0: News session—Market reports and sports results.
- 7.40: Lecturette—Mr. Alfred Blaxall, "How to Reduce Weight Naturally and Easily."
- Studio programme by the Band of 1st Battalion, Wellington Regiment, under the conductorship of Lieut. B. J. Shardlow, and assisting artists.
- 8.0: Chimes of the G.P.O. clock.
- 8.1: March—Band, "Distant Greeting" (Doring).
- Selection—Band, "A Musical Bouquet" (Round).
- 8.16: Dog trot—Four Gay Dogs, "C.O.N. T.A.N.T.I.N.O.P.L.E." (Allan)
- 8.20: Baritone solo—The Popular Fellow, "Don't Forget the Old Folk" (Ingils).
- 8.24: Hawaiian selection—Queenie and David Kalli, "Ukulele Dream Girl" (Low) (Parlophone Record A2364).
- 8.28: Recital—Mr. Peter Dorrian, "Spring" (Thomas).
- 8.33: Cornet polka—Lieut. B. J. Shardlow, "The Amateur" (Greenwood).
- 8.37: Waltz—Band, "Sunset on the St. Lawrence" (Heller).
- 8.43: Recitation—The Sad Fellow, "Why Do I Always Remember?" (Gunsky).
- 8.47: Cohenisms—The Two Fellows, "On the 'Phone" (Hayman).
- 8.52: Soprano with orchestra—"The Barber of Seville—Il Son Docile" (Rossini) (Parlophone Record A5002).
- 8.56: March—Band, "My Regiment" (Blankenburg).
- 9.1: Weather forecast.
- 9.2: Xylophone novelty—"Polly" (Parlophone Record A2548).
- 9.6: Cheer Germ—The Bass Fellow, "Good Cider for Me" (Arundall).
- 9.10: Selection—Band, "Morning, Noon, and Night" (Suppe).
- Waltz—Band, "Dreams of the Past" (Thiere).
- 9.26: Recital—Mr. Peter Dorrian, "Heavenly Hustler" (Thomas).
- 9.31: Confidential—The Four Quiet Fellows, "The Whisper Song" (Friden).
- 9.35: Soprano with orchestra—Margherita Salvi, "Barber of Seville" (Rossini) (Parlophone Record A5002).

- 9.43: Selection—Band, "Four Indian Love Lyrics" (Woodforde-Finden).  
 9.53: Some Yorksha—The Choom Fellow, "Yorkshirettes" (original).  
 9.57: Humorous duet—Two of 'em, "The Good Little Boy and the Bad Little Boy."  
 10.1: Choruses—All the Fellows, "As You Like 'Em" (Medley).  
 10.6: March—Band, "Imperator" (Moorhouse) (Regimental March of N.Z.R.B.)  
 10.11: Close down.

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

- 3 p.m.: Afternoon session—Selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session, conducted by Uncle Hal.  
 7.15: News session.  
 7.30: Talk—under the auspices of the Canterbury Progress League.  
 8.0: Chimes.  
 8.1: Rebroadcast of 2YA overture.  
 8.7: Classical programme, featuring the song cycle "The Pagoda of Flowery" (Woodford-Finden), presented by the Melodious Four Quartet, with instrumental accompaniment by the Christchurch Broadcasting Trio:—  
 Descriptive opening chorus—"Shwe, Dragon Pagoda."  
 Passing of priests, with contralto solo—"I Come From Afar."  
 Prayer, trio and chorus, followed by tenor solo, (a) "Awgatha, Awgatha,"; (b) "Midst the Petals in Your Tresses."  
 Soprano solo—"In My Lacquered Tray are Roses."  
 Contralto solo—"The Star Flower Tree."  
 Baritone solo—"God Keep My Thoughts."  
 Contralto solo—"Pale Priest Beside the Shrine."  
 Contralto and bass duet—"Ah! It was There to Live and Love."  
 Mixed quartet—"Shwe Dragon Pagoda."  
 8.43: Recital—Mr. R. R. Wills, "Napoleon's Tomb" (MS).  
 8.48: Pianoforte solo—Miss Dorothy Davies, "Rhapsody in C" (Dohnanyi).  
 8.58: Soprano solo—Miss Frances Hamerton, "L'Ete" (Chaminade).  
 9.2: Weather forecast.  
 9.4: Orchestral—Ketelbey's Concert Orchestra, "Sanctuary of the Heart" (Ketelbey) (Columbia Record 02690).  
 9.12: Tenor solo—Mr. Russell Sumner, "Till I Wake" (from "Four Indian Love Lyrics") (Woodford-Finden).  
 9.16: Organ solo—G. T. Pattman, (a) "Temple Bells"; (b) "Less than the Dust" (from "Four Indian Love Lyrics") (Woodford-Finden) (Columbia Record 02696).  
 9.20: Shakespearean recital—Mr. R. R. Wills, "Brutus Addresses the Mob" (from "Julius Caesar").  
 9.25: Instrumental trios—Christchurch Broadcasting Trio, (a) "Elegie and Consolation" (Atherton); (b) "Introduction and Habanera" (Bizet).  
 9.33: Vocal duet—Melodious Duo, "Pau's Holiday" (Bridge).  
 9.37: Tenor with orchestra—James Melton, "When Love Comes Stealing" (Rapee, Pollock) (Columbia Record 01215).  
 9.41: Baritone solo, followed by vocal quartettes—Mr. T. D. Williams, Melodious Four, (a) "A Soldier's Song" (Mascheroni); (b) "A Summer Wind" (c) "Evening" (Cruickshank).  
 9.51: Octette—J. H. Squire's Celeste Octet, "Serenade" (Titl) (Columbia Record 9116).  
 9.55: Band selection—H.M. Grenadier Guards, "The Meistersingers" (Wagner) (Columbia Record 02697).  
 10.3: Close down.

### 4YA, DUNEDIN (463 METRES)—THURSDAY, DECEMBER 13.

SILENT DAY.

## Friday, December 14

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

- 3 p.m.: Afternoon session—Selected studio items.  
 4.0: Literary selection by the Announcer.  
 4.8: Selected studio items.  
 4.25: Sports results to hand.  
 4.30: Close down.  
 6.0: Children's session conducted by Nod and Aunt Jean.  
 7.15: News and market reports; book review.  
 8.0: Overture—Orchestra, "A Children's Overture" (Quilter).  
 8.10: Soprano solo—Madame Mary Towsey, "Out on the Rocks" (Sainton-Dolby).  
 8.14: One-act play—Auckland Comedy Players, "The Discovery."  
 8.32: Ballet suite—Orchestra, "Ascanio Ballet Music," Part 1 (Saint-Saens):  
 1. Entry of the Master of the Games.  
 2. Venus, Juno, and Pallas (soloist, Mr. V. Bedford).  
 3. Diana, Wood nymphs and Water nymphs.  
 4. Bacchus and Bacchantes.  
 5. A vision of Phœbus Apollo and the Nine Muses.  
 6. Phœbus and the Harp and Cupid.  
 (Saint-Saens makes great use of the woodwind in this ballet of the gods, and the second number is particularly notable for the brilliant flute solo).  
 8.45: Baritone solo—Mr. John Bree, "When the Swallows Homeward Fly" (White).  
 8.48: Mezzo-soprano solo—Miss Beryl Barker, "The Fiddler of June" (Elliott).

- 8.51: Male quartets and choruses—Parlophone Melody Company, "Convivial Songs" (Parlophone Record A2511):  
 1. I Married a Wife.  
 2. John Peel.  
 3. Sally in Our Alley.  
 4. Rolling Home.  
 5. Bring My Rum Ration to Me.  
 6. We Won't Go Home Till Morning.  
 8.55: Contralto solo—Miss Edna Peace, "Down Where the Lilacs Fade" (Maud).  
 8.58: Quartet—Madame Mary Towsey's Quartet, "O Hush Thee, My Baby."  
 9.1: Weather forecast.  
 9.2: One-act comedy—Auckland Comedy Players, "A Perfect Pair."  
 9.17: Novelty—Orchestra, "In a Chinese Temple Garden" (Ketelbey).  
 Dance—Orchestra, "Danse des Persanes" (Moussorgsky).  
 9.27: Quartet—Madame Mary Towsey's Quartet, "The Fairies Were Tripping" (Taylor).  
 9.30: Soprano solo—Miss Irma Schollum, "You in a Gondola" (Clark).  
 9.33: Drawing-room entertainers—The Asquiths, "Thirty Minutes' Drawing-room Entertainment."  
 10.3: Duet—Madame Mary Towsey and Miss Irma Schollum, "O That We Two Were Maying" (Nevin).  
 10.6: Tenor solos—Mr. John McDougall, (a) "My Heart is a Haven" (Steinel), (b) "You Will Never Grow Old" (Drummond).  
 10.11: Duet—Madame Mary Towsey and Mr. John Bree, "The Golden Song," from "Lilac Time" (Schubert-Clutsam).  
 10.14: Selection—Orchestra, "The Gondollers" (Sullivan).  
 10.24: Close down.

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

- 3 p.m.: Chimes of the G.P.O. clock.  
 3.1: Selected gramophone items.  
 4.30 and 4.55: Sports results.  
 5.0: Close down.  
 6.0: Children's session conducted by Uncle George.  
 7.0: News session—Market reports and sports results.  
 7.40: Lecturette—Mr. A. E. Wilson, of the Tourist Department, "New Zealand's Holiday Attractions."  
 8.0: Chimes of the G.P.O. clock.  
 8.1: Overture—Orchestra, "Volga Gipsies" (Spialek).  
 8.10: The Orpheus Quartet will present vocal gems from "The Greek Slave" (Sidney Jones).  
 Trio—"Whirligig" (Sidney Jones).  
 8.13: Instrumental quartet—London Etude Quartet, "Carnival de Venice" (Benedict) (Parlophone Record A4023).  
 8.17: Baritone solo—Mr. Len Barnes, "Freedom" (Sidney Jones).  
 8.21: Pianoforte solos—Miss Molly Cook, (a) "Falling Blossoms" (Pesse); (b) "Shepherd's Song" (Schulhoff).  
 8.28: Soprano solo—Mrs. Alice Harris, "I Cannot Love" (Sidney Jones).  
 8.31: Cello solo—Mr. Geo. Ellwood, "Kol Nidrei" (Bruch).  
 8.38: Humorous duets—Mr. and Mrs. Albert Russell, (a) "On Your Honey-moon" (Fragson); (b) "The Croony Melody" (Goodwin).  
 8.46: Tenor solo—Mr. Arthur Coe, "The Girl of My Heart" (Sidney Jones).  
 8.49: Violin solos—Tossy Spiwakowsky, (a) "Turkish March" (Beethoven); (b) "Dervish Chorus" (Beethoven) (Parlophone Record A2561).  
 8.57: Duet—Mrs. Alice Harris and Mr. Len Barnes, "All Is Fair" (Sidney Jones).  
 9.1: Weather forecast.  
 9.2: Instrumental—Orchestra, repeat number.  
 9.10: Quartet—Orpheus, "All Is Made Ready" (Sidney Jones).  
 9.14: Instrumental—Orchestra, "Hiawatha Suite" (Coleridge-Taylor):  
 1. The Wooing.  
 2. The Marriage Feast.  
 3. Bird Scene.  
 4. Conjuror's Dance.  
 5. Departure.  
 6. Reunion.  
 9.28: Contralto solo—Miss Lily Mackie, "I'm a Naughty Girl" (Sidney Jones).  
 9.32: Humour—Mr. and Mrs. Albert Russell, "Impressions of Vaudeville Concert and Grand Opera."  
 9.40: Quartet—Orpheus, "Here at the Balae on the Bay" (Sidney Jones).  
 9.44: Wurlitzer organ solo—Sigmund Krungold, "Gipsy Love Song" (Herbert).  
 9.48: Baritone and quartet—Mr. Len Barnes and Orpheus Quartet, "The Revels" (Sidney Jones).  
 9.52: Musical comedy selection—Orchestra, "Blue Kitten" (Friml).  
 10.2: God Save the King.  
 Close down.

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

- 3.0 p.m.: Afternoon session—selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session conducted by Big Brother.  
 7.15: News session.  
 8.1: Chimes.  
 8.2: Overture—rebroadcast of 2YA, Wellington (Studio Orchestra), "Volga Gipsies" (Spialek).  
 8.10: Popular programme featuring excerpts from the musical comedy "Kissing Time" (Caryll), presented by the Radiolian Quartet.

- Opening chorus, followed by contralto and chorus—the Radiolians and Miss Mildred Russell, (a) Opening Chorus, (b) "Godmothers" (Caryll).
- 8.17: 'Cello soli—Mr. Harold Beck, (a) "Largo" (Chopin), (b) "Gavotte" (Lully).
- 8.22: Bass solo and chorus, followed by contralto, tenor and bass trio—Mr. W. J. Richards and Radiolian Trio, (a) "My Motors" (Caryll), (b) "A Happy Family" (Caryll).
- 8.28: Instrumental trio—Christchurch Broadcasting Trio, "Miniature" (Gurlit).
- 8.37: Soprano solo—Mrs. Claris Shaw, "Some Day Waiting Will End" (Caryll).
- 8.41: Recital—Mr. Alan Brown, "The Barrister" (Robey).
- 8.46: Tenor solo, followed by soprano, tenor and bass trio, Mr. Gregory Russell and Radiolian Trio, (a) "Desertions" (b) "I Like It" (Caryll).
- 8.52: Marimba solo—Rudy Starita, "Aloha Oe" (Hawaiian Air) (Columbia Record 01143).  
Xylophone solo—Rudy Starita, "Minuet" (Paderewski). (Columbia Record 01143).
- 9.0: Weather forecast.
- 9.2: Contralto and bass duet, followed by quartet—Radiolian Duo, Radiolians, (a) "Don't Fall in Love" (Caryll), (b) "Just Back From Paris" (Caryll).
- 9.8: Military tattoo—H.M. Grenadier Guards Band, "Wembley Military Tattoo" (Columbia Record 9074).
- 9.16: Vocal quartette, followed by soprano, tenor and bass trio, Radiolians—(a) "Wouldn't You Like," (b) "Oh, How Warm" (Caryll).
- 9.21: One-step—Willyams Dance Band, "Lucky Strike" (Glogan).
- 9.26: Tenor solo—Mr. Greg. Russell, "Women Haven't Any Mercy" (Caryll).
- 9.30: Humorous recital—Mr. Alan Brown, "Mafferty Has a Hair Cut" (Herbert).
- 9.35: Hawaiian fox-trot—Willyams Dance Band, "Dreamy Paradise" (Schmidt).
- 9.40: Contralto and bass duet—Radiolian Duo, "Joan and Peter" (Caryll).
- 9.44: Instrumental trios—Christchurch Broadcasting Trio, (a) "Romance" (Bridge), (b) "Scherzo" (Reissiger).
- 9.52: Vocal quartette—Radiolians, "Some Day, Never Forget" (Caryll).
- 9.56: Slow waltz—Willyams Dance Band, "Cast Away" (Saxophone, bells and vocal), (Easton).
- 10.0: Soprano solo—Mrs. Claris Shaw, (a) "Thousands of Years Ago" (Caryll), (b) "Ma Cherie" (Caryll).
- 10.4: Banjolin solo with saxophone obligato—Messrs. East and Wilkinson—"Flag Lily" (Holt).
- 10.8: Soprano and tenor duet, followed by finale—Radiolians, (a) "In Your Eyes," (b) Finale (Caryll). Dance programme till 11 p.m.
- 11.0: Close down.

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

- 3 p.m.: Town Hall chimes.
- 3.1: Gramophone concert.
- 3.30: Relay of afternoon tea music from the Savoy.
- 3.45: Studio music.
- 4.0: Relay of music from the Savoy.
- 4.15: Gramophone items.
- 4.25: Sports results.
- 4.30: Close down.
- 6.0: Town Hall chimes.
- 6.1: Children's session, conducted by Aunt Shella and Big Brother Bill.
- 7.15: News session.
- 7.30: Book review by Mr. H. Greenwood, of the Dunedin Athenaeum.
- 8.0: Town Hall chimes.
- 8.1: Overture—London Symphony Orchestra, "Coriolan" (Beethoven) (H.M.V. Record D1409).
- 8.9: Contralto solos—Miss Dorothy Skinner, (a) "Gossiping" (Dodge); (b) "Spreading the News" (Oliver).
- 8.15: 'Cello solo—Guilhermina Suggia, "Kol Nidrei" (Bruch) (H.M.V. Record DB1083).
- 8.23: Bass solo—Mr. Neil Black, "Captain Mac" (Sanderson).
- 8.26: Recitals—Mr. Clarence Paine, (a) "The Office Boy" (Coulston); (b) "Nothing to Say" (O. Henry).
- 8.34: Soprano solos—Miss Mae Matheson, (a) "Down in the Forest" (Landon Ronald); (b) "June is in My Heart" (Vaughan Williams).
- 8.40: Pianoforte solo—Mrs. Ernest Drake, "Romance" (from "Tannhauser") (Wagner).
- 8.44: Contralto solo—Miss Dorothy Skinner, "A Heap of Rose Leaves" (Wilby).
- 8.47: Recital—Mr. Clarence Paine, "That's What I'd Do."
- 8.51: Male Quartet—De Reszke Singers, "My Lady Chlo" (Chlough Leighton) (H.M.V. Record E432).
- 8.55: Bass solos—Mr. Neil Black, (a) "The Valley by the Sea" (Adams); (b) "The Rosary" (Nevin).
- 9.1: Weather forecast.
- 9.3: GRAND OPERA: A special presentation of "The Valkyrie" (Wagner)—Act 1. (H.M.V. Records D1320/3):—  
Tenor with orchestra—Walter Widdop and London Symphony Orchestra—"Prelude—Siegmond Seeks Shelter in Hunding's Dwelling."  
Tenor with orchestra—"The Sword Hilt Gleams in the Firelight."  
Soprano and tenor with orchestra—G. Ljungberg and W. Widdop, (a) "Sieglinde Comes to Siegmund": (b) "Siegmond Greet the Spring Night."

- Soprano and tenor with orchestra—Love Duet, (a) "You are the Spring!"; (b) "How Broad is Your Brow."
- Soprano and tenor with orchestra—"Siegmond Draws the Sword from the Tree: The Lovers Fly into the Night."
- 9.31: Orchestral—Berlin Philharmonic Orchestra, "Carnival Romain" (Berlioz) (H.M.V. Record W1365).
- 9.39: Soprano solo—Miss Mae Matheson, "Open Thy Blue Eyes" (Massenet).
- 9.43: Tenor with orchestra—Tudor Davies, "Ah! Moon of My Delight" (Liza Lehmann) (H.M.V. Record D1283).
- 9.47: Tenor with violin, piano and 'cello—Joseph Hislop, "My Love is Like a Red, Red Rose" (Trdfl) (H.M.V. Record DA901).
- 9.51: Comedian with orchestra—Frank Crumit, "The Three Trees" (McNaughton) (H.M.V. Record EA887).
- 9.55: Baritone with male quartet—John Goss and Cathedral Male Voice Quartet—(a) "Rio Grande" (Arr. Terry); (b) "Billy Boy" (Arr. Terry) (H.M.V. Record B2646).
- 9.59: Grand organ and orchestra—Victor Symphony Orchestra, "Liebestraume" (Liszt) (H.M.V. Record EB10).
- 10.3: March—Band of H.M. Coldstream Guards, "Colonel Bogey" (Alford) (H.M.V. Record B2408).
- 10.7: Close down.

## Saturday, December 15

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

- 3.0 p.m.: Afternoon session—selected studio items.
- 4.0: Literary selection by the Announcer.
- 4.8: Selected studio items.
- 4.25: Sports results to hand.
- 6.0: Children's session conducted by Cinderella.
- 7.15: News and market reports—book review.
- 8.0: Overture—State Opera House Orchestra, "William Tell" (Rossini) (Parlophone Records AR1003-4).
- 8.15: Bass solos—Mr. F. Sutherland, (a) "Good Fellows" (Phillips); (b) "Pass Everyman" (Sanderson).
- 8.22: Instrumental trio—Auckland Trio, "Merrie England," selection (German).
- 8.32: Soprano solo—Miss Beth Whitelaw, "Sing, Joyous Bird" (Phillips).
- 8.36: Xylophone novelty—"Polly" (Parlophone Record A2548).
- 8.40: Recital—Mr. F. W. Barker, character sketch, "Jonas Chuzzlewit Comes Home Drunk" (Dickens).
- 8.45: 'Cello solo—Miss Molly Wright, "Reverie" (Dunkler).
- 8.50: Baritone solos—Mr. Clinton Williams, (a) "Jack Briton" (Squire), (b) "An Emblem" (Thompson).
- 8.57: Hawaiian selections—Queenie and David Kalli, (a) "Ukulele Dream Girl" (Reg Low), (b) "Ukulele Lullaby" (Williams), (Parlophone Record A2364).
- 9.5: Weather forecast.
- 9.7: Bass—baritone solo—Mr. Frank Sutherland, "Song of the Waggoner" (Breville-Smith).
- 9.11 Instrumental trio—Auckland Trio, "Serenata" (Moszkowski).
- 9.19: Soprano solo—Miss Beth Whitelaw, "Sing Merrily To-day" (Phillips).
- 9.23: Vocal duet with steel, guitar, ukulele and piano accompaniment, "Fijian Farewell" (Parlophone Record A2450).  
Vocal solo with violin, steel guitar, cello and piano, "The Adorable Outcast" (Parlophone Record A2450).
- 9.30: Humour—Mr. F. W. Barker, "The Lord Chancellor's Song" (from "Iolanthe") (Sullivan).
- 9.35: Orchestral—State Opera House Orchestra, "Martha" (Flotow) (Parlophone Record E10578).
- 9.43: Baritone solo—Mr. Clinton Williams, "The Windmill" (Nelson).
- 9.47: Dance programme.
- 11.0: Close down.

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

- 3.0 p.m.: Chimes of the G.P.O. clock.
- 3.1: Selected gramophone items.
- 4.30 and 4.55: Sports results to hand.
- 5.0: Close down.
- 6.0: Children's session conducted by Uncle Toby and Aunt Gwen.
- 7.0: News session—market reports and sports results.
- 8.0: Chimes of the G.P.O. clock.
- 8.1: March—Orchestra, "The Boy Scouts" (Henneberg).  
Dance—Orchestra, "Venetian Love Dance" (Rich).
- 8.9: Quartette—Melodie Four, "Timbuctoo" (Giebel).
- 8.13: Hawaiian selections—Queenie and David Kalli, (a) "Hawaiian March" (Ellis), (b) "Hilo March" (Pale) (Parlophone Record A2372).
- 8.21: Tenor solo—Mr. Sam Duncan, "Daphne" (Coningsby Clarke).
- 8.25: Serenade—Orchestra, "Serenade from Les Millions D'Arlequin" (Driga).  
Waltz—Orchestra, "Il Bacio" (Arditi).
- 8.35: Quartette—Melodie Four, "A Musical Muddle" (Lewis).
- 8.39: Soprano solo—Mrs. D. Allwright, "The Loveliest of Trees" (Peel).
- 8.43: Wurlitzer organ solo—Sigmund Krumgold, "Indian Love Call" (Friml) (Parlophone Record A2339).
- 8.47: Sketch—Miss Gwen Shepherd, Mr. Wynne Watkins, "Cross Calling" (Peach).
- 8.54: Bass solo—Mr. W. W. Marshall, "A Thousand Leagues Under the Sea" (Petrie).

- 8.58: Instrumental—Orchestra, repeat number.  
 9.6: Weather forecast.  
 9.7: Duet—Mrs. D. Allwright and Mr. Sam Duncan, "A Night in Venice" (Pucantoni).  
 9.11: Quartette—Melodie Four, "The Cornfields" (Medley) (arr. Holloway).  
 9.15: Orchestral—Dajos Bela Orchestra, "Electric Girl" (Parlophone Record A4009).  
 9.19: Baritone solo—Mr. R. S. Allwright, "Sleepy Hollow Tune" (Kountz).  
 9.23: Sketch—Miss Gwen Shepherd and Mr. Wynne Watkins, "Light and Shade" (Peach).  
 9.30: Quartette—Melodie Four, "Honolulu Moon" (Arr. Crowther) (By special request).  
 9.34: Soprano solo—Mrs. D. Allwright, "The Secret of the Tide" (McGeogh).  
 9.38: Novelty—Orchestra, "Musical Switch" (Alford).  
 9.48: Tenor solo—Mr. F. Bryant, "A Little Coon's Prayer."  
 9.52: Instrumental—Orchestra, Fox Trot novelties.  
 10.0: Dance programme.  
 11.0: Close down.

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

- 3 p.m.: Afternoon session—selected studio items.  
 4.25: Sports results.  
 4.30: Close down.  
 6.0: Children's session conducted by Chuckle and Aunt Pat.  
 7.15: News session.  
 7.30: Sports results.  
 8.0: Chimes.  
 8.1: Rebroadcast of 2YA, Wellington.  
 10.0: Dance programme.  
 11.0: Close down.

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

- 7.15 p.m.: News session.  
 8.0: Town Hall chimes.  
 8.1: Relay of orchestral music from Octagon Theatre Orchestra under the conductorship of Monsieur Henri De Rose.  
 8.16: Songs at the piano—Miss Eileen Cooper, "Slippers and Shoes" (Arp-thorp); (b) "Putting up With It" (Herbert).  
 8.22: Marimba Orchestra, "When it's Love Time in Hawaii" (Waltz), (Heagney) (Zonophone Record 3852).  
 8.26: Humorous Scottish song—Mr. J. Paterson, "I Know a Lassie Out in Ohio" (Lauder).  
 8.30: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.  
 8.40: Popular song hits—Miss Jacqueline Burke, (a) "Some Day I'll Make You Love Me" (Ayer); (b) "Totem Tom Tom" (Friml).  
 8.48: Relay of orchestral music from Octagon Theatre.  
 8.58: Humorous song—Mr. Norman Scurr, "Ice Cream" (King).  
 9.2: Weather forecast.  
 9.4: Musical comedy selection—Savoy Orpheans, "Hit the Deck" (Youmans) (H.M.V. Record C1408).  
 9.12: Song at the piano—Miss Eileen Cooper, selected.  
 9.15: Vocal trio with violin, harmonica, guitar and jew's harp—"Climin' Up De Golden Stairs."  
 Duet with violin, banjo and guitar, "The Little Green Valley" (H.M.V. Record EA382).  
 9.23: Humorous Scottish songs—Mr. J. Paterson, (a) "The Inverary Inn" (Fyffe).  
 9.31: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.  
 9.41: Popular song hit—Miss Jacqueline Burke, "Because I Love You" (Berlin).  
 9.45: Dance Orchestra—Rhythmic Eight, "Neapolitan Nights" (Zamecnik).  
 Dance Orchestra—Arcadians, "Singapore Sorrows" (Le Soir, Doll) (Zonophone Record EE106).  
 9.53: Humorous songs—Mr. Norman Scurr, (a) "Nothin'"; (b) "Moonbeam, Kiss Her For Me."  
 10.0: March—H.M. Coldstream Guards, "Youth and Vigour" (Lautenschlager) (H.M.V. Record B2408).  
 10.4: Close down.

## Sunday, December 16

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

- 3.0 p.m.: Afternoon session—selected studio items.  
 4.0: Literary selection by the Announcer.  
 4.8: Selected studio items.  
 4.30: Close down.  
 6.0: Children's song service conducted by Uncle Leo.  
 6.55: Relay of service from Pitt Street Methodist Church—Preacher, Rev. L. B. Dalby. Choirmaster, Mr. W. Leather.  
 8.30: Gramophone recital from studio.  
 9.30: Close down.

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

- 3 p.m.: Afternoon session.—Chimes.  
 3.1: Selected gramophone items.  
 4.30: Close down.
- EVENING SESSION.
- 7 p.m.: Relay of Evening Service from Taranaki Street Methodist Church. Preacher: Rev. Clarence Eaton. Organist and choirmaster: Mr. H. Temple White.

- 7.45 (approx.): Excerpts from Handel's "The Messiah." Organist and choir-master: Mr. H. Temple White. Soloists: Soprano, Miss Myra Sawyer; Contralto, Miss Nora Greene; Tenor, Mr. George Wilson; Baritone, Mr. John Prouse.  
 9.15 (approx.): Studio Concert.  
 Overture: Victor Symphony Orchestra.—"Egmont" (Beethoven) H.M.V., EBS.  
 Bass: Robert Easton.—"The Midnight Review" (Glinka). Col. 02674.  
 Violin: Albert Sammons.—"Meditation" (Thais). Massenet. Col. 02687.  
 Duet: Alma Gluck and Louise Homer.—"I Waited for the Lord." Hymn of Praise (Mendelssohn). H.M.V. DB478.  
 Cello: W. H. Squire.—"Drink to Me Only with Thine Eyes." Col. 04180.  
 Band: Band of the Royal Air Force.—"R.A.F. Grand March." Regal 20240.

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

- 3 p.m.: Gramophone recital of selected items, electrically reproduced.  
 4.30: Close down.  
 5.30: Children's song service, conducted by Uncle David.  
 6.30: Relay of evening service from the Church of Christ, Moorhouse Avenue. Preacher, Pastor J. Crawford. Organist, Miss E. Hepburn. Choirmaster, Mr. H. Ames.  
 8.0 (approx.): Studio recital of electrically reproduced gramophone records.  
 8.30: Orchestral—Philadelphia Symphony Orchestra, "Hungarian Rhapsody No. 2" (Liszt) (H.M.V. Record D1296).  
 8.38: "The Prodigal Son" (Sullivan), presented by the Melodious Four Quartet.  
 Quartet—Melodious Four—"There is Joy in the Presence of the Angels."  
 Bass recitative and aria—Mr. T. D. Williams, (a) "My Son, Attend to My Words"; (b) "Trust in the Lord with All Thine Heart."  
 Contralto solo—Miss Belle Renaut, "Love Not the World."  
 8.46: Grand organ solo—Edwin H. Lemare, "Chant de Bonheur" (Song of Happiness) (Lemare) (Zonophone Record EE93).  
 8.50: Tenor solo—Mr. Russell Sumner, "How Many Hired Servants of My Father Have Bread Enough and to Spare and I Perish with Hunger."  
 Soprano recitative and tenor and bass duet—Miss F. Hamerton, Mr. Russell Sumner and Mr. T. D. Williams, "And He Rose and Came To His Father and Said, Father I Have Sinned."  
 Bass recitative and aria—Mr. T. D. Williams, "Bring Forth the Best Robe For This My Son Was Dead."  
 9.0: Orchestra and grand organ—Victor Symphony Orchestra, "Kamennoi-Ostov" (Cloister Scene) (Rubinstein) (H.M.V. Record EB10).  
 9.4: Quartet, followed by soprano recitative and aria—Melodious Four and Miss Frances Hamerton, (a) "The Lord Is Nigh Unto Them" (Sullivan); (b) "No Chastening"; (c) "Come, Ye Children, and Harken Unto Me."  
 Quartet—Melodious Four, "Thou, O God, Art Our Father."  
 9.16: Orchestral—Victor Concert Orchestra, "In a Monastery Garden" (Ketelbey) (Zonophone Record EF7).  
 9.20: Quartet—Melodious Four, "Cast Thy Burden Upon the Lord" (from Elijah) (Mendelssohn).  
 9.25: Orchestral—Royal Opera Orchestra, (a) "Shepherd's Fennel Dance" (Balfour-Gardiner); (b) "The Sleeping Beauty" (Tchaikowsky) (H.M.V. Record C1469).  
 9.33: Close down.

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

- 5.30 p.m.: Children's song service, conducted by Big Brother Bill.  
 6.15: Organ recital by Mr. E. Heywood, F.R.C.O.  
 6.30: Relay of service from St. Paul's Cathedral. Preacher, Rev. Canon Nevill.  
 8.0: Relay of concert by the St. Kilda Band, from Band Rotunda, St. Kilda.  
 9.0: Close down.

### United States Amateurs

THE United States newspapers credit the Radio Commission with following the advice of the American Radio Relay League (the A.R.R.L.) in removing from the so-called 80-metre band the many amateur 'phone stations now existing and opening up the 20-metre band for radiophone communication. In addition, the United States amateurs have from 1580 to 2000 k.c., and a wide band between 56,000 and 64,000 k.c., for 'phone communication.

The new international regulations, probably in effect by 1929, narrow the so-called 40-metre band, but leave the other bands about the same as before. Into this 40-metre band all the amateurs of the world who once could be

found from 30 to 50 metres will be pushed, and instead of listening for South America and South Africa on 27.5 to 33 metres, and England and France above the American band, United States amateurs may find themselves mixed up with the 8's and 9's which are so numerous in that country.

THE radio telephone calls between Great Britain and the United States now average 30 a day, and occasionally the number of international radio conversations may reach to 60 within the day. To accommodate this increasing traffic as well as to determine the suitability of short waves for regular dependable long-distance communication, the duplex, two-way communication system has been constructed in the two countries.

### A Distinguishing Call.

WHAT I am going to write about, I want you to understand is not in the nature of destructive criticism as is so often sent in to the "Record" but as a suggestion only. Some friends of mine called round to listen to 2YA's concert one night last week, and after about an hour's listening one of the party remarked on the number of times the announcer, quite unnecessarily, gave the station's call sign, which prompts me to offer the suggestion that N.Z. main Broadcasting Stations adopt some sort of identifying sound, as is in use in some of the big European stations. Some French, German, and Swiss stations use, I believe a metronome, others a horn, whilst some use the peal of a bell or bells to enable listeners to identify any particular station that they may have "bagged." Whilst admitting that "This is station blank, blank, blank, broadcasting from their studio, etc." is helpful to distant listeners, local fans find it distinctly superfluous. The call sign can be given at the beginning of a performance and again at the conclusion, but during the session, any of the suggested "sounds" would be all that is required. With regard to 2YA and its transmissions, with the exception of some terribly old worn out records, the station is all that can be desired, both in respect to transmission and programmes, not forgetting the announcer, for his clear and efficient announcing. We all have a warm spot for Mister Announcer of 2YA.—"ACHILLES" (Wellington).

[Regulations require the station call to be given fairly frequently. The suggestion as to distinguishing sounds for each station is nevertheless good. Sometime back, the Company proposed bells for 3YA (as being the Cathedral City) and invited suggestions for the other stations. We have not heard of anything characteristic being forthcoming.—Ed.]

### Listener Wants to Pay a Higher Fee.

MIGHT I offer the following suggestion which I think would

# Our Mail Bag

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

greatly improve the interest in Radio at small expense to license holders. We hear a great deal of criticism of the programmes we have to listen to night after night, and I am afraid we must admit that they are not too good, but that is not the fault of the different stations, we are told that you "cannot make bricks without straw" and you certainly cannot get a Galli Curci, or a Kreisler, for the fee they are able to offer. Give the stations the necessary funds and I am sure they have the men who would make good use of them.

There are about forty thousand license holders in the Dominion, an extra annual fee of ten shillings would produce £20,000 which could be "earmarked" for the purpose of paying a suitable fee to visiting star artists.

I do not think anyone can run a good valve receiver allowing for interest on purchase depreciation, license, new valves, charging batteries, etc., for less than twelve pounds ten shillings a year. The extra ten shillings would amount to an additional four per cent. on the present annual expenses. Now what business man would hesitate if he could increase the efficiency of his business by a hundred per cent. for an expenditure of four.—REFORM?

### Are These Right?

NOTICE in the Radio Record of Friday, November 23, 1928, an inquiry by Mr. Gav C. Holmes, with regard to unknown American stations he has received, these stations are I think, K.D.Y.L., 258.5 metres, Salt Lake City, Utah and W.B.R.C., 241.8 metres, Birmingham, Alabama. Both

these stations have been heard by me on both speaker and phones on different occasions. Trusting that the above information may be of assistance to Mr. Holmes or other D.X. fans. If these calls are not as Mr. Holmes received, and if he will forward on what call letters he has received of these stations, maybe I will be able to fill in what letters are necessary, also I can forward the addresses of W.B.R.C. and K.D.Y.L. and hours of broadcasting. Greetings Mr. Holmes.—Vic's Radio Shack, Belmont.

### An Appreciation.

YOU must not conclude that because there are a few growlers who write you complaining of everything, that the greater number of listeners may not find extreme satisfaction in the very items of complaint. Take 2YA's relay of the last opera from the Concert Chamber at the Town Hall. I for one enjoyed it immensely and there were a dozen others whom I questioned that agreed that the opera was a pleasant change. The only point that one might cavil at was a purely technical one—pick up of all the voices was not as clear as is usually the case on relay—but we strongly condemn any correspondent who writes without strict regard to the truth. We heartily enjoy operas and envy Auckland listeners who are reled with real music. We trust that further relays of any operas will always be undertaken by 2YA whenever opportunity offers. Also that gramophone records of operas be utilised to a greater extent. Another relay that was most clear was that from St. Gerards.—It was perfect.—In fact the relay of church services are now very fine and are much appreciated by the many listeners whom I have questioned. We do not subscribe to the opinion expressed by one correspondent that 2YA announcer's voice comes in too strongly. On the contrary we consider 2YA has much improved its service, and we welcome any experimenting 2YA may find it necessary in order to improve that service.—"APPRECIATIVE."

### The Popular Taste.

MAY I commence my remarks by congratulating the Broadcasting Co. upon their announcers and the very

fine reception which we get from their various stations in New Zealand, even little Sister 4YA managing to put in a very good appearance up here from about 9 p.m. onwards on most evenings just now, though possibly scarcely up to the old exhibition standard of merit. Still, I must join in with the great majority of your correspondents and the still greater majority of your non-correspondents and growl at the quality of the entertainment with which we are ordinarily provided. Let me first sugar my remarks by stating that it is far, far too good for us. It is absolutely impossible to elevate us to the heights at which the company, assisted by the pick of the musical authorities and artists in the country, are aiming at raising us to. We milk cows and feed pigs and shear sheep, and do things like that, and our sole desire between tea and bed times is for amusement and light entertainment; and what do we get? Here is last night's 2YA sample!! 2YA—8.1: Overture, "Mendelssohn." 8.9: "Schubert." 8.13: (a) "Chopin," (b) "Scriabine," (c) "Debussy." 8.20: "Mozart." 8.24: "Kreisler." 8.32: "Elgar," etc., etc. Fortunately our good friend Tommy Fairhall and Reg. Trowern came to the rescue, but only suppose that Reg. had got a straight left to the bread-basket in the first round, where also were we for the rest of the evening? And it is not only one night, but practically on every night, that we get this musical uplift, and from every station, with one exception. Little sister Dunedin reserves one night a week for us, usually Wednesday. Cannot her three big sisters do the same on Thursday, Friday, and Saturday nights? One night a week of pure amusement without any ulterior thoughts of instruction added to it from each? Your office boy could arrange it nicely. We would then have four nights a week of joy unconfined, no jazz allowed before 10 p.m., and saxophone solos barred entirely, and the only records allowed to be those of Sir Harry Lauder, our Yorkshire friend of "Lady Godiva" fame, and others of similar character.

I was also going to second your recent southern correspondent's remarks about the absence of the Scottish national instrument from the performances, but fortunately happened to glance at your programme of St. Andrew's Day concerts this week, and hasten to withdraw, for the time being, anyhow. I would continue telling you exactly what to do for several pages more, but I will desist. Still, I must add that the items for the gramophone competition of last week were just about over the edge in places, and I at least do not expect anything but the

## CHEAP HOLIDAY FARES FOR CHRISTMAS and NEW YEAR HOLIDAY TRIPS.

Holiday excursion fares will be in operation from December 14 to January 5, inclusively, and they will be available for return until February 9.

For full information regarding holiday travel, communicate with the nearest Stationmaster, Passenger Agent, Central Booking Office or District Manager.

## DON'T BUY THAT NEW PART.

You were thinking about an attempt to fix up your set. It may be unnecessary. A fault may have occurred that you cannot trace, yet, to the eye of an expert, it is most obvious. Just drop Mack a line about your troubles, or, better still, call and get first-hand information. It is worth while, and may save you pounds.

Just a Reminder that Christmas is Near. Spend all your money on your holidays and regret it. Whereas if you spend some on a Radio Set you'll enjoy it until next Christmas. We have still a few Bargains left.

If it has anything to do with  
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booby prize, as although I put the saxophone solo in 17th position, as doubtless 99 per cent. of the auditors would do, I made the atrociously unmusical error of putting "I'm Ninety-four To-day" in first place, even before "Poet and Peasant" ! !—G. FRASER (Ohura).

#### A Little Tip.

HERE is a tip that may save some amateur a few shillings, if not pounds. The average radio fiend—and I am one—when anything goes wrong sets to work to dismantle his set as quickly and as excitedly as possible, with the result that the repair men call his name blessed and hope his excitement will never cease.

The other night my set stopped. At first I thought it disapproved of the dance music; but that wasn't the trouble. Valves were lit and all seemed O.K. The little devil of curiosity prompted me to take the set to pieces; quite an easy job if there wasn't any reassembling to be done. However, I 'phoned an expert—I use the word "expert" reverently—and explained the case. He said, "Look at your A battery leads." With wonderful patience I pointed out that the valves were apparently going strong. However, he maintained that he might be right, and, more to please him, I had a look. Sure enough, when I touched the A plus the set went again as per schedule. Behind the clip the stranded wire had broken away until there was but one strand left. When I fixed this up all was well.

This might not apply to every set. However, it fixed mine, and I'm passing it on to you for what use you can make of it. I must emphasise the point, however, that, had I not got expert advice, I might still have been without the comfort of hearing a little music of nights. I have recently come in from the back country, and a relative of mine—about six miles over the edge of the world is where his home is—has a very fine set. I cannot speak too highly of what it has done for him. In fact, he looks forward to his evening's music. I left the backblocks six years ago, and only return for holidays now; but I'll never forget the awful boredom of winter nights when all we had to do was to read the weekly papers over and over again. Whilst the city man has his wireless, he could never know the difference it makes to life back yonder.

One other thing, too. In my day many of the children of farmers were inclined to be a trifle "sawney." Since radio has come the kiddies have a new standard of education and new ideas. Many a country child, such as I was not so many years ago, is repressed be-

cause the thoughts it has find no full means of expression. But wireless enables it to hear others saying what they think, and, in consequence, the child is given a new courage in its own opinions. It is a big subject and one of these days I would like to write more fully on. In the meantime cheerio.—C.H.

#### A New Yankee Scalp.

SINCE my last letter, I have been successful in still further adding to my log by the addition of Radio KWKH, of Shreveport, Louisiana, which I picked up on Tuesday evening last. I think this station is new to New Zealand listeners. The wave length was 352.7 metres, and the announcer gave the power as 10,000 watts. I held the station for nearly half an hour, and except towards the close, there was no real fading. Reception throughout was very clear, and at good phone strength—I did not put him on to the speaker. During the past two or three weeks new American stations have been coming in in quick succession, and seem to have put the usual "Yanks" in the background. This, however, may be accounted for by the fact that numerous changes have, I believe, been made in the wavelengths of these stations. KFON, WENR, KGO, have come through well during the past few days.

Last evening, at about 10.45 p.m., I logged another "mystery station" on about 341 metres, and held him till he signed off, some twenty minutes later. The items were heard clearly, but I could not make out the announcements except that I gathered it was an advertising session, and I could tell it was an American station. The final call letter sounded like "L." Can any DX fan oblige? The American stations nowadays appear to be observing very late (or early) hours.

When forwarding verification of my report of reception, station 4ZO, Dunedin, stated that their power was 8 watts—and I received them at quite good speaker strength! Wavelength is 277.8 metres.—Guy C. HOLMES (Masterton).

#### Transferring a License.

I WANT to take my radio set away me for a few weeks during the holidays, and operate it while away. Is it necessary to notify the Post officials, and do I have to procure another permit to do so? Perhaps a note on how the stations are being received here would be of some small interest. Station IYA is about the best here, with 2YA second, and 4YA the next best. There is an occasional night when 2YA is very bad, on account of fading and mushiness. On the other hand, Auckland can be relied on almost any even-

ing to come in clearly and strongly. Another thing which I have noticed is the vast improvement in the programmes broadcast since I first began listening. They are quite a treat to listen to lately, and every month seems to bring forth some improvement or other.—G.W.J. (Greymouth).

[According to the regulations any change in the location at which a radio license is being exercised must be notified promptly to the nearest district radio inspector. A temporary change of address, such as that you refer to, is not objected to, provided the D.R.I. is notified. Such action is necessary in order will avoid any possible abuse.—Ed.]

#### Queries Answered.

I WOULD like to congratulate the B.C. on their performance on election night; also the excellent announcer at 2YA—he is the best on the broadcast band. Could you inform me of any station called 1XX (about 200 metres). I heard him on Wednesday 21st. He appeared to be talking to someone about generators, etc. Also, is there a station, WLAC? I think that is in America. When are we to have dinner music? It certainly would be a great asset.—Yours, etc., PUKEKAWA.

[1XX is the experimental station of the district telegraph engineer, Auckland, who frequently converses with VLO, Kawau Island, Hauraki Gulf. WLAC, Nashville, Tennessee, operated by Dad's Auto Accessory and Radio Store, and the Life and Casualty Assurance Co., operates on 201.2 metres His power is 5 k.w.—Ed.]

### Radio and Sports

A QUESTIONNAIRE recently circulated amongst twenty American College authorities gives some illuminating information as to the effect of broadcasting sports events upon attendances thereat. It is the practice of a number of American colleges to maintain their own radio station, and

these stations broadcast descriptions of the college sports. At the success of these sports depends upon attendance of the public, opportunity was presented for an effective investigation of the effect of broadcasting upon attendance.

In answering the questionnaire, the twenty colleges and universities which habitually give radio presentation of all major sports events, the consensus of opinion was that the broadcasting was advantageous. "The tendency was to work two ways regarding gate receipts. It enhances the sale of tickets for football games, but slightly cut down the attendance at basketball contests. The loss incurred in the latter instance was negligible compared with the amount of advertising given the institution, and the service rendered to the public. The reason why basketball attendances were slightly affected was that these tourneys were held in the evening, when people were tired."

The general opinion was that the broadcasting of football games did a very great deal in the way of advertising the sport of the institution. This test is of definite value to New Zealand sports institutions, as it records the practice of college institutions, concerned with making a success of their sports, deliberately adopting the broadcasting of such sports as a means of contributing to their success. The cost of doing so would certainly not be undertaken if the effect of such broadcast was deleterious to the success of the sports. It may, therefore, be taken for granted that the Americans consider that broadcasting definitely advertises the sport, and is a distinct service to the sport. This is certainly the case in New Zealand in relation to football, boxing, tennis and cricket. The racing authorities alone, for reasons not yet fully appreciated by the public, fail to realise the advertising value of broadcasting in the popularisation of their own sport.

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# Mainly About Construction

## Trouble Tracking on the H.F.

COMPARED with almost any other wireless component the high-frequency transformer is a trouble-free and blameless piece of apparatus. Being in essentials merely several coils of wire properly spaced and brought out to pins for connection to the rest of the set, it can hardly fail to work provided it is of suitable type. Yet for all its simplicity the work it carries out is of a highly complicated character, so that it is quite possible for a small fault in an H.F. transformer to make a big difference to the working of a set.

H.F. transformer troubles are best dealt with according to the way in which they affect reception. It is not very often that a fault in a transformer completely stops reception, but it will very often make a stable set unstable, give rise to flat tuning, or in other similar ways make the set misbehave. A good instance of the type of fault which a faulty H.F. transformer will cause is the one in which the symptoms are that the set will not neutralise. Generally, in such a case, the set does not fail to work altogether, but it works in an abnormal way, with peculiar symptoms.

### Why Won't It Neutralise?

IN the ordinary course of events, a receiver which contains an H.F. stage will give pretty good results, even if the neutralising is not properly carried out. Failure to neutralise probably means that when the circuits are exactly in tune with one another the set is prone to oscillate at that point; and when the condenser neutralising condenser is readjusted to its correct position this instability disappears and the set becomes perfectly easy to handle.

Not infrequently, however, one comes across a set which simply will not neutralise properly. Adjustment of the neutralising condenser results in the

most violent yells and whistles imaginable.

Usually there is one pretty well defined point where this tendency to instability is at a minimum, but if the neutralising condenser is moved away from that point violent oscillation sets

in. If the coil is a home-made one, matters can soon be remedied by undoing it and changing over the two ends of the neutralising winding.

Another puzzling fault is the appearance of unusually flat tuning. Generally, the aerial condenser appears to

Another rather puzzling fault that high-frequency amplifying sets are prone to develop is a general falling-off in the sharpness and degree of high-frequency amplification. When the set is neutralised in an attempt to restore good amplification, it is discovered that adjustment of the neutralising condenser makes no difference whatever.

In such cases, whatever the position of the vanes—whether all in or all out—no difference to results is apparent. Very often the set is unduly lively when the H.F. circuits are in tune, and, in fact, it may oscillate badly at this point.

If you are experiencing this type of trouble you will probably find it is due to a break in the neutralising winding. Either the wire itself has broken, or is making unsatisfactory connection to the rim of the transformer, or else the pin of the transformer which carries the neutralising winding is failing to make proper contact with the rest of the set. Consequently, the set is behaving as though it were not neutralised at all, and when the connections are restored its behaviour should become the normal one of a properly neutralised receiver.

### Weak Signals and Choking.

ANOTHER peculiar fault worth mentioning has a similar cause, but quite different effect. In this case the main trouble is weak signals.

Probably the set has no tendency to oscillate at all, and it may even show signs of choking. In this latter condition, reception, which is not too good to start, seems to fade away periodically, the stations getting weaker and weaker until they disappear altogether.

Generally, one finds that if one of the wires joining the grid-leak or condenser is touched, the set shows signs of life again, only to "pop off" again at the shortest notice. The word "choking" seems exactly to describe this condition, for the effect is as though the set were trying to work all right, but the signals are continually choked back and suffocated.

Very often this state of affairs can be traced to the fact that there is a break in the secondary winding of the H.F. transformer.

Possibly the wire is continuous throughout, but is not making proper contact to one of the pins, or one of the pins is not making proper contact to its corresponding socket to which the rest of the circuit is wired.

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WATCH FOR THIS NUMBER.

in and frequently spoils reception. In other words, the neutralising condenser appears to be acting rather like a reaction condenser, except for the fact that one cannot reduce reaction sufficiently by it, and the reaction effects are altogether too lively.

Such symptoms are very often due to the fact that the connections to the neutralising windings have been re-

tune quite well, but the tuning on the high-frequency condenser is inexplicably broad and instead of stations being confined to one or two degrees on the dial they are spread out over quite a wide area.

### When the N.C. Goes on Strike.

VERY often in such cases the set appears to neutralise fairly well at one point, but not over the whole range. (Flat tuning of this type very often occurs where a home-made H.F. transformer is employed, or it may be due to the use of a very high impedance R.C. valve.)

Such symptoms generally arise because the primary winding has too many turns for its particular valve, so in all such cases a reduction in the number of turns of the primary winding should be tried. All that is necessary is to take off a few turns at a time, say, half a dozen, until the desired degree of selectivity has been obtained.

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LOW frequency transformer troubles are by no means uncommon, but complaints are not frequently made, the resulting unsatisfactory rendition being attributed to wireless. However, a correspondent from Cromwell, suspecting trouble, writes thus:—

MY first transformer is a Ferranti 4, which does not seem to perform according to Cocker. When the machine is at maximum sensitivity this transformer will squeal when the casing is touched. I have noticed at times that the output volume of the set will increase when I hold this transformer with my hand. On odd occasions it will squeal when I put my hand near it. The other transformer, a Ferranti 3, does not do any of these tricks.

I find volume increased by tying the radio valve hard down in the socket. Cleaning the pins did not have this effect, so they could not be responsible.

I have an output filter, and despite the makers' assurance to the contrary, it does decrease the volume somewhat. The most annoying part, however, is that the filter sings—it acts like a 'phone and can be heard anywhere in the room quite distinctly.

Before I put on the filter, and even yet to a lesser extent, I was annoyed by a short explosive crackle in the speaker and 'phones. It was an intermittent cracking sound, and I could not track it down unless the first Ferranti was doing it. I can guarantee everything else in the set was O.K. Batteries, connections, and valves as good as gold.—Diogenes (Cromwell).

It would seem that the transformer is at fault. Following these notes is a lengthy article dealing with the locating of L.F. troubles, and Diogenes would be well advised to apply the test. However, a few other suggestions may be of value. The case of the offending transformer should be earthed; this may eliminate the difficulty if the test does not reveal a broken winding, which the crackling in the speaker would seem to indicate. Crackling has been dealt with in the Beginner Corner in our issue of September 28, but in this case we suspect the transformer.

It would also seem that a new socket for the R.F. valve would improve reception. It seems to be somewhat defective. Output filters do reduce volume, and singing is hard to stop, but the correspondent should try removing the filter further from his set.

DESPITE the recent great improvements in transformer design the commonest trouble with this instrument is still the "burn-out." This term—which, by the way, is a misleading one—is generally used to indicate a break in one of the windings.

If the break is in the primary winding, the anode supply to the valve in whose circuit it lies is automatically cut off, thus placing this and the succeeding valves hors de combat. If the break is in the secondary winding the results are almost equally disastrous.

#### Testing the Primary.

When the primary winding is fractured the usual result is not merely an interruption of the transfer of signal impulses to the following valve, but there is often a puzzling fluctuation in the fault as well, combined with weakness and distortion. Even without the transformer being touched in any way there is an irregular contact at

## L. F. Transformer Troubles

the point of fracture which gives rise to scratching and scraping noises, so that a broken primary often means that snatches of distorted music or speech come through much weaker than the usual signals, and puzzling by virtue of their inconstancy.

If the transformer can easily be moved from the set the continuity of its winding can be tested by means of the phones and dry-cell method. All that is necessary is a small battery to give the tell-tale double click when the phones leads are connected across it.

Then, if one end of the phones cord is connected to one side of the battery, the remaining side of this to the terminal of the winding under test, and the remaining transformer terminal is connected to the other phone tag, a loud click will be heard in the telephones if the winding is O.K. If, however, the winding is broken the click will either be quite a soft one, or else no click at all will be heard. The primary is the likeliest winding to "burn out," but if this appears to be O.K. the secondary winding should be tested in the same manner.

#### Under Working Conditions.

IF the L.F. transformer cannot easily be removed from the set for test, it can be tested for breakdown under working conditions by means of a pair of telephones. If the two or more wires which go to the primary are removed and a pair of telephones are connected across this point in the circuit, the output of the receiver to the transformer can be checked. Good results in the phones indicate that the primary terminals when connected will be getting their correct input. If now one side of the phones is connected to one of the primary terminals and then the remaining side of the telephones goes to the wire which previously went to this terminal, the telephones will be in series with the primary. (The remaining side of the primary should be connected to its ordinary lead, thus restoring the set to its original form except for the fact that the telephones are now linked in as well.) Weak or negative results will, of course, indicate that there is no connection through the primary. The shorting of the two primary terminals by a piece of wire and the consequent phone signals will prove without a doubt that a fault lies between these points. If, however, under this test the primary winding appears to be O.K. and the phone results are still good when connected in series with the primary, the phones should be taken out of circuit and placed across the transformer secondary terminals instead. Failure to get results here will be a clear indication that the fault lies in the transformer itself.

Not only can the continuity of the primary and of the secondary winding be tested by means of the phones and dry cell, but this method can be employed also to make sure that there is no fault in the insulation between the windings. For this test, disconnect all wires from both primary and secondary. Then join one side of the battery to one of the primary terminals, one side of the phones to one of the secondary terminals and then listen in when the circuit is completed by attaching the other side of the battery

to the other side of the telephone. If the insulation is as good as it should be, the fact that there is no current flowing in the circuit will be indicated by the absence of a click. But if a loud double click is heard on touching the battery and telephone terminals together it will prove that the insulation between these windings has broken down.

#### Investigating Insulation.

ON some transformers it is the practice to provide an extra terminal by means of which the metal case of the instrument may be connected to earth. As both the primary and the secondary windings should be insulated from the earthed case of the transformer, the phones and dry-cell method affords us an opportunity of testing whether this insulation is correct. In

this instance the test is carried out by connecting the battery to the earth terminal on the transformer, the remaining side of the battery to the telephones, and the remaining side of the telephones to the winding under test. When this final connection is being made no sound should be heard in the phones, but a loud click will indicate that the winding in question is not properly insulated from the frame of the instrument.

DO not lay a panel down on a bench which has not been brushed or freed from bits of metal, or otherwise you may scratch and mar its appearance before it is put in the cabinet.

UNDER no circumstances must the small holes in accumulator vent plugs become stopped up, as by allowing the escape of gases when the accumulator is being charged they play an important part in its maintenance.

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## The Daniell Cell Charger

IN our issue of November 11, 1927, "Megohm" described a charger comprising Daniell cells. A correspondent has been using this but meets with trouble. "I have installed the Daniell cells on accumulators as the R.R. article describes. I find that the zincs are used very badly within a month. Since then have brought the Epsom solution from half saturated to 2oz. for the six pots. (1/2 pt. capacity each approximately) still they seem to eat away quickly. I changed to 1-80 of sulphuric acid with new zincs, and they were treated the same. Should the zincs last very long? Bluestone seems to go into the porous pots quickly.

Questions.—(1) How can I check the bluestone from creen? too much

to make the zincs last longer, using either Epsom or sulphuric in pots. (A.) Bluestone and numerous other "salts" exhibit a peculiar action. If a piece of bladder similar to the material used for sausages, is filled with a solution of bluestone it can be sealed up and will be perfectly watertight. If, however, this container, tied up tightly is lowered into a vessel of water, in a few hours the water will be found to be turning blue, and in a day or so the two solutions inside and outside the bladder will be of the same strength. This is known as a "colloidal" action. The bluestone has passed through the membrane. The same action takes place in a Daniell cell. There is no actual preventive but the action can be retarded a great deal by arranging so that the two acid solutions inside the porous pot and outside are equal in strength.

(2.) Should Daniell cells show 6 volts, and when 4 jars show 4 volts,

should the 4 give same amperage as accumulators to light a torch bulb? This in view of voltmeter giving out.

(A.) The true Daniell cell of bluestone and 10 per cent. solution of sulphuric acid should show 1.8 to 2 volts per cell. The amperage should be from 15 to 30 on dead short, depending on the size of copper electrode and strength of acid. A torch bulb only takes .3 ampres at 4 volts.

(3) Is any harm done to charger in disconnecting?

(A.) No. The zincs should always be lifted out of solution when not in use. You ask about the life of zincs. I presume you have got these amalgamated. If you haven't, get a small quantity of mercury and put in the bottom of each porous pot. About half a thimbleful to each pot. This will coat the zincs with mercury, and prolong their life.

## Useful Tips and Jottings

### Saturation of Transformer.

THERE are several troubles associated with the use of unsuitable L.F. transformers. For instance, a particularly objectionable form of distortion occurs when an ordinary small transformer with a rather "tishy" core is expected to carry a plate current of 4 or 5 milliamperes, and to respond to the signal variation handed to it by, perhaps, preceding H.F., Det., and L.F. stages. In such a case, the magnetic load upon the core is practically at a maximum before signals are fed to the valve and, consequently, its magnetic variations cannot correspond with the signal's impulses, but can only be varied in a limited degree. The distortion effect is similar to that of an overloaded valve unable to respond faithfully to variations of its grid voltage.

### Potentiometers.

POTENTIOMETERS used either for adjusting the bias of a detector valve or an H.F. valve should be shunted with a condenser of about 0.1 mfd. capacity. Most potentiometers sold for this purpose have a resistance of several hundred ohms and may introduce losses sufficient to cause a slight reduction of signal strength and sharpness of tuning unless a suitable by-pass of low H.F. impedance is provided. Paper condensers are quite good enough for this purpose. Even if the resistance of the potentiometer is too low to introduce serious losses its inductance will almost certainly be sufficient to upset the tuning slightly when adjustments are being made with it. The by-pass condenser is therefore desirable in any case.

### Pick-up Notes.

THE speed at which a record turns plays a very important part in the reproduction of faithful music from a gramophone pick-up. Almost all the modern records are recorded at a speed of 78 revolutions per minute. Occasionally instructions on the record indicate a speed of 80 r.p.m. Very often the speed indicator fixed to the motor is inaccurate, and should be checked up by sticking a small piece of paper on one side of the turntable and counting the revolutions per minute, while the record is revolving.

### Needles.

COLUMBIA semi-permanent chronic needles are very good for pick-up work, as these will play 6 to 10 records without the necessity to change. The point should be lowered gently to the record, as rough treatment is liable to break off the tip, and a broken needle goes a long way to ruining the record.

### Amplification.

TWO stages of good transformer coupled audio amplification are all

that is necessary for a gramophone pick-up work. Good class transformers and a power valve in the last stage must be used, otherwise reproduction will be no better than that of the cheapest gramophone costing less than the pick-up itself.

### The Zinc Rod in Daniell Cells.

IT has been found that chemically pure zinc is not attached by sulphuric acid as readily as commercial zinc containing a good percentage of foreign matter. Pure zinc is soluble in the metal mercury forming a pasty solution called zinc amalgam. Mercury is insoluble in sulphuric acid, therefore if a layer of zinc amalgam is formed on the outside of the zinc rod in a Daniell cell, the active surface presented to the acid is pure zinc, the impurities being deposited when the zinc amalgam is formed. To give this coating, first clean the zinc rod by rubbing in dilute sulphuric acid, and then rub on the mercury, when it will be found to adhere in the form of a shining mirror. A small quantity of mercury can be kept permanently in the bottom of the porous pot, and this will keep the zinc constantly amalgamated. Care should be exercised, however, when using mercury not to allow any to come in contact with gold rings or jewelry, the experimenter may be wearing, as mercury also combines with gold, etc., forming gold amalgam. If by any chance a silver colour is noticed on any gold article that comes in contact with the mercury, this can be removed by rubbing lightly with concentrated nitric acid, which dissolves the mercury without touching the gold underneath. If the zinc rods are given this treatment they will be found to have two or three times the life if not treated.

### Megohm's Short-Valve Set.

I AM constructing "Megohm's" short-wave set, published some time ago in the "Radio Record," and would be much obliged if you would answer the following questions:—1, Should I use power valve in last socket? 2, How many turns of wire on coils are needed for broadcast wave-lengths for the above set. Trusting you can put me right, and thanking you.—T.G.M. (Wellington).

A power valve is always advisable for second audio stage. For domestic use one of the B605 type is quite suitable. Don't forget to use grid bias as specified by the makers.

If .0002 condenser is used, then use 85 turns for broadcast with 30 turns reaction. If .00035 to .0005 mfd. condenser used, 70 or 60 turns, with 40 turns reaction.

IF you must have joints in either your aerial or your earth wire, be sure they are soldered ones.

# RADIO DIRECTORY

## What to Buy and Where

### CITIES

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

### COUNTRY TOWNS

ANCHORADIO, BREMER-TULLY, RADIOLA, BROWNING-DRAKE, AND ATWATER-KENT RADIO	Radio House, Hamilton. G. S. Anchor, Manager.
BROWNING-DRAKE SALES AND SERVICE	J. H. Sinclair, Otane, H.B.
CROSLY ELECTRICAL AND BATTERY MODELS	The Forrest-Crosley Radio Co., Ltd. Cuba Street, Palmerston North.
GREBE, CROSLY AND RADIOLA SERVICE	E. Dixon and Co., Ltd., Hawera.
RADIOLA DEALER AND SERVICE	G. C. Carrad. 140 The Avenue, Wanganui.
PHILIPS VALVES AND APPARATUS	All Good Radio Dealers.

### Why a Crystal is Needed.

IT is usually considered that when an operator knows something about what he is operating he will be more efficient. In view of this a few notes are to be given on the principle of rectification as embodied in the crystal.

Now, to get down to non-technical language, and explain what has been just said.

Sounds are picked up by the microphone and are impressed on a strong electric wave leaving the transmitting station. This wave is rising and falling like all other waves, the rise and fall being expressed in the voltage fluctuation.

The voltage rises from 0 to a maximum and then falls to 0, then reverses and goes to the same maximum, but this time negative volts are expressed. It then comes back to the original 0. This is termed an alternating current, and is of the type employed in our lighting systems, and in wireless.

Whereas there are approximately 60 of these cycles or rises and falls per second in house lighting, wireless goes out at a rate varying from a few hundred to millions of cycles per second. One thousand of these form a kilocycle, and the frequency of a station is expressed in kilocycles per second. The distance between each wave crest is the wave-length.

#### Detection.

ON this rapidly rising and falling wave the sounds are carried to our aerial, and though the portion we pick up is very weak, it is nevertheless sufficient to be heard if suitable devices are provided.

Travelling at the rate it does those sounds could not be heard—they must be altered in form and converted into a flow in one direction only. That is the crests must be separated from the troughs. To do this a detector is employed.

The crystal detector may be composed of many substances—carborundum, galena, zincite, tellurium and silicon are those usually used. Of these, carborundum, which is made into a fixed cartridge, and galena, with which a cat's whisker is employed, are the most common. Zincite and tellurium are becoming popular in the "Perikon" type of crystal.

THE crystal exhibits a peculiar action: it strips away the lower half of the wave, passing only the crests to the earphones, the coils of which steady up the current and render the signals audible. The troughs of the waves (the magnetic alternations) are passed off in heat.

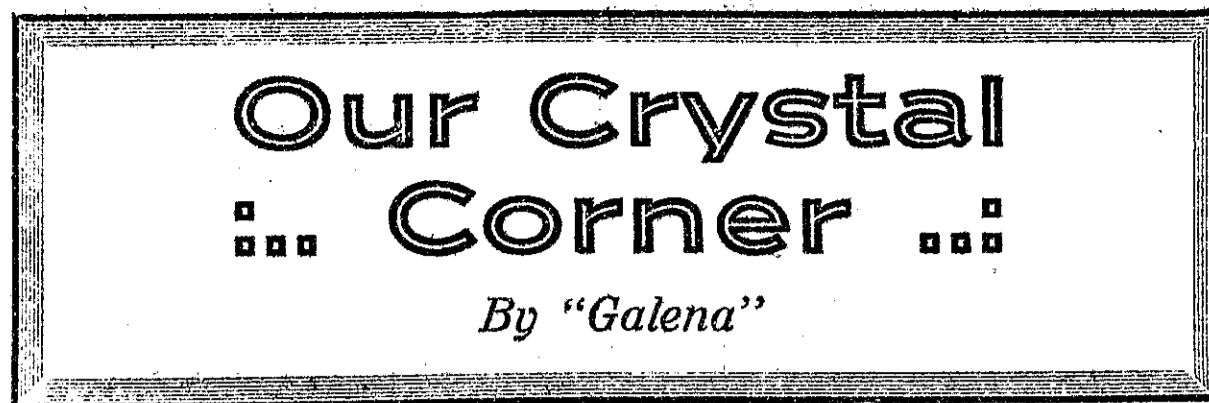
A crystal does not make the signals any louder, so that when they get too weak to be heard without being strengthened up, the crystal becomes useless, unless strengthened by an amplifier.

Some parts of the crystal are more sensitive than others, that is they pass the crests through more readily. These spots are the goal of all who use a cat's whisker.

#### The Cat's Whisker.

THIS popular type of detector is the most sensitive, but requires more attention than the other types and it is doubtful whether the sacrifice in sensitivity is not outbalanced by the qualities of the semi-permanent and permanent types.

In the earlier times the cat's whisker held the field unopposed, but it is now



THIS week marks the commencement of a new section, a Crystal Corner for crystal users. The corner is being conducted by a crystal-user so that a common interest exists between him and all others who use this modest detector. Queries, suggestions or experiences are welcome. The aim of the corner is to interest the user of the crystal and of the amplified crystal.

Next week's issue will be a special issue for crystal owners as an offering for the Christmas season.

steadily being replaced, but each listener must decide for himself which he prefers, sensitivity or absence of trouble.

The cat's whisker type consists of a piece of jagged galena, fixed in a metal cup, preferably by a metal with a low melting point—lower than solder. Solder melts at a high temperature and is likely to damage the crystal. Woods metal, however, does not do any damage.

THE cat's whisker, a piece of fine wire, may be composed of any suitable metal ranging from steel to gold. There is little to be gained, however, in the different types of wire, remembering, however, that such factors as fineness and pressure, do enter into the reception. Galena crystal requires a fine cat's whisker, lightly applied.

The crystal should be kept free from dust and is usually enclosed in a glass tube. Some crystals have the fine wire attached permanently, but these are not common.

#### The Perikon Detector.

THIS is a type which is gaining great popularity. The cat's whisker has been replaced by another crystal and is usually marketed under the name of "semi-permanent." The crystals used are usually zincite and tellurium.

Perikon detectors are usually made up of a crystal, set in a metal base on to which is screwed a tapering top containing a shaft with a spring, at the end of which is a piece of moderately sharp crystal.

A certain pressure is to be exerted between the two crystals so that a spring is attached to the shaft. The correct pressure, about 1½ pounds, is adjusted by this carefully-constructed spring.

The point of the upper crystal should be neither too fine, in which case it is easily broken, nor too flat, in which case sensitivity is lost. Sometimes it pays to judiciously sharpen the movable crystal to get a good contact.

When adjusting or readjusting a Perikon detector do not grind the crystals together. Tellurium is a very soft material, and the grinding of it against the harder crystal of the latter crystal being blackened by a deposit of tellurium. The presence of this deposit tends to lower the resistance between the two crystals, and thus decrease the rectifying efficiency.

Like every other form of crystal rectifying device, a Perikon detector,

which is not completely cased in, should be kept free from dust.

#### Carborundum Units.

THERE is another material, carborundum, which is not nearly so sensitive as galena, but which is not easily thrown out of adjustment. With a galena crystal, the pressure exerted by the point of wire on the crystal is only a matter of an ounce or less. With carborundum this pressure may be around four or five pounds between the two parts. Contact with carborundum is made through a fine steel point.

In order to obtain as sensitive an action with carborundum as with galena, it is necessary to use a small battery in the circuit. The method of application of this battery will be the subject of a future article.

The effect of the battery is to keep a small voltage continually applied across the crystal. The signal voltages and current waves are then added to and subtracted from this steady voltage. The voltage lowers the resistance of the carborundum and allows the signals to come through with much greater strength. With a battery applied, the detector acts as a very efficient rectifier.

A great deal could be said of the carborundum which would be of great value to those who use or contemplate using this type of detector, but for the present introduction such details cannot be entered upon. The carborundum, like other aspects of the crystal circuit, will receive attention in future numbers of the "Radio Record."

DO not stand the loud-speaker too close to the set itself, or you may cause it to vibrate the filaments of the valves, and this will give rise to a loud howl.

DUST, fluff, and other similar foreign bodies, if allowed to enter the horn of a loud-speaker, may accumulate on the diaphragm and seriously interfere with reception.

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# Hutt Valley Choral Society

Third Concert, December 11, to be Broadcast

(See Programme on Page 18 for Details)

## Hiawatha's Wedding Feast.

You shall hear how Pau-Puk-Keewis,  
How the handsome Yenadizze,  
Danced at Hiawatha's wedding;  
How the gentle Chibiabos,  
He the sweetest of musicians,  
Sang his songs of love and longing;  
How Iagoo, the great boaster,  
He the marvellous storyteller,  
Told his tales of strange adventure,  
That the feast might be more joyous,  
That the time might pass more gaily,  
And the guests be more contented.

Sumptuous was the feast Nokomis  
Made at Hiawatha's wedding.

All the bowls were made of bass-wood,  
White and polished very smoothly,  
All the spoons of horn of bison,  
Black and polished very smoothly.

She had sent through all the village  
Messengers with wands of willow,  
As a sign of invitation,

As a token of the feasting;  
And the wedding-guests assembled,  
Clad in all their richest raiment,  
Robes of fur and belts of wampum,  
Splendid with their paint and plumage,  
Beautiful with beads and tassels.

First they ate the sturgeon, Nahma,  
And the pike, the Maskkenozha,  
Caught and cooked by old Nokomis,  
Then on pemican they feasted,  
Pemican and buffalo marrow,  
Haunch of deer and hump of bison,  
Yellow cakes of the Mondamin,  
And the wild rice of the river.

But the gracious Hiawatha,  
And the lovely Laughing Water,  
And the careful old Nokomis,  
Tasted not the food before them,  
Only waited on the others,  
Only served their guests in silence.

And when all the guests had finished,

Old Nokomis, brisk and busy,  
From an ample pouch of otter,  
Filled the red stone pipes for smoking  
With tobacco from the South-land,  
Mixed with bark of the red willow,  
And with herbs and leaves of fragrance.

Then she said, "O Pau-Puk-Keewis,  
Dance for us your merry dances,  
Dance the Beggar's Dance to please us,  
That the feast may be more joyous,  
That the time may pass more gaily,  
And our guests be more contented."

Then the handsome Pau-Puk-Keewis,

He the idle Yenadizze,  
He the merry mischief-maker,  
Whom the people called the Storm-Fool,  
Rose among the guests assembled.

Skilled was he in sports and pastimes,

In the merry dance of snow-shoes,  
In the play of quoits and ball-play;  
Skilled was he in games of hazard,  
In all games of skill and hazard,  
Pugasaing, the Bowl and Counters,  
Koomtassoo, the Game of Plum-stones.

Though the warriors called him  
Faint-Heart,

Called him coward, Shaugodaya,  
Idler, gambler, Yenadizze,

## My Land.

Dear Land, that of all lands to me art the fairest,  
Land where the fern in its loveliness grows,  
Girt with the ocean and crowned with thy snows,  
Richly thy beauty with me thou sharest,  
God-given bounty to me thou bearest.

Fair Land, that of all lands to me art the dearest,  
Great is the joy that thy children may feel,  
Deep the devotion they owe to thy weal;  
While thy sons love thee, nothing thou fearest—  
God make our service bravest, sincerest.

O Land of my home, I will serve thee for ever,  
Live to thine honour and guard thee from wrong,  
Make thee yet fairer through labour and song;  
Loving thee truly, strong my endeavour,  
Onward and upward, failing thee never!

—Anon.

Little heeded he their jesting,  
Little cared he for their insults,  
For the women and the maidens  
Loved the handsome Pau-Puk-Keewis.

He was dressed in shirt of doe-skin,  
White and soft, and fringed with  
ermine,

All inwrought with beads of wampum;  
He was dressed in deer-skin leggings,  
Fringed with hedgehog quills and ermine,

And in mocassins of buck-skin  
Thick with quills and beads embroidered.

On his head were plumes of swan's  
down,

On his heels were tails of foxes,  
In one hand a fan of feathers,  
And a pipe was in the other.

Barred with streaks of red and  
yellow,

Streaks of blue and bright vermilion,  
Shone the face of Pau-Puk-Keewis.

From his forehead fell his tresses,  
Smooth and parted like a woman's,  
Shining bright with oil, and plaited,  
Hung with braids of scented grasses,

As among the guests assembled,  
To the sound of flutes and singing,  
To the sounds of drums and voices.

Rose the handsome Pau-Puk-Keewis,  
And began his mystic dances.

First he danced a solemn measure,  
Very slow in step and gesture,  
In and out among the pine trees,  
Through the shadows and the sunshine.

Treading softly like a panther,  
Then more swiftly and still swifter,  
Whirling, spinning round in circles,

Leaping o'er the guests assembled,  
Eddying round and round the wigwam,  
Till the leaves went whirling with him,  
Till the dust and wind together

Swept in eddies round about him.

Then along the sandy margin  
Of the lake, the Big-Sea-Water,  
On he sped with frenzied gestures,  
Stamped upon the sand, and tossed it

Wildly in the air around him:  
Till the wind became a whirlwind,  
Till the sand was blown and sifted  
Like great snowdrifts o'er the landscape,

Heaping all the shores with Sand  
Dunes,

Sand Hills of the Nagow Wudjoo!  
Thus the merry Pau-Puk-Keewis  
Danced his Beggar's Dance to please  
them,

And, returning, sat down laughing  
There among the guests assembled.  
Sat and fanned himself serenely  
With his fan of turkey-feathers.

Then they said to Chibiabos,  
To the friend of Hiawatha,  
To the sweetest of all singers,  
To the best of all musicians,

"Sing to us, O Chibiabos!  
Songs of love and songs of longing,  
That the feast may be more joyous,  
That the time may pass more gaily,  
And our guests be more contented!"

And the gentle Chibiabos  
Sang in accents sweet and tender,  
Sang in tones of deep emotion,  
Songs of love and songs of longing.

Looking still at Hiawatha,  
Looking at fair Laughing Water,  
Sang he softly, sang in this wise

"Onaway! Awake, beloved!  
Thou the wild-flower of the forest!  
Thou the wild-bird of the prairie!  
Thou with eyes so soft and fawn-like!"

"If thou only lookest at me,  
I am happy, I am happy,  
As the lilies of the prairie,  
When they feel the dew upon them!"

"Sweet thy breath is as the fragrance  
Of the wild-flowers in the morning,  
As their fragrance is at evening,  
In the Moon when leaves are falling.

"Does not all the blood within me  
Leap to meet thee, leap to meet thee,  
As the springs to meet the sunshine,  
In the Moon when nights are brightest?"

"Onaway! my heart sings to thee,  
Sings with joy when thou art near me,  
As the sighing, singing branches  
In the pleasant Moon of Strawberries!"

"When thou art not pleased, beloved,  
Then my heart is sad and darkened,  
As the shining river darkens  
When the clouds drop shadows on it!"

"When thou smilest, my beloved,  
Then my troubled heart is brightened,  
As in sunshine gleam the ripples  
That the cold wind makes in rivers.

"Smiles the earth, and smile the  
waters,

Smile the cloudless skies above us,  
But I lose the way of smiling  
When thou art no longer near me!

"I myself, myself! behold me!  
Blood of my beating heart, behold me!  
O awake, awake, beloved!  
Onaway! awake, beloved!"

Thus the gentle Chibiabos  
Sang his song of love and longing;  
And Iagoo, the great boaster,  
He the marvellous storyteller,  
He the friend of old Nokomis,  
Jealous of the sweet musician,  
Jealous of the applause they gave him,  
Saw in all the eyes around him,  
Saw in all their looks and gestures,  
That the wedding-guests assembled  
Longed to hear his pleasant stories,  
His immeasurable falsehoods.

Very boastful was Iagoo:  
Never heard he an adventure  
But himself had made a greater;  
Never any deed of daring  
But himself had done a bolder;  
Never any marvellous story  
But himself could tell a stranger.

Would you listen to his boasting,  
Would you only give him credence,  
No one ever shot an arrow  
Half so far and high as he had;  
Ever caught so many fishes,  
Ever killed so many reindeer,  
Ever trapped so many beaver!

None could run so fast as he could,  
None could dive so deep as he could,  
None could swim so far as he could:  
None had made so many journeys,  
None had seen so many wonders,  
As this wonderful Iagoo,  
As this marvellous storyteller!

Thus his name became a by-word  
And a jest among the people!  
And when'er a boastful hunter  
Praised his own address too highly,  
Or a warrior, home returning,  
Talked too much of his achievements,  
All his hearers cried, "Iagoo!  
Here's Iagoo come among us!"

He it was who carved the cradle  
Of the little Hiawatha,  
Carved its framework out of linden,  
Bound it strong with reindeer's sinews,  
He it was who taught him later  
How to make his bows and arrows.  
How to make the bows of ash-tree  
And the arrows of the oak-tree.  
So among the guests assembled  
At my Hiawatha's wedding  
Sat Iagoo, old and ugly,  
Sat the marvellous storyteller.

And they said, "O good Iagoo,  
Tell us now a tale of wonder,  
Tell us of some strange adventure,  
That the feast may be more joyous,  
That the time may pass more gaily,  
And our guests be more contented!"

And Iagoo answered straightway,  
"You shall hear a tale of wonder,  
You shall hear of strange adventures,  
So he told the strange adventures  
Of Osseo, the Magician,  
From the Evening Star descended.

Such was Hiawatha's Wedding  
Thus the wedding-banquet ended,  
And the wedding-guests departed,  
Leaving Hiawatha happy  
With the night and Minnehaha.  
—Longfellow.

**O Happy Eyes.**

O happy eyes, for you will see  
My love, my lady pass to-day;  
What I may not, that may you say,  
And ask for answer, daringly.

O happy flowers, that touch her dress,  
That touch her dress and take her  
smile.

O whisper to her all the while  
Some words of love in idleness.

O happy airs, that touch her cheek,  
And lightly kiss and float away,  
So carelessly as if in play,  
Why take ye all the joy I seek?

O happy eyes, my love to see.  
Alas, alas, I may not greet  
With word or touch my lady sweet;  
O happy eyes, say all for me!

—C. Alice Elgar.

**The Silver Swan.**

The silver swan, who living had no  
note.

When death approached unlocked her  
silent throat;

Leaning her breast against the reedy  
shore.

Thus sang her first and last, and sang  
no more:

"Farewell, all joys; O death, come,  
close mine eyes,

"More geese than swans now live, more  
fools than wise!"

—Anon. (17th century).

**My Bonnie Lass She  
Smileth.**

My bonnie lass she smileth  
When she may heart beguileth,  
Smile less, dear lass, therefore,  
And you shall love me more,  
With a fa la la la la.

When she her sweet eye turneth,  
Oh! how my heart it burneth!  
Dear love, call in their light,  
Or else you burn me quite,  
With a fa la la la la.

—Old English.

**All in the April Evening.**

All in the April ev'ning,  
April airs were abroad;  
The sheep with their little lambs  
Pass'd me by on the road.  
All in the April ev'ning  
I thought on the Lamb of God.  
The lambs were weary and crying  
With a weak human cry.  
I thought on the Lamb of God  
Going meekly to die.  
Up in the blue, blue mountains.  
Dewy pastures are sweet,  
Rest for the little-bodies,  
Rest for the tired feet.

But for the Lamb of God,  
Up on the hill-top green,  
Only a cross, a cross of shame,  
Two stark crosses between.  
All in the April evening,  
April airs were abroad.  
I saw the sheep with their lambs,  
And thought on the Lamb of God.

—Katharine Tynan.

**Snowflakes Falling.**

Snowflakes falling, angels calling,  
Natus Christus hodie.  
Mortals singing, church-bells ringing,  
Salve Jesu, Domine.  
Never sleeping, vigil keeping,  
Sempiterna laus Deo::  
All repeating, endless greeting,  
Et Beato Filio.

Mother holy, dwelling lowly,  
Bubus assistentibus:  
Love beholding, God enfolding,  
Cara nobis omnibus.  
Babe so tender, our Defender,  
Inter tenebrosa lux.  
Man-rejected, God-elected,  
Salus nostra, noster Dux.

Cease from mourning, sorrow scorning,  
Pax in terris et caelo!  
No more sighing, banish crying,  
Ego Resurrectio!  
Angels quiring, men conspiring,  
Natus Christus hodie;  
Aeons lauding, worlds applauding,  
Salve Jesu, Domine.

—E. G. A. Beckwith.

**O Can Ye Sew Cushions?**

O can ye sew cushions, and can ye sew  
sheets,  
And can ye sing ba-lu-loo when the  
bairn greets?  
And hee and ba, birdie, and he and ba  
lamb!  
And hee and ba, birdie, my bonnie wee  
lamb!  
Hee, O wee, O what will I do wi'  
you?  
Black's the life that I lead wi'  
you!  
Mony o' you, little for to gi'e you,  
Hee, O wee, O what will I do  
wi' you?

I've placed my cradle on yon holly top,  
And aye as the wind blew, my cradle  
did rock,  
O hush-a-ba baby, O ba lilly loo!  
And hee and ba birdie, my bonny wee  
doo!

—Old Scottish Cradle Song.

**After Many a Dusty Mile.**

After many a dusty mile,  
Wanderer, linger here awhile,  
Stretch your limbs in this long grass,  
Through these pines a wind shall pass  
That shall cool you with its wing.  
Grasshoppers shall shout and sing,  
While the shepherd on the hill,  
Near a fountain warbling still,  
Modulates, when noon is mute,  
Summer songs along his flute;  
Underneath a spreading tree  
None so easy-limbed as he,  
Sheltered from the dog-star's heat.  
Rest, and then on freshened feet  
You shall pass the forest through—  
It is Pan that counsels you.

—From the Greek, translated by  
Edmund Gosse.**Come, Sisters, Come.**

Come, sisters, come, the silvery moon is  
beaming,  
And in the realm where angels dwell  
The stars in splendour shine.  
Come, sisters, come, 'tis not the hour  
for dreaming,  
For 'neath the shadows of the night

Are dance and song divine!  
Come, sisters, come away,  
To merry dance and roundelay!  
Come, sisters, come, where light and  
shadows mingle,  
And elves and fairies dance and sing  
Upon the meadowland.  
Come, sisters, come, we'll thread the  
dell and dingle,  
And frolic 'neath the bright moonbeams  
With hand enclasped in hand.  
Come, sisters, come away  
To merry dance and roundelay!

—Edward Oxenford.

**The Challenge of Thor.**

I am the God Thor,  
I am the War God.  
I am the Thunderer!  
Here in my Northland.  
My fastness and fortress,  
Reign I for ever!  
Here amid icebergs  
Rule I the nations;  
This is my hammer,  
Mjolner the mighty:  
Giants and sorcerers  
Cannot withstand it!  
These are my gauntlets  
Wherewith I wield it;  
And hurl it afar off.  
This is my girdle:  
Whenever I brace it,  
Strength is redoubled.  
The light thou beholdest  
Stream through the heavens  
In flashes of crimson,  
Is but my red beard  
Blown by the night-wind,  
Affrighting the nations!  
Jove is my brother,  
Mine eyes are the lightning  
The wheels of my chariot  
Roll in the thunder.  
The blows of my hammer  
Ring in the earthquake!  
Force rules the world still,  
Has ruled it, shall rule it,  
Meekness is weakness,  
Strength is triumphant;;  
Over the whole earth  
Still is it Thor's day!

Thou art a God too,  
O Galilean,  
And thus single-handed,  
Unto the combat,  
Gauntlet or Gospel,  
Here I defy Thee!

—Longfellow.

**Wavelengths of American  
Stations Change**

IN order to meet the intense congestion in the United States, it was planned to change the wavelengths of nine-tenths of the broadcasting stations from Armistice Day. It was claimed that the temporary inconvenience caused would be more than recompensed by the clearer reception.

To understand the plan upon which the new allocations are based, it is necessary to know that there are ninety-six channels or highways in the broadcast spectrum between 550 and 1500 kilocycles, that is, between the wavelengths of 545 metres and 200 metres. Each of these channels is 10 kilocycles wide, the modulating or sound frequency extending for five kilocycles on either side on the carrier wave.

When two stations are radiating energy on the same channel, or on approximately the same wavelength, a collision occurs, and a high pitched squeal results. Listeners will remember such an occurrence in New Zealand when 3YA was being heterodyned by a Sydney variation.

Of the ninety-six channels, six are assigned exclusively to Canada, leaving 90 to the use of the six hundred and twenty-four stations in the United States and Alaska, an average of nearly seven stations per channel. The inevitable result was that there was hardly an American station that could be heard without a heterodyning whistle. Here was the problem which faced the Commission which has just completed its investigations.

There were two solutions to the problem. One was to reduce the time that some of the stations were to operate, and the other was to reduce the number of stations on the air. The

Radio Commission chose the former that they do not operate simultaneously.

Most of them are high-powered stations. Consequently, during the night hours, there should be little or no interference on nearly half the dial. The remaining channels are allocated so as to provide for a minimum of interference.

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WELLINGTON.

For Practical Gifts that will Last.

A NEW short-wave station is reported to be located at San Lazaro, a suburb of Mexico City. Call, XC51, wavelength, 44 metres. Mexican news is broadcast at 9 a.m. and 9 p.m. daily.

The "Wireless World" writes: "The Nairobi broadcasting station now transmits on 35 and 400 metres, and it is hoped that programmes on the former wavelength will be audible throughout the world. The times of transmission are 4 p.m. to 7 p.m. G.M.T. daily, Sundays included. The Nairobi station, which uses the call sign 7LO, was opened in June last, and has since made a name for itself among DX enthusiasts."

This station, apparently, is experimenting with various wavelengths, as the shortwave used now is nearly 33 metres, while they worked on 90 metres when they first started operating about five months ago.

5SW, Chelmsford, are changing their wavelength of 24 metres to 25.53 metres (11,750 kilocycles) as from December 3. Reports will be appreciated comparing reception on the new wavelength with that of 24 metres.

This information was gathered from a chat between 5SW and 2XAD one morning during the week. Something was said about 2XAD also changing its wavelength, but I did not hear anything definite.

ANE, Java, was heard giving 2ME the following particulars:—

POLL is now working on 38.8 and 18.4 metres.

ANE broadcasts on 15.93 metres on Wednesdays from 12.30 till 13.30 G.M.T.

## Round the World on Short Wave

Notes of special value to short-wave enthusiasts are contributed weekly to the "Radio Record" by Mr. F. W. Sellens, Northland, Wellington. Observations from others are welcomed.

(12.30 a.m. till 1.30 a.m. Thursday, N.Z. summer time).

### Saturday, November 24.

5SW at 7.30 a.m., with a talk was R4-5, rapid fading, 2XAD was heard at about R2 for a short time about 3 p.m. Later on they could not be picked up. KDKA were very weak at 3 p.m., about R3, increasing to R7 by 4 p.m. Up to this time the music was supplied by the National Broadcasting Co., and Concert Bureaux. From 4 p.m. till signing off at 4.35 p.m., dance music was heard from the William Penn Hotel. Volume decreased slightly towards 4.20 p.m.

PCJJ commenced at 4 p.m. at R2-3, slowly gaining in strength till 7 p.m., when volume was R8-9. The usual selection of good records was heard. When signing off at 7.5 p.m. reports were asked for.

A Jap. at 7 p.m., on about 28.5 metres, was talking quite a lot. Strength, R4.

3LO, Melbourne, were transmitting on dual wave-length from about 7.50 p.m. The short-wave used was 32 metres. Reception was excellent.

RFM, with talk and music, was R9. Static very bad.

### Sunday, November 25.

AFTER reading Mr. Morrison's letter and noting that IMI, Milan, was heard in the early hours of Sunday morning, I decided to get up earlier than usual to see what was doing. My luck was out as far as IMI was concerned, but I heard several stations which to me were new. In each instance they were too weak to hear a call. The following are the approximate wave-lengths; perhaps some reader can oblige with the calls:—

About 45.5 metres, music, R2.

About 39.5 metres, orchestra R3. Heard "Hullo, hullo." but could not get call.

About 36 metres. Talk only, R2-3.

About 21 metres, describing football match, very strong ripple, spoiling intelligibility.

The above were heard between 6 a.m. and 7 a.m.

7LO, Nairobi, although free from the usual morse interference, was too weak to be readable—about R2-3.

2XAF, 2XAD, and KDKA were each giving a description of a football match between Yale and Harvard. 2XAF was the clearest and strongest. At 7.30 a.m. they were R5, which is quite good for early morning reception. The station on 21 metres may have been describing the same match, but could not be certain.

2XAF and KDKA were too weak before 4 p.m. to bother with.

Dance music from the crystal room, De Witzler Hotel, Albany, New York, was heard at about R5 through 2XAF from 4 p.m.

KDKA, after a musical programme, sent out messages to the Byrd Expedition. Strength about R4, rapid fading spoiling readability.

3LO, Melbourne, was tuned-in on 32 metres at 7.50 p.m., when they announced that they had just concluded a test.

RFM was very good during the evening.

### Monday, November 26.

7LO, Nairobi: Carrier only audible.

3LO, Melbourne: Their regular weekly transmission from 7 a.m. came in splendid at R9. 3LO from 8 p.m. on dual wave-length, transmitted their regular evening programme.

RFM was R9. Static fair.

### Tuesday, November 27.

From 5.45 a.m. till 6 a.m. 5SW (R8) and 2XAD (R5) were carrying on duplex telephony. Changes of wave-length mentioned earlier in these notes were discussed between the speakers at these stations. 7LO, Nairobi, was R5, but jammed by Morse most of the time.

ANE, Java, on duplex telephony, were about R3. 5SW at just before 7 a.m., after asking for reports on reception of the station on the new wave-length (25.53 metres) to operate from December 3, announced that "We are now going over to London for the evening programme." Big Ben was heard, followed by "London calling."

The announcements direct from 5SW were perfectly clear and 100 per cent. readable at R7, but directly they go "over to London" it is impossible to understand what is said except for an odd word or two at times. RFM during the evening was very good at R9. 3LO again on dual wavelength, but instead of the usual 32 metres for short-wave transmission, they were found on about 75 metres. Reception on this wavelength was as good as on 32 metres.

### Wednesday, November 28.

7LO, Nairobi, R2 at 5.30 a.m., increasing later. Morse and static as usual spoilt reception. From POLL on 38.8 metres at R8 a man and woman were having a long talk, duplex telephony I expect, but could not locate the other station. From 6 a.m. PCJJ were transmitting music. Strength R8, decreasing to R4 by 7.30 a.m. Big Ben from 5SW at 7 a.m. was about R7. A talk followed by Miss Jackson. At 7.30 a.m. all sign of 5SW had gone—not even a carrier. 3LO, on 75 metres, was again heard during the evening. 2ME, at R9, was calling ANE, Java (R7). The speaker at Java was speaking quite good English, 100 per cent. readable. 2GH, Wanganui, 2BO, Wellington, and 2GO, Wellington, were testing.

### Thursday, November 29.

6 a.m., 7LO, Nairobi, R2-3, clear of Morse. It is strange, but when the Morse station that works on top of 7LO is silent—which is seldom—the African station is weak.

POLL, Kootwijk, 38.8 metres, at R7, were transmitting gramophone records. Except for a slight fade, reception was perfect.

5SW, at about 7.20 a.m., was very poor. Music was heard at R4.

### Friday, November 30.

7LO, R3, music clear of Morse for short time. PCJJ from 6 a.m.

Strength only R5 to commence, and decreased to R2-3 at 7.30 a.m. 5SW was very unsteady at 7 a.m. Strength R4-5. RFM, at R9, was very good during the evening.

## Another New Ray

IN an age of unbelievable developments we have arrived at one of the most unexpected of them all. First radio transmission of voice and later television have startled our credulity at their introduction, but now comes the announcement of a phenomenon surpassing either of them—power by radio. In the transmission of a picture from point to point the picture as such does not move through space, but in the transmission of power the electrical energy will be actually transmitted through space, independent of the strength of the radio transmitter.

### Apparently Simple.

Mr. Phillips Thomas, Ph.D., research engineer of the Westinghouse Electric and Manufacturing Company of America, in a recent lecture predicted the transmission of power by use of very short-wave radio transmitters. Very short radio waves, of the order of 10 centimetres, may be reflected and focused in a parallel beam in the same manner as light and with comparatively simple apparatus.

This type of reflector has been employed on a large scale by Signor Marconi in his well-known beam transmission systems. A few thousand watts concentrated in a short-wave beam could be expected to ionise the air in the path, changing it from an insulator to a fair electrical conductor. Two such beams, along parallel paths, would constitute a pair of weightless conductors, literally "hanging in thin air," which could be aimed at any desired point. If the two reflectors were connected to the high voltage terminals of a transformer and the beams focused on two metal targets connected to a similar transformer for reducing the voltage, power could be received without the aid of any further radio apparatus. The power received would not necessarily have any relation to the power of the radio transmitter.

### Another "Death Ray"?

Rumours of a "death ray" capable of creating havoc in time of war recently created much consternation in the minds of the people. Perhaps their fears may now be realised, for it would be as fatal to life to come into the path of rays energised by the high voltage as it would be to pick up a high-tension wire. Its onslaught on an army would be noiseless, and—at least in daytime—invisible.

Apparatus for producing the 10-centimetre radio transmission is not available, but it is now in the process of design and construction and will soon be tested experimentally.

One cannot conceive of any location so remote or inaccessible that it could not be furnished with power by radio. If the development becomes practical for commercial use we may look for the universal dissemination of electrical energy.

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