

# Successful Broadcast to Schools--Brilliant Artists for 1YA

## Special Sessions for New Year's Eve



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## Outstanding Talent Engaged for 1YA



MISS MINA CALDOW.

Miss Mina Caldwell, a Wellington contralto, who has undergone a course of training abroad, has a voice of rare beauty, timbre, and compass, her upper register being as clear and powerful as her lower notes are thrilling. Her enunciation is impeccable, her control excellent, and she is blessed with that rare interpretative spirit which invests each song with a charm and significance. Her reputation as a highly intelligent soloist of sound judgment leaves no room for further comment. Miss Mina Caldwell will be heard during the coming week from 1YA.

1YA, Auckland has been fortunate in securing a wealth of distinguished talent. Among the many artists of wide repute are:—Madame Mina Caldwell, Mrs C. Towsey, Miss Lola Solomon, Miss Ina Bosworth, Miss Lalla Hemus, Miss Chrissie Ormiston, Mr. Barry Coney, Mr. O'Malley, Mr. Simpson, Mr. Frank Sutherland, Mr. Cyril Towsey, and Mr. J. F. Montague. Their services will begin almost forthwith.

Mrs. Cyril Towsey studied in England for five years with Madlle. Olga Tremelli (one of Mathilde Marchese's most successful pupils) and M. Felix Garay (of the Paris Opera) for voice production, and also with Mr. Gregory Hast for interpretation. She gave three very successful recitals in London, receiving excellent Press notices.

The most valued of these notices are one from Mr. Fuller Maitland in the "Times," and one from the late Mr. John T. Runciman in the "Saturday Review."

Mr. Fuller Maitland writes as follows:—"An excellent programme was put forward at Bechstein Hall yesterday afternoon by Miss Mary Cooper, which showed her to be a good musician. She began with groups which included Scarlatti's 'O Cessate di Piagnere,' and Schubert's 'Die Yunge Nonne,' etc., and went on to modern songs, amongst which were examples by Sibelius, Leroux, Brahms, and Massenet. In the course of these songs she managed to bring out the dramatic side of the music without forcing either the voice or the sentiment. The quieter songs were particularly successful. Her voice is naturally an attractive one, and is produced very easily. In the last phrases of 'Die

Yunge Nonne' and some of the English examples, her quiet tone was resonant and beautiful to listen to."

Mr. John T. Runciman says: "Amongst the concerts I chanced on recently was one by Miss Mary Cooper, a lady with one of the finest voices I have recently heard, and also with a fine technique."

Mrs. Towsey has, since settling in Auckland, had great success as a teacher, many of her pupils being favourites on the concert platform.

Miss Lola Solomon's reappearance as a broadcasting artist will be welcomed by music-lovers. She is not new to "listeners-in," as she has broadcasted on many occasions. She is well-known to concert audiences also, having appeared frequently at the Town Hall.

Miss Solomon has a voice of considerable range and quality, a feature of her singing being her splendid diction. She excels in the works of the French masters, and her knowledge of the French language gives life to the interpretations.

Mr. Frank Sutherland, the bass-baritone in the quartet, comes of a musical family. His late mother at the early age of 12 played before Queen Vic-

(Continued on page 2).



MR. BARRY CONEY.

Mr. Barry Coney, Auckland's best-known baritone soloist, whose resonant and inimitable manner have firmly established him as a general favourite with the music-loving public, will shortly be heard from 1YA in the Mina Caldwell-Barry Coney quartet.

Mr. Coney is well-known in the Dominion, having given recitals in Auckland, Napier, Gisborne, Nelson, Hamilton, etc., and in each instance captivating those with whom he came in contact by his charming personality.

Mr. Barry Coney has a flexible voice of mellow timbre, together with a fine dramatic sense, more than a touch of humour, and an appreciation of character, added to which he has the brains and temperament to use his talent.

His enunciation is excellent, and his vocalisation arresting—both indispensable qualities in a radio artist. Mr. Coney, in addition, is a pianist of remarkable technique and execution.



The Bosworth, Hemus, Towsey Trio.

Tornquist, photo.



The Waiata Quartet—Mrs. Towsey, Miss Lola Solomon, Mr. Frank Sutherland, and Mr. James Simpson.

Tornquist, photo.

(Continued from Cover.)

rovia at Buckingham Palace, and an older brother, Mr. Ernest Sutherland, is at present touring England with the Carl Rosa Grand Opera Company. Mr. Sutherland was appointed choir-master of the Onehunga Methodist Church while still in his teens, and shortly after conducted the Onehunga Male Glee Club of 30 voices. Since the war he has conducted the Takapuna Methodist Choir, and has frequently appeared as soloist in many choral productions. Mr. Walter Gray, the well-known Auckland teacher and late principal tenor of the Carl Rosa Opera Company, has guided his voice production. Mr. Sutherland has been a frequent performer at IYA in a wide variety of songs, and sung roles at two of the Auckland Choral Society's performances during the season just completed. He is always in demand at the local Orphans' and Savage Clubs, and appeared on the Ladies' Night programme of four of the clubs at the close of the 1927 season. He has a voice of extensive range. The songs he has sung in front of the microphone range from low E to top G.

### BOSWORTH-HEMUS-TOWSEY TRIO

Miss Ina Bosworth, one of the Dominion's most brilliant violinists, has been away from the Dominion for ten and a half years, during which period she studied with the late John Saunders (leader of London Symphony and Royal Albert Hall orchestras), Editha Knocker (contemporary of Leopold Auer, in Petrograd), and Dr. Van Loen, Leipzig. She has heard, and been associated with, leading London and Continental artists, such as Charlton Keith (who plays for Kreisler), O'Connor-Morris, Max Pirani, Leslie Heward (of B.N.O.C.), May Mukle, Plunket Greene, Schuster and Kolberg (of Philharmonic Orchestra, Copenhagen). She was chosen to do the Bach Memorial Concert for John Saunders with the Queen's Hall orchestra members accompanying. Recitals were given at the Aeolian and Wigmore Halls and the Coliseum. Subsequently Miss Bosworth toured all England, Scotland, and Ireland. During the war she played for soldiers' concerts and hospitals in all parts of France. Later she toured in Scandinavia (where she was engaged to play pri-

vately at British legations), and in Italy, prior to leaving for New Zealand, where she was associated in chamber music with Dr. Van Loen (an authority on old Italian instruments), and assisted by playing on same, i.e., Stradivari, Guarnerius, Amati, etc., for testing tone qualities. Miss Bosworth has not been heard from any New Zealand broadcasting station, but she played solos and trios from 2FC and 2BL, Sydney (who offered all their solo work). On her return to New Zealand concerts were given in Auckland, Wellington, Christchurch, Blenheim, Nelson, etc., and assisted at Joseph Hislop's recent concerts.

Miss Lalla Hemus commenced the study of the 'cello at an early date. She went to Sydney and studied with Bryce Carter for two and a half years. In search of further experience, Miss Hemus then went for three years to Melbourne to take advantage of the teaching of the virtuoso, Herr Louis Hattenbach. On returning to New Zealand Miss Hemus accepted the position of solo 'cellist at the Crystal Palace, where she stayed for over two years. On coming to Auckland Miss Hemus soon became known as a most successful teacher, as well as soloist.

### MR. CYRIL TOWSEY.

Mr. Cyril Towsey studied the piano for two years in Germany with Herr Heinrich Lutter. Returning to New Zealand he studied for five years with Mr. Maughan Barnett in Wellington, and always speaks of these as amongst the most valuable lessons he ever received. On the advice of Mr. Andrew Black, whose accompanist he was for the Wellington concerts, Mr. Towsey went to London "to try his luck." After further study he joined the office of Schultz-Curtius and Powell, now Lionel Powell and Holt, as accompanist. For the next three and a-half years he was the sole accompanist of such artists as Blanche Marchesi, Alice Verlet, John McCormack, Joska Gzetti, Franz von Vecsey, etc. He accompanied Melba on her tour of the British Isles, and toured dozens of times with Busoni, Pachmann, Backhaus, Carreno, Edna Thornton, Mark Hambourg, and many others.

Since returning to New Zealand Mr. Towsey has settled down as a teacher of the piano.

As an accompanist he is in a class by himself, and is in demand at most of the local concerts.

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He has recently returned from a tour as accompanist to Madame Frances Alda, the famous Metropolitan Opera prima donna.

The new trio at IYA, which makes its first appearance before the microphone next week, has chosen some fine selections from its repertoire. The first will be a trio from Beethoven. This composer wrote eight trios for piano, violin, and 'cello. The Op. 1, No. 1, was published in 1795. In the key of E flat major it consists of four movements—allegro, adagio cantabile, scherzo and trio, and finale.

A trio by Anton Dvorak will also be played. Dvorak did not come before the public as a composer until he was in his 32nd year. The trio in B flat, Op. 21, is one of the most beautiful trios for piano, violin, and 'cello. The slow movement is one of haunting beauty. Strangely enough, in the first movement of this trio are passages very reminiscent of the later great work, "The New World Symphony."

Niels Gade, another composer on whom the trio will draw, wrote much music of a particularly refined nature. The "Novelletten" has a fascinating grace and makes an instant appeal.

### MR. J. F. MONTAGUE

### TO BE "ON THE AIR" FROM IYA

Among a number of interesting engagements recently made in Auckland for IYA is that of Mr. J. F. Montague, who is well known throughout the Dominion as an elocutionist and adjudicator. Mr. Montague's work is always of a high standard, and his appearance on the air will naturally evoke much interest, for his many admirers throughout the Dominion and outside it will be glad to listen to his cultured work. Mr. Montague will be heard on the evenings of December 27 and 30, in dramatic and humorous items, and in sketches and playlets with other good artists—this kind of sketch being something of a novelty for IYA.

Mr. Montague is, and has been, from his earliest youth, an excellent speaker of the Maori tongue, and his first talk is likely to be on the subject of pronunciation of Maori words, and more especially of Maori place names. This subject has been freely discussed in the Press and elsewhere from time to time, and strong protests have been made against the violent mutilation of the beautiful Maori names, and rightly so.

No amount of writing seems to help the general public to solve the difficulty, but the actual spoken word from one who really and truly knows should be a tremendous help to the many thousands who are keenly interested in the subject. Mr. Montague recently stated: "It is a fact that I could actually speak Maori before I could speak English. I have always kept up my interest in Maori, and I am sure that I can instruct anyone of average intelligence who is keen to learn, in a few minutes how to avoid most or all of the common mispronunciations one hears. Some of these, many of them, in fact, are atrocious, and it is time something was done about it. Many

### BROADCASTING DIFFICULTIES

#### LOSSES THROUGH ABSORPTION.

Broadcast transmission is subject to many influences, and where listeners grumble about distortion, fading, and weak reception in some localities they are apparently unaware that the causes of these troubles are unavoidable. These difficulties are explained in the New York "Radio-Broadcast" as follows:—

"When the radio waves are thrown out, or radiated, from the aerial at the broadcasting station, they tend to spread out in all directions somewhat as do the waves in a pool of water when a stone is dropped into it. As they travel outward in ever-increasing circles, their initial energy is spread over a larger and larger circumference, so that the intensity of the waves must correspondingly decrease. If the energy merely spread out in this way, none of it being lost, the wave intensity would change inversely as the distance increased. But, due to the absorption in the atmosphere, and in the ground, of a part of the wave energy, which is thus dissipated as heat, the falling-off of wave intensity with distance is more rapid. The amounts of absorption caused by various kinds of terrain differ widely, being smallest for transmission over the ocean, or bodies of salt water, and increasingly greater for fresh water and dry land. Since a broadcasting station is usually not surrounded on all sides by a uniform terrain, the efficiency of wave-travel in different directions is not the same. As a result, the received wave intensity may not be the same at all points equidistant from the transmitting station.

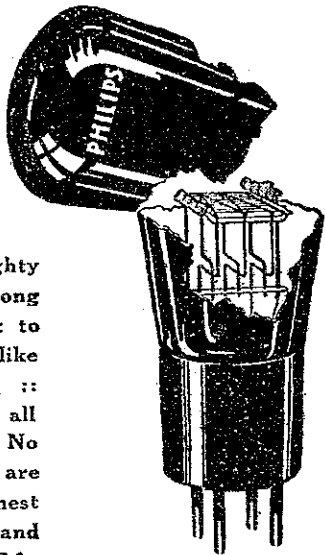
#### Causes of Trouble.

Mountains and steel-frame building areas of large cities cause particularly heavy absorption, which may amount to almost complete suppression of the waves, so that on the far side of such obstructions there is sometimes an area of very low wave intensity called a "dead spot." At such places, or near places where the terrain changes abruptly, as at a coast line, the waves may be deflected somewhat from their course and be thrown across the path of another part of the waves which has not been deflected. This gives rise to wave interference patterns of the same nature as those produced at the edges of shadows by diffraction of light. Since radio waves are millions of times longer than light waves, the patterns are relatively gigantic and one such pattern may cover an area of a hundred square miles or more. Within the area, the wave intensities at points separated from each other by only a fraction of a mile may show wide differences.

people pronounce the names perfectly well, but these folk find it exceedingly difficult to show others, by the written word especially, just how it is done. I have this advantage at least, that it is my business to teach people how to correct errors of speech of all kinds, and this Maori stuff comes easier to me, if possible, than my own language."

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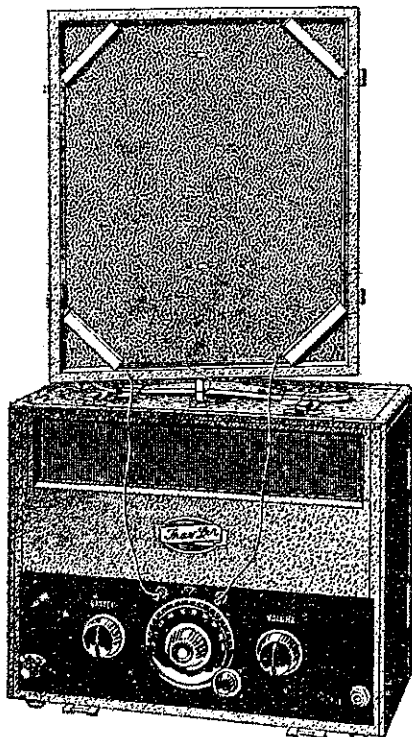
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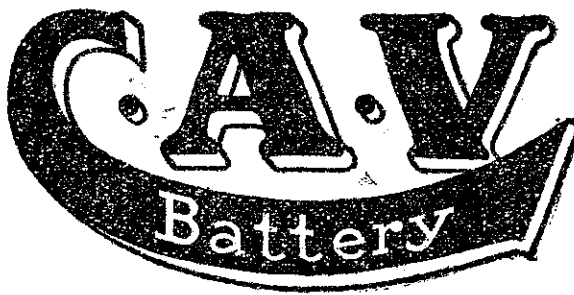
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# Highly Successful Schools' Broadcast

## Excellent Reception in Most Parts of the Dominion

The experimental broadcast to schools carried out from 2YA on December 13 was outstandingly successful. Places as far north as Ohakune and as far south as Milton reported clear reception. The educational possibilities of specially selected programmes are illimitable, and it can be confidently anticipated that as a result of this initial experiment, regular broadcasts to schools will, before long, become a recognised feature of our educational programme. The Director of Education, Mr. T. B. Strong, is greatly impressed with the results of this experiment, which shows how greatly radio can help the outback teacher, giving the pupils of the country schools cultural opportunities not otherwise available.



APPROXIMATELY thirty schools were selected for the experimental broadcast, these as far as possible representing every district in the Dominion. In actual fact the broadcast was received by more than twice that number of schools, and the general results were exceptionally good. The great majority of the reports show clear reception throughout the whole of the programme, although in some cases the afternoon was marred through electrical disturbances in certain districts. Disappointing reception was reported from Auckland, also from the Waikato, but, on the other hand, Ohakune reported excellent reception. Christchurch schools complained of erratic reception, but schools in the rural area, and those further south, reported the successful reception of the greater part of the programme. Particularly pleasing are the reports from Southland, where reception under summer daylight conditions could reasonably be expected to be not so good. At Milton the whole programme was clearly received, while further south, at Longbush, fair reception was recorded. Speaking generally, reception was excellent throughout Taranaki, Manawatu, Hawke's Bay, Wairarapa and Marlborough, except where local electrical disturbances were responsible for distracting breaks. Elsewhere, with the notable exceptions of Christchurch and Auckland, fair reception was general.

### "WONDERFUL POSSIBILITIES."

Discussing the various reports, the Director of Education, Mr. T. B. Strong, said that he fully realised the importance of the experiment, and the educational possibilities of wireless. The tenor of the reports received indicated that for complete success the rebroadcasting of the programmes from the various stations would be necessary.

"This broadcast was purely an experiment," continued Mr. Strong, "but its success has been sufficient to demonstrate the advantages which wireless offers in education. Given successful reception, the country schools could be greatly assisted through judiciously selected programmes. I believe that wireless could be used in conjunction with the 'School Journal' with very beneficial results. Suitable literature published in our journals could be dealt with by experts, and children taught by wireless to appreciate more deeply the delights of good music, art and literature. Next year we hope to go further with this matter, and eventually it may be possible to utilise widely wireless in our educational programme."

### ENTERPRISING DEALERS.

A particularly pleasing feature of the experimental broadcast was the enterprise of many radio dealers in installing sets in schools other than those listed for the official experiment. The reports already received indicate that thanks, mainly to the initiative of the dealers, at least twice as many schools as were on the schedule "listened-in" on December 13. In all probability the number was very much greater, as it is known that numbers of schools have not as yet reported.

This commendable spirit of enthusiasm exhibited by the dealers shows that they have a thorough appreciation of the possibilities opened up by regular broadcasting of programmes to schools. There will, we feel certain, be little difficulty in arranging for the successful reception of school programmes in all parts of the country, and a very wide potential market for radio sets is thus exposed. Apart altogether from the actual sets which would necessarily have to be installed at thousands of schools throughout the Dominion were a wireless programme to become a definite feature of the school curriculum, there is a wider field open to exploration. The child who receives interesting instruction by means of wireless is going to carry his enthusiasm into the home, and thousands who have thought of radio merely as an interesting but unnecessary luxury are going to become buyers, so that they too can gain the enjoyment which has been opened up to their children.

If the Education Department definitely decides upon a wireless instructional programme, and as few difficulties remain to be overcome it may be presumed that they will do so, the question of purchasing sets for the various schools will naturally arise. Though this might at first appear a definite obstacle in view of the expenditure which must necessarily be incurred, the educational possibilities are so great that ways and means could be found of raising the money. Under present conditions, subsidies are paid to school committees who voluntarily raise money for the purchase of school gramophones, etc., the Department subsidising the voluntary contributions on a £1 for £1 basis. The extension of such subsidies to the money raised for the purchase of wireless sets would act as an incentive to

committees to raise the money for their individual schools, and would result in widespread applications.

### WIRELESS LESSONS.

The programme given on this occasion was purely experimental and was not indicative of the class of work which would be carried out were wireless adopted generally. Naturally the broadcasts would have to cater for the different classes at the schools, and the programmes be so arranged as to be suitable for Standards 5 and 6 on one occasion, and for the lower standards at other times. Subjects which ordinarily present difficulties to the teacher could be treated by recognised experts, and with classes specially prepared beforehand, excellent results should be secured.

Radio for schools is no new thing, and for the past three years careful experiments have been conducted in America with school programmes. Miss Johnson, who was in charge of the work in California, said: "The experiment has been most worth while, and it has definitely proven that radio instruction is practical and a much-desired feature of any school system."

Miss Whitmarsh, to whom was entrusted a series of thirteen health talks, reporting on the possibilities of wireless, said: "The results would have been greater had more schools participated. In my particular field of instruction this experiment has convinced me that radio does much in stimulating an interest in health habits and arouses an interest in a subject which, having no special time allotted, is often neglected on the programme. I think it not too ambitious to predict that in the near future instruction by radio will be a standardised department of instruction, guided by a full-time director."

### OUR OWN RESULTS.

Judging from the success of our first experiment, results similar to those recorded in the United States may be confidently anticipated. Many of the reports received from headmasters of schools were of a most enthusiastic nature, showing that the teachers recognised the assistance that could be given them "over the air." Here are some extracts from the reports received by the Director of Education:—

Motupiko (Nelson): "The reception was excellent, the voices of each speaker being heard very distinctly."

Eketahuna: "Every word of the speeches was distinctly heard, and the type of lessons given by Mr. Taylor was received enthusiastically by the children."

Carlisle School (Marlborough): "I have to report clear reception and the absence of any distraction."

Levin D.H.S.: "I have to report that the radio reception at this school was of first-class strength and clearness. There was a complete absence of static."

Upper Moutere (Nelson): "Every word of each speaker was heard distinctly."

Tiakitahuna (Palmerston North): "The volume was very good, and there was neither fading nor distortion."

Pipiriki (Wanganui River): "I have to acknowledge the clear loudspeaker reception of the whole programme."

Carterton D.H.S.: "The reception by our school was perfect. There are, no doubt, great possibilities before this new mode of instruction."

Fitzherbert East (Palmerston North): "I think that wireless could be made to serve a very useful purpose."

Fordell (Taranaki): "The experiment was successful beyond expectation. The address of every speaker was surprisingly clear and was followed by the children with interest."

Eketahuna: "Education addresses splendidly received. Every word of literature talk came through very clearly."

Milton (South Otago): "Wireless reception excellent. Fills us with enthusiasm."

Leamington (Cambridge): "Failure owing to atmospheric robbed of much of its usefulness by static caused by an by doing so he would distract the attention of the children."

Longbush (Southland): "On the whole, the test was more satisfactory than I had hoped it could be at this time of the year. Had 2YA been relayed through 3YA the reception would have been quite successful."

Waiteika (Opunake): "The music, etc., was enjoyed by all, and I have no hesitation in saying that as regards reception the programme was an unqualified success."

Maungaturoto: "The reception was excellent, and the children and staff were able to enjoy the programme provided by the Department to the full."

Reikorangi: "From beginning to end there was not the least hitch, and the items came through very well indeed. There was no static or interference."

Waitoa (Waikato): "The volume was spoiled with considerable interference by static. Musical items and addresses were alike indifferently received."

Manurewa (Auckland): "Indistinctness and atmospheric noises prevented any but those close to the machine from hearing. The musical items were best received."

Kihi Kihī (Te Awamutu): "Unfortunately, a severe electrical storm—and probably a local one—passed over during the hour, and static was particularly bad."

Lemington (Cambridge): "Failure owing to atmospheric conditions, a thunderstorm coming on soon after 2 p.m."

Lowcliffe (Canterbury): "I have no hesitation in saying that even for daylight reception everything was perfect. Not a word was missed, and it is the wish and hope of parents and children in this district that yesterday was but the first of many such days."

Wanganui: "The programme was excellently received at Wanganui Technical School."

Woodville: "Every word of each address came through clear and distinct, and the music was most enjoyable."

Horopito (Ohakune): "The reception of the broadcast was excellent."

Paparoa (Christchurch): "Unfortunately, the trial was robbed of much of its usefulness by static caused by an electrical disturbance passing over the district."

Ongarue (Taumarunui): "The school children listened very keenly to the programme rendered, but the success was marred by the prevalence of a rain storm that swept over just prior to the broadcasting of the programme."

Elsthorpe (Hawke's Bay): "Static at times spoilt what was otherwise a very good reception. Keen interest was displayed throughout. Wireless lessons as a permanent institution should be of great value to pupils and teachers alike."

Fiat Creek (Ral Valley): "Right throughout the trial there was no suspicion of fading. The address was entirely satisfactory, especially for pupils from Standards 4 to 6."

Tairua (East Coast): "I much regret that the results were disappointing. After some interference by static, the items were faint."

Taihape D.H.S.: "The day was not at all suitable for good results. Static gave some trouble, but some speakers were heard clearly."

Wanganui: "The reception was very good, and even at the back of the hall every word could be heard without difficulty. If wireless is used in schools it would be inadvisable for the teacher to have any oral part, because by doing so he would distract the attention of the children."

Timaru: "The conditions were not altogether favourable, but the address of the Director and the Chief Inspector came through very well and could be clearly heard right to the back of the large room."

Sefton Rural (Canterbury): "The upper children listened in, and had the programme been rebroadcast through 3YA we should have had a delightful reception."

Linwood (Christchurch): "The voices were heard quite distinctly, but the music suffered. As an experiment it was quite successful. A day should be set aside specially for addresses to Standards 5 and 6, and another day for the lower standards."

Manala (Taranaki): "We assembled the whole school in our largest room, which I now think was a mistake, for the novelty wore off for the smaller children. I think the broadcasting of good models of elocution would help to break down the self-conscious efforts at recitation by most of our bigger boys and girls."

### CO-ORDINATING LESSONS.

In addition to the brief excerpts given above, much valuable data and many useful opinions were provided by teachers who heard the experimental programme. The general opinion inclines to the belief that the most effective use can be made of wireless where previously-arranged lectures are given, the teacher having maps or diagrams available for ocular demonstration of the points made by the speakers. The benefit to be derived by a series of short lessons by one individual lecturer is stressed, the children thus, after the first performance, having a feeling of common interest with the lecturer. "Musical instruction provides the most profitable and the most promising field for broadcasting in the schools," says one head teacher, and, realising the difficulties attendant upon the teaching of singing and the still greater difficulties associated with the inculcation of a proper appreciation for good music, all will be in complete agreement with him.

This experimental broadcast opens up a further field of useful service for radio in the Dominion, and dealers and listeners recognising the advantages of educational broadcasting work should give their keen support to any proposals which may be brought down by the Education Department for wireless installations in schools.

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No responsibility is accepted for blocks, stereos, etc., remaining unclaimed after last use, beyond a period of three months.

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

P.O. Box 1032.  
WELLINGTON

WELLINGTON, DECEMBER 23, 1927.

## THE RADIO CHRISTMAS.

The suggestion first made in our columns some month or so ago to make this a "Radio Christmas," we are glad to see, has been generally adopted by the trade, and effective efforts made to promote the giving of radio presents and so widen the circle of listeners. Commendable co-operation has developed in this effort between the trade and the Radio Broadcasting Company. In order to give the trade a wider opportunity of demonstrating sets during business hours to prospective buyers, the company promptly acquiesced in the suggestion advanced by a trade deputation that 2YA should go "on the air" from noon throughout the week preceding Christmas (including Wednesday, the usual silent day). Apart from this request the company had already arranged for extended and additional sessions at all stations, both preceding Christmas and at Christmas. The programmes provided for Christmas itself are very full, and most definitely such as will make a strong appeal to listeners.

A very happy spirit marked the meeting between the trade deputation and the general manager, Mr. A. R. Harris, dealers giving full endorsement to the statement of their leader, Mr. Wyles, that the trade greatly appreciated the service being given by the company, and desired to co-operate in every way to further the cause of broadcasting. This is a very happy spirit, and is a very good augury for the future.

We trust that the "Radio Christmas" will everywhere have been successful, and that it will mean the definite spreading of radio happiness into many new homes. That would be the brightest part of a real "Radio Christmas." May the full happiness of the festive season attend our readers!

## BREMER-TULLY

Six and Eight-Valve Receivers.

The Best and Most Sensitive Set Money can Buy.

GILFILLAN FIVES AND SIXES.

A reasonably priced set of good quality.

The largest and best assortment of Radio requirements in Otago.

From the Otago Agents:

**Barnett's Radio Supplies**  
OCTAGON : : DUNEDIN.

**The CAMERA Coy.**  
OCTAGON, DUNEDIN.

The House For Satisfaction.

**Have You Heard  
PAGE RADIO?**

This powerful Six-Valve Receiver is the machine you are looking for. For distance, selectivity and tone, it is unexcelled.

**Prices from £16**

## SPECIAL SERVICE FOR XMAS WEEK

SESSIONS FROM NOON TILL FIVE.

By special arrangement between the Broadcasting Company and the radio dealers, stations 1YA, 2YA, and 3YA are "on the air" from noon until 5 p.m. each day during the week preceding Christmas. Dealers are thus enabled to demonstrate their sets during the lunch hour, when many would-be buyers flock to the shops. Even on Wednesday, usually the silent day from 2YA, the afternoon service is being continued.

Dealers who met the company's representatives on the matter expressed their pleasure at the arrangement, while the company was only too glad to provide this extra service for the benefit of dealers and listeners alike. The dealers, who realise the advantages of co-operation with the Broadcasting Company for the mutual betterment of radio, were taken to Mount Victoria to see the transmitting station in action. Christmas week is a rush week for all the radio shops, and the special afternoon sessions are, no doubt, contributing to the success, assisting dealers in spreading their sales throughout the day, and allowing buyers to hear the various sets before finally deciding upon their purchase.

## A MESSAGE OF GOOD- WILL

FROM JAPANESE CONSUL-  
GENERAL.

Scholar, statesman and orator, Mr. Tokugawa, Consul-General for Australasia for Japan, has a record of which anyone might well be proud. For years he has been prominently associated with the diplomatic service, and he has played no mean part in the councils of the League of Nations. New Zealanders can never forget the invaluable service rendered by our gallant Japanese allies in the early days of the war in escorting our soldiers in safety, and the message which Mr. Tokugawa delivered from 2YA last week was particularly appropriate.

"I am here," said Mr. Tokugawa, "to give you a message from your friends in Japan. The Japanese nation recalls the days when the forces of New Zealand and Japan were arrayed together for the cause of justice and righteousness."

"New Zealand's immediate assistance to the relief of sufferers in the great catastrophe which befell my country is not forgotten. The relations between New Zealand and Japan are primarily based on the traditional good fellowship existing between Great Britain and Japan."

"Great Britain and Japan, both similarly situated island nations, have always been in a position to understand each other well, from the inception of Japan's intercourse with Europe. We have learned so much from Great Britain, especially in the sphere of commerce and navigation. Great Britain, on her part, has proved herself at all times to be Japan's staunch friend, and so we believe she will always be. The friendship between the two nations is no mere question of give and take: no mere matter of bargaining. There is something far deeper and more fundamental than that."

"New Zealand and Japan, not unlike in many respects, in climatic and geographical conditions and otherwise, are bordering the same great ocean which is now becoming one of the most important centres of world activities, - that is to say, the region in which we are responsible in common for the maintenance of permanent peace and order."

"We shall see that our two countries, always relying on the Anglo-Japanese good relations to which I have referred, should co-operate, and indeed be determined to co-operate, to make the Pacific a region of new hope for the much tried world."

"It will be seen that the task before us is one of extreme importance, and that task we can cheerfully undertake on the strength of the happy relations always maintained between the British Empire and ourselves. Let us co-operate. Let us go together."

## "HEAR HERE!" STIRTON'S

Music and Radio Store.  
PETONE.

HUTT VALLEY AGENTS FOR:  
CROSLY AND C. AND B.  
BROWNING DRAKE SETS.  
SERVICE AND SATISFACTION  
GUARANTEED.

**S.O.S**  
TRAVEL IN COMFORT BY  
CAR  
WELLINGTON - PALMERSTON  
NEW PLYMOUTH.  
Use Our Booking Offices in Advance.  
51 Willis Street, WELLINGTON.  
Telephone 45-842.

## HOW WIRELESS HELPS

THE BACKBLOCKS TEACHER.

Wireless in these days is doing a wonderful work for the children. Not only does it afford them delightful entertainment "over the air," but it comes to their aid in other ways, many and various. For instance, this little letter received by Mr. Stanley Warwick, a popular performer at 2YA:—"On Tuesday evening I heard you recite through the 'wireless' a piece of poetry entitled 'The Sad Story of a Motor-car.' I am teaching in a Native school, and intend having a concert shortly in aid of funds to start a library for the children. I would esteem it a great favour if you would be kind enough to let me have a copy of the recitation, as, being so isolated here, I have very little opportunity of getting suitable recitations. The little Maori children are very fond of reading, and at present we have no library." This comes from the Kōkako Native school, Tirai, Hawke's Bay.

## SHORT-WAVE ERA BEGINS

LONDON CALLING.

On Tuesday, 13th inst., at 1.15 a.m., Wellington listened to "London calling," and heard what is stated to be the best transmission yet picked up by Australia from England. The concert relayed from 2LO, London, and broadcast by the British Broadcasting Corporation's experimental short-wave station, 5SW, Chelmsford, came through with excellent volume and clarity. The transmission was picked up and relayed by Messrs. Farmer and Company, 2FC, Sydney, and it is reported that the volume was equal to that of Sydney's usual broadcast, there being a marked absence of fading.

A soprano solo was heard perfectly; then came the call, "London calling," followed by a piano solo, Chopin's "Nocturne in E Flat Major," and later an organ solo, Mendelssohn's "Sonata in F Minor."

## BRITISH BROADCASTING

OVER 2,000,000 LICENSE-HOLDERS.

The number of receiving licenses issued by the Post Office in force at the end of September was 2,333,631. In addition there were 9150 blind listeners, to whom free licenses had been granted. This shows an increase on the previous month's total of nearly 18,000, the biggest advance in any one month since April last. Altogether 155,000 new listeners have been enrolled since the beginning of the year. That the figures are still rising, after five years of broadcasting, refutes the suggestion sometimes made, that saturation point has been reached. What exactly is "saturation point" is a matter for speculation, but one suggestion is in the neighbourhood of 1,000,000 licenses.

## SPORTING BROADCASTS

NEXT WEEK'S FEATURES.

December 26: Australasian Amateur Athletic Championships, 2YA; Auckland Racing Club Meeting at Ellerslie, 1YA.

December 27: Australasian Amateur Athletic Championships, 2YA.

December 28: Auckland Racing Club Meeting at Ellerslie, 1YA; New Zealand Tennis Championships, from 2.30 p.m. onwards, 3YA.

December 29: New Zealand Tennis Championships from 2.30 onwards, 3YA.

December 30: New Zealand Tennis Championships from 2.30 onwards, 3YA.

EVENING SESSIONS.

Results of New Zealand Tennis Championships, all races, Plunket Shield cricket, Australasian Amateur Athletic Championships—from all stations every night.

HON. L. C. S. AMERY

SPEAKS TO 100,000 LISTENERS.

The fact that the Hon. L. C. S. Amery spoke directly to over 100,000 listeners throughout New Zealand in a farewell message and review of his experiences in the country lies to the credit initially of 2YA Wellington and the re-broadcast of that station by 3YA.

In spite of the pressure of many public engagements, Mr. Amery was good enough to meet the request of the Broadcasting Company for a final address, which was delivered from 2YA on the evening of December 15. For the occasion the studio was decorated, and the band of the First Battalion Regiment, under Lieutenant Shallow, was in attendance and gave the distinguished visitor musical honours both before and after his address. "I am more than satisfied with my visit to New Zealand," said Mr. Amery. "It has been all too short, but through the kindness of your Government I have been afforded every opportunity for making the very fullest use of my time. I have seen something, not only of your chief cities, but of almost every part of your two islands, and I shall go away with a far clearer idea than I had when I came here, both of the great developments you have already achieved, and of the great progress which I know is still to come. I have enjoyed every minute of my stay here, and shall leave with a sense of joy in my visit to New Zealand, and a sense of confidence in her future, not only in her material future, but in what the character of her people and the high standard of education and the ideals they hold so dear will enable New Zealand to achieve in the years before her."

## RALEIGH RADIO

### A FEW FACTS CONCERNING RALEIGH RADIO

RALEIGH Radio are the largest Radio manufacturers in the British Empire.

RALEIGH Radio has its own expert research and engineering departments.

RALEIGH Radio is one of the six companies who have exclusive access to the largest pooled patent resources in the whole of Canada.

RALEIGH Radio plant has a production capacity of 1200 Radios a day.

RALEIGH Radio Receivers are designed and built to excel in tone quality, simplicity of operation, selectivity and beauty.

RALEIGH Radio is now available to those discriminating New Zealand listeners who demand the highest standard of British workmanship in Radio.

A range of attractive models is now on view at—

**BRITISH IMPERIAL RADIO CO.,**

236 Lambton Quay, WELLINGTON. 'Phone 42-412

If you want SHORT WAVE OUTFITS, COILS, CONDENSERS, CHOKES,

—you want BREMER TULLY PRODUCTS.

If you want FINE RESISTANCES, RHEOSTATS, JACKS, PLUGS, CONVENIENCE OUTLETS, for SPEAKER, BATTERY, AERIAL AND GROUND CONNECTIONS, in any ROOM, or AUTOMATIC CONTROL,

—you want YAXLEY PRODUCTS.

If you want PRECISION CONDENSERS for WAVE TRAPS, T.C. SPECIAL RECEIVERS, DOUBLE ROTOR COILS, R.F. CHOKES, 6-1 TRANSFORMERS, NEUTRALISING CONDENSERS, IMPEDANCE COUPLING UNITS, OUTPUT DEVICES,

—you want SAMSON PRODUCTS.

If you want A GOOD SPEAKER TO WORK OFF YOUR OWN CRYSTAL SET,

—you want A CLARITONE JUNIOR (Ashley Wireless Co.).

If you want THE BEST SETS OR PARTS that money can buy, ASSISTANCE, ADVICE OR REPAIRS,

—you want

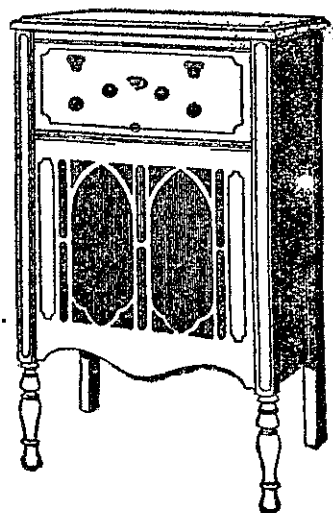
**Mack's RADIO CO. LTD.**  
76-77 KENT TERRACE.

WELLINGTON.

(The House of Service), where the HIGHEST QUALITY GOODS are sold.

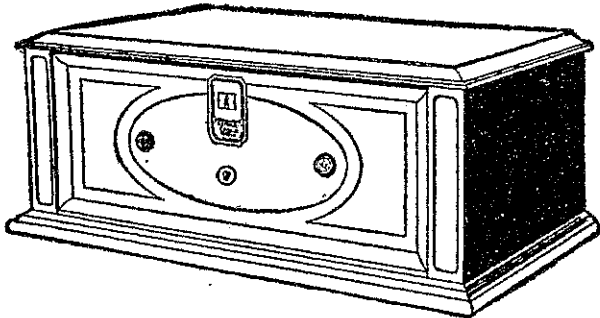
# AT LAST!

## A World-Leader in Radio Receivers that is ALL BRITISH The "Raleigh"



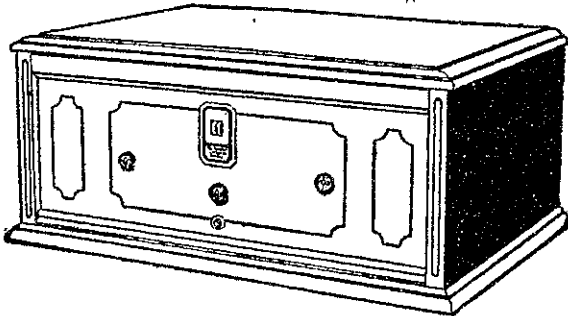
### THE HASTINGS One of the Royal Series

Where the convenience and attractive appearance of the console cabinet are desired, in combination with outstanding performance and value, the "Royal Series" presents the HASTINGS.



### THE BALMORAL One of the Royal Series

In every community there are those who never compromise with cost in the satisfaction of their desires. For them the seven-tube Balmoral has been built. Unique in the mechanical and electrical design—in power, tone and selectivity—the Balmoral furnishes a fine example of the quality made possible by D.C. resources.



### THE WARWICK One of the Royal Series

A genuine Stradivarius violin costs £8000 or more because of its exquisite tone, which has never been equalled by any other. In radio, fine tone quality has been hitherto restricted to very expensive sets. Now, in the Warwick, unusual tonal superiority has been attained at a moderate price.

Manufactured in Toronto, Canada, by the largest Radio Manufacturers in the British Empire.

### Canada's Wonder Industry

FROM a small assembling plant employing a few dozen operators, to a huge factory with hundreds of employees, completely manufacturing a comprehensive line of sets, speakers, and power devices—from a production of a few complete sets per day, to a daily output exceeding five hundred units—from a purely local market, to a world-wide chain of agencies, including control of one of the pioneer radio manufacturers of the United States; such is the astounding four year's growth of this remarkable young Canadian company.

Managed by Britishers—financed by British capital—drawing on British resources of inventive genius, labour and material—RALEIGH Radio is an outstanding example of what British enterprise can accomplish even in a highly competitive industry. Handicapped at the beginning by limited resources, limited purchasing power, and a limited market, but ever keeping as its guiding star the ideal of radio satisfaction for RALEIGH owners, it has won definite leadership in its own and many foreign fields—has demonstrated again the ability of British industry to achieve outstanding success in the most competitive markets.

## The ROYAL SERIES

Altogether Superior to any other Wireless You've Ever Heard or Seen

The enjoyment you may have had from Wireless entertainment is a mere shadow compared with the flawless results the all-British Raleigh "Royal Series" will give you.

And if you are one of those who have waited for an instrument giving absolutely perfect reception with absolutely simple "tuning-in" before buying a set, then the "Royal Series" offers just what you require. Golden Resonance of tone—classic beauty—value unequalled—simpler than ever to operate—free from interference from unwanted stations—amazing in range and selectivity—in every way the "Royal Series" represents the greatest advance of the day in Radio Receivers.

Subject this marvellous all-British Receiver to the minutest examination. It will instantly appeal to you as being extraordinarily fine and desirable.

RALEIGH RECEIVERS are in the quality class, but owing to 20 per cent. preference in duty on account of being a British product, they are sold at prices competing favourably with cheap American Receivers.



### DISTRIBUTORS:

WELLINGTON:  
SOUTH WAIRARAPA:  
PALMERSTON NORTH:  
WANGANUI:

Wholesale—J. A. Smyth and Co  
71 Victoria St., Wellington.

TARANAKI: Jas. McNeill, 375/379, Devon Street,  
New Plymouth.  
GISBORNE: Swan Radio Co., Gisborne.  
DUNEDIN: Laidlaw and Gray, Rattray Street,  
Dunedin.

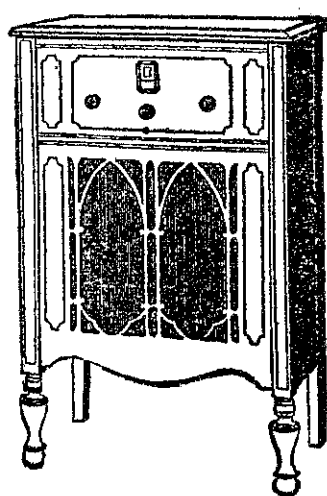
There will be a Raleigh Dealer in every part of New Zealand. Full list will be published later. Some territory is still open for representation, and applications are invited from Dealers, both Wholesale and Retail.

Communicate with

THE RALEIGH REPRESENTATIVES

P.O. BOX 1432,

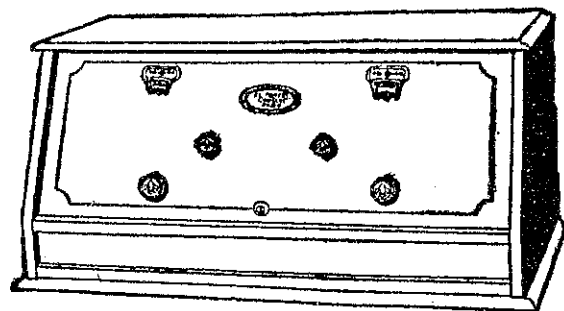
AUCKLAND.



### THE WINDSOR One of the Royal Series

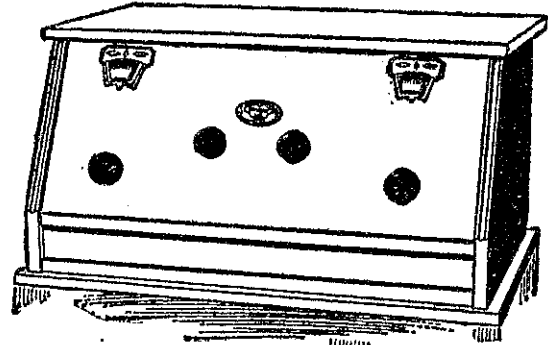
For those who wish to combine the attractions of unusual tone with the ornamental features and convenience of a beautiful console cabinet, the Windsor will find particular favour.

To the mechanical attainments of the six-tube Windsor, are added dignified console beauty—a welcome addition to the most attractive home surroundings—and a new self-contained acoustical system.



### THE CONWAY One of the Royal Series

Supreme in its class the Conway is the greatest value in a five-tube set ever put within the reach of those who want exceptional performance at a modest price. The value exemplifies the savings made possible by applying the principles of standardisation to quality products.



### The SUPER-TRIRDYN One of the Royal Series

A three-tube set superior in performance to many five-tube sets, the Super-Trirdyn continues to prove its popularity wherever a compact model, with low upkeep cost, is desired.

The 1927 model contains for the first time the Wheatstone Bridge principle of balance—giving added power, selectivity, and new ease of control.



# From the Woman's Point of View.

By VERITY.

## TO-DAY AND TO-MORROW

### "The Woman of To-morrow."

Even more than the woman of to-day, the woman of "just to-morrow" is intriguing people nowadays, and much is being said and written on the subject. "If things go on at this rate," said Mrs. Grundy, only yesterday. Imagination failed her, for she got no further, and now she herself has gone into short skirts, and is swinging a racquet and learning to Charleston. Someone has said "Women are news"; and news they are likely to remain, so long as men write newspapers and books.

### "The Old Woman and the New."

Once, during the war, I watched the women of the English V.A.D. and another organisation holding their athletic meeting. It was at St. Omer, on a French sports ground. We men—and there were many of us—were amused, surprised, and, I think, a little impressed. These girls ran and hurdled and high-jumped, and turned out well-trained teams for the tug-of-war. And there was a grace about it all, a smiling keenness.

There were other women watching: French women, well perfumed, exhalant that something which a man likes to call femininity. And these French women were amused, and, I think, a little contemptuous. It seemed to me that you had on that field the old woman and the new, and that the French girl was thinking that the English girl had gone very much astray.

The French woman still had her eyes on the man. Those girls who were running and hurdling had their eyes on the tape. All that happened during the war was, I think, symptomatic. Also, it was the sudden quickening of a tendency, an impulse. Skirts and hair began to shorten. The woman of the 1920's was upon us.—Warwick Deering.

### No More Spinsters.

The woman of 1928 will have more enthusiasm and far more real self-respect than the woman of previous generations. There is no need for the woman of the open air and the open road to be less of a mate, comrade, mother, sister, friend, than the woman of the boudoir. Is she not more reliable, more honest, more free, more interesting to herself and others? The despised word "spinster" is dead. There are no more spinsters in the Victorian sense—there are women.

### Cheese Rissoles.

Half-pound flour, 4oz. butter, little milk, 3oz. grated cheese, 2 eggs, pepper and salt, 2 tablespoons breadcrumbs. Method: Put flour, pepper, salt, and cheese into a bowl, put in the butter, and mix stiffly with one egg and a little milk. Make into round balls. Beat egg on a plate, brush the balls with this, toss in breadcrumbs, and fry slowly. Serve very hot.

### From the "Church Times."

Small child is busy drawing. Fond Mother: "And what is my darling drawing?" Small Child (without hesitation): "Drawing God." Fond Mother (hastily): "Oh, but, my dear, you can't do that. No one knows what He is like." Small Child (with assurance): "No; but they will when I've finished my drawing!"

### NOT from the "Church Times."

"Mummy, do cats go to heaven?"—"Well, no, I don't think so."—"Do cows go to heaven?"—"No, dear, I'm afraid not."—"Well, then, who's going to hell to fetch the milk?"

## WE SAVE YOU MONEY ON RADIO LITERATURE

MAGAZINE DEPT.  
BOX 62 P. T. A. R. U. R. U.  
Radio, M., 15/-; Radio News, M., 15/-; Radio Call Book, Q., 9/-; Radio Broadcast, M., 20/-; Radio Engineering, M., 12/6; Q.S.T., 15/-; Money Making, M., 9/-; Amazing Stories, M., 15/-; Boy's Life, M., 12/6; Radio Record, W., 10/-; Radio Record with Radio News, 21/-; Popular Radio, 15/-; Popular Radio with Radio Record, 24/-. All subscriptions per annum, post paid. Single copies not sold at above rates. Please remember we are at your service and that we can quote the best possible prices on any magazine published. Be early. This Month's supplies limited.  
MAGAZINE DEPT.,  
BOX 62 P. T. A. R. U. R. U.

### Coconut Cake.

Three eggs, their weight in batter, sugar, and flour, 3oz. coconut, 1 teaspoon baking powder. Method: Cream butter and sugar, add eggs and flour, and beat well; add coconut and baking powder. Bake in a greased tin for about one hour.

### Almond Icing.

This is very easy to make. Its ingredients are: Equal quantities of ground almonds and sifted icing sugar, and a few drops of almond essence. Mix well, then moisten to a very stiff paste, using sugar-syrup or beaten eggs. Either whites, yolks, or whole eggs may be used; if whites only, they must be slightly beaten up, but not frothed. Knead the paste till firm and close, and let it cease to feel sticky; form into a round of the proper size, fit on to the top of the cake, which should be cut flat if required, press well down, and smooth the edges neatly with a knife. Let it stand in a warm place for twenty-four hours, or, better still, for some days before using.

## GOLFING LULLABY.

Hush-a-bye, baby, pretty one, sleep,  
Daddy's gone golfing to win the club  
sweet;

If he plays nicely—I hope that he will—  
Mother will show him her dressmaker's  
bill.

Hush-a-bye, baby, safe in your cot,  
Daddy's come home and his temper is  
hot;

Cuddle down closer, baby of mine,  
Daddy went round in a hundred and  
nine.

—From "The Cape."

## A BLUSH ROSE.

Once in an old-fashioned garden  
Long years ago, I suppose,  
There grew a slender white lily,  
And close to it grew a rose.

Now they both loved the amorous  
west wind,  
How it happened nobody knows,  
But a kiss that was meant for the lily  
Got wafted away to the rose.

And ever since then for that reason,  
At least, so the story goes,  
There's a sad faded droop on the lily,  
And a blush on the cheek of the  
rose.

## The Letters of Annabel Lee

My Dear Elisabeth,

The Maoriland summer is upon us, and the good old month of December is rushing past in a cold that is like unto that of Mount Cook or the regions of the Pole. Mr. Sidey, that altruist, that shedder of daylight in dark places, has been foiled by the powers that be, the clerk of the weather, the heavenly host; and, though the clocks have been put forward, and the mantle of Elijah draped reverently around the slim shoulders of the Jovian protagonist who so long and loudly has exclaimed: "Let there be light!" so far the result has been disappointing. Ebulient youth has looked out its sports kit, flourished racquet and bat, only to encounter winds that are icy, trails that are slushy, noses that are red. But the shops are scoring heavily. Never have I seen those shops begin operations so early, and 'tis pleasant to notice the quiet and smiling patience displayed by those who stand and wait behind the counter, towards poor humanity that is apt to grow irritable and exacting in its quest for that unattainable counsel right person at the right price. Blow, blowing are the trumpets of youth and the squeakers resound in the land, harassed are the mothers in Israel, and occasionally grumpy the fathers, as who can wonder when the depletion of the exchequer is envisaged. But apparently 'tis all one to the nymphs of the counter who, with a tact that at times is worthy of the Secretary of State for Her Majesty's Dominions, wait with angelic deference while the flustered shopper makes a meticulous choice between a sixpenny powder puff and a nice and ninepenny modern equivalent of a "hussif." Truly the admirable art of courtesy is not extinct. "Know, dear brother," says Malory, "that courtesy is one of the qualities of God Himself, who of His courtesy giveth His sun and His rain to the just and the unjust, Courtesy being the sister of charity," and so on. Fain would I recommend this ancient writer to two dashing blades, who, unfortunately for us, sat beside us on the same hard bench at the Concert Chamber the other night, the occasion being the closing performance of the year of the National Repertory Society. If the young man who, in appearance, so closely re-

sembled the pictures of Mr. Michael Arlen, wished to make comments as frequent and painful and free as those of Mark Twain's heathen Chinese, and snigger and whisper to his companion of the shiny hair and audibly yawn, why, oh why, did he not reserve the gallery for himself and his friends, instead of boring and disturbing those to whom the play is the thing?

We look to the Repertory Society for an intelligent presentation of those modern plays which, in the nature of things, there is little opportunity of seeing in this Dominion, distant as it is from the bracing intellectual atmosphere of the Old World. And the Society on the whole has done well, and, though on the first night the audience was sparse, it was so responsive and receptive that players and producer could not fail to be gratified. The three plays presented were widely different in character and somewhat uneven in performance. "Posterity," by Mr. C. R. Allen, is whimsical, wise and witty, with that quality of putting us in touch with spiritual issues that one has grown to expect from the work of this New Zealand playwright. The fantasy, however, was not happily cast; Mr. Oswin often having been seen to better advantage than in the part of a Cambridge don, and much of the dialogue did not get over, Mr. Miles Cadman as the Ghost giving the best conception of the trio of actors.

In essaying "Riders to the Sea" the Society was perhaps over-ambitious; but the performance of the heart-stirring Irish tragedy was very good, and that the audience recognised this was shown by the remarkable stillness and attention with which it followed the simple, poignant unfolding of the plot. There was no rustling, no twittering, no coughing at inopportune moments; but instead a silence that could almost be felt as Mrs. Hannah, as Maurya, made her hopeless, fatalistic, heart-broken lament for her dead Michael and the others, and sprinkled holy water on that last lifeless rider to the sea. Everyone concerned deserves high appreciation for so faithfully presenting Sygne's great play. Especially appealing were Miss Chapman and Miss Vautier, who looked very sweet indeed, and admirably co-

## TO-DAY AND TO-MORROW

### FLU' FEVER (THE RELAPSE.)

With apologies to Mr. Masfield.

I must go back to my bed again, to my attic under the sky,  
And all I ask is a sheetless bed and blankets warm and dry;  
And a cool drink and a hot bath and a bath-sheet baking;  
And no letters or 'phone calls till my head's stopped aching.

I must go back to my bed again, for the signs of the fell disease  
Are a high temp. and a hot temp. and pains in the back and knees;  
And all I ask is some perfect peace with loved ones far away,  
And blinds to shut out an English spring and its skies lead-grey.

I must go back to my bed again, to the old familiar bore  
Of tennet-taking and chart-making and "the mixture as before";  
And all I ask is a cheery book with a pretty girl on the cover,  
And a deep sleep and a great sweat when the hot fit's over.

—C. A.

### "Dwellers in the Dark."

There is a picture by Millais of "The Blind Girl," with Titian red hair, sitting on a stone by the roadside, her lips parted in a smile of wonderment as she listens to her sister's description of a rainbow. One day, another picture will be painted. It will portray a blind boy with earphones intently listening, with the same smile or pure delight and enchantment. How much radio means to the blind, the blind alone can tell. It means so much that it should be an endeavour at this season of goodwill to see that no blind or deaf person goes unprovided with a set of some kind.

### "Bill for Beauty Culture."

The business of making the American woman even more lovely than did Nature has now become one of the major industries in America. American women are spending \$365,000,000 yearly for beautification and its aids. In the last ten years, two significant things have happened to the American woman. One is that she has learned how to cook. She has studied foods and their nutrition values, and to a large extent dyspepsia has been banished from the American home. The other phenomenon is that the American woman has, by the use of preparations and cosmetics, ceased to become old. She is getting the best out of life to the last minute, and is "crowding old age up to the grave's edge."

Grandmothers shed their tresses along with their grand-daughters. There are now 14,000,000 shingled heads in America.

### Easy Fire-lighting.

If about half-a-dozen paraffin cinders are placed on the paper used when lighting a fire, only half the usual amount of kindling wood is needed. Each morning as the grate is being cleared, a few cold cinders should be put in an old tin, and kept saturated with kerosene. The fire will never need watching in its early stages.

### Three Secrets.

To remove splashes of paint from glass windows, rub with a piece of stick dipped in hot vinegar. This will easily remove even old and hard splashes.  
2. Clean windows with a soft cloth and a few drops of methylated spirit. This gives a good polish and is less trouble than using water. Finish with a chamois leather.  
3. Mashed bananas used with a very little apricot jam make a delicious filling for sandwiches.

### Apple Peelings.

If apples, instead of being stewed, are placed in a jar with a little water, sugar, cloves, or lemon rind, and the peelings laid on top of the fruit, and the whole covered and cooked in a slow oven till tender, the flavour will be infinitely superior. The juice will be the real thing and will form a jelly when cold. Apple tarts should have the fruit cooked first in the peels with the peelings on top, to be removed when the pastry is put on. These peelings boiled in aluminium saucepans will clean them.

### Pan Problems.

A new enamel pan should be placed in a larger pan of warm water, let it come to the boil and then cool. It will neither crack nor burn if thus treated and will last far longer.  
If before boiling milk the saucepan is rinsed out with cold water the milk will not burn or stick to the bottom.

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Every husband and wife have words at times," says my tame cynic, "but it is only the wife who uses them."

Laughter is not at all a bad beginning for friendship, and is far the best ending for one.

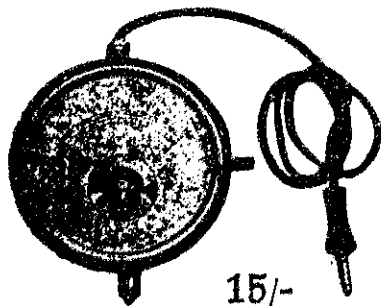
The difference between the quick and the dead is that he who can dodge the motor-car is quick, and the other is soon dead.

"My husband has become inordinately stout. Can you suggest any effective fat-reducing exercise?" "Yes; let him try pushing open a bolted door from the inside. This will make him lean."

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# Some Features of Next Week's Programmes

## 1YA NOTES

There will be no silent day for 1YA next Monday, for then the week's Radio Carnival commences. A programme that will launch the week of entertainment has been arranged.

Vocal talent which has twice appeared at 2YA (and that is a sufficient recommendation) will be singing. These artists are Madame and Mr. C. T. Spillane and Miss Marjorie Alomes, three singers who are very prominent in musical circles in Wanganui.

The cornetist (Mr. Fred Bowes) and the flautist (Mr. H. McLennan) are soloists in the Auckland Municipal Band.

As a humorist Mr. Rex Yates stands out almost by himself in Auckland. One of his items will be "Misunderstood," a tale of two soldiers.

Playing on a mouth organ only one inch long is a novel freak feat of which Mr. A. S. Brownrigg is capable. Mr. Brownrigg is a very clever manipulator, and his novel turns will be very much enjoyed.

The Bohemian Duo needs no introduction to a 1YA audience. They have been on the air repeatedly since the auspicious opening night's concert.

## GEMS FROM THE OPERAS.

Tuesday will be mainly an operatic night, and one of the new quartets and the studio instrumental trio will be on the air for the first time. This quartet will be that composed of Madame Irene Ainslie, Miss Marjorie Fair, Mr. J. De Montalk, and Mr. J. Ripley. Solos from some of the best-known operas will be sung.

In addition to this quartet and the Fosworth-Hennessy-Towsey trio, other talented artists have been engaged. Among these is Mr. Montague, the elocutionist, who has a vast repertoire to draw upon.

Mr. Dan Flood, late of the Humphrey Bishop Company, and well known in Auckland for his excellent interpretation of the role of Doolittle in the very recent production of Pygmalion, will give monologues at the piano.

## MARITANA MELODIES.

The Wainia Quartet (Mrs. C. Towsey, Miss Lola Solomon, Mr. James Simpson, and Mr. F. Sutherland) will make its debut as a quartet on Wednesday, though the artists themselves are known individually to listeners. For this evening a number of the beautiful solos, duets, and quartets in "Maritana" have been chosen.

The Bohemian Duo will also be at the microphone again with some of their popular songs.

The vocalist for Wednesday will be Miss Mary Wilson, who has sung for 2YA.

## THE PREMIERE QUARTET.

Singing in the Premiere Quartet will be Miss Mina Caldwell, Miss Lola Solomon, Mr. Barry Coney, and Mr. Birrell O'Malley. The items which will be rendered, individually and collectively, will give an indication of the quality of these singers. Miss Mina Caldwell will be singing Brahms' "Sappische Ode" and "My Jewel" (Sanderson).

The Snappy Three (composed of Miss B. Poulton, Messrs. Birch and Arthur Prentice) will give some more of their popular items, and Mr. Rex Yates will dispense more humour.

## MUSIC AND HUMOUR.

Some of the delightful melodies from Gilbert and Sullivan operas will be among the songs to be sung by the St. Andrew's Quartet on Friday. This quartet—Miss Phyllis Gribben (contralto), Miss Adelaide Taylor (soprano), Mr. Robert Peter (tenor), and Mr. A. Colledge (bass) has been for some time connected with St. Andrew's Church, hence its name.

Mr. Dan Flood will be again appearing this evening, and, abetted by his piano, will broadcast his radiant humour.

Mr. Flood will not be alone, for Mr. A. McLennan, one of the leading humorists of the Queen City (and a member of the well-known Lyric Quartet), has a couple of significant-looking items against his name.

Mr. Montague and Miss Lynda Murphy are to stage two sketches. One is called "Wednesday or Thursday" and the other "At the Fire Station." Miss Murphy has earned a great name for herself in Bernard Shaw's "Pygmalion," in which she played the leading role.

Joan Lowry is "Maritana," Miss Margaret Smith "Lazarillo," Mr. George Wilson "Don Caesar," Mr. Ray Kemp "Don Jose," and Mr. James Cooke "The King." Miss Hazel Rowe is the pianiste, and Mr. Harry Brusey the organist.

## THE ORPHEUS QUARTET.

"Come All Ye Lads and Lassies," by Lane Wilson, the opening number of the Orpheus Quartet's programme to be broadcast from 2YA on the evening of Tuesday, the 27th instant, is a very bright composition, its theme being an invitation to an old-time coun-

Beethoven; the trio in B flat by Schubert; and the Reissiger trio in G major, will be played. Each one abounds in beautiful melody, such as any lover of pure tunefulness can enjoy at a first hearing.

The first movement of the Grieg sonata in C minor, for piano and violin, will be played by Miss Ava Symons and Mr. Gordon Short. Grieg (1843-1907) is the chief of Scandinavian composers, and his works received early popular recognition by reason of their own peculiar charm.

Miss Ava Symons will play the Wilhelmj violin arrangement of the noble "Ave Maria," by Schubert. This is

## THE CELESTE QUARTET.

The Celeste Quartet are young, enthusiastic singers, who are fully alive to the requirements of their big audience. Miss Myra Sawyer returns fresh from conquests in Napier and Dannevirke. The popularity of her work is not to be gainsaid. As usual, this week's programme has been chosen carefully, with due regard to the fact that the range of popular taste runs from light to heavy music. In this respect the evening's offering will be well balanced. No doubt their performance will be fully appreciated.

## 3YA NOTES

Station 3YA will observe no silent day next week, and specially-attractive programmes have been prepared for every concert session.

There will be a lingering echo of the Christmas music about the programme on Monday. Derry's Military Band will include some carols in its selections for the evening, and one of the quartets which the Beckenham four male voices will sing will be "Holy Night, Peaceful Night."

A 2YA artist, Mr. R. G. Peak, will also be on the air on Monday evening in two sketches.

Tenor, soprano, baritone, contralto and banjo/tenor solos, songs at the piano, recitation—these go to make the variety programme for Tuesday evening at 3YA.

Mr. R. Lake, baritone, has been soloist for the Male Voice Choir at its last two concerts. He will broadcast well on Tuesday.

On Tuesday evening one of Mrs. D. W. Stallard's songs will be, "We'd Better Bide a Wee."

Mr. H. R. Trevern will be welcomed on Tuesday in "Panic! Panic!" and "Nirvana."

Mr. R. A. Sargent's songs at the piano recall the late Mel. B. Spurr to mind. He is a very acceptable artist at 3YA.

An original humorous recitation will come from Mr. H. Instone. Mr. Instone has considerable ability in this direction.

Messrs. Skinner and Birch (banjo and mandoline) and Mr. A. Hodgson (banjo/tenor) will also help materially with the programme on Tuesday.

"Flora's Holiday," a song cycle of Old English melodies, will be given by the Madame Gover-Burns Quartet on Thursday. Madame had the honour of being the first to introduce this song cycle to a Christchurch audience. It is a particularly pleasing collection of melodies, of quartettes, duets, and solos, extending in all over about thirty-five minutes. The various members of the quartet, Madame Gover-Burns, Miss Jessie King, Mr. Harold Prescott, and Mr. Bernard Rennell—will also be heard in solo items.

(Continued on Page 13.)



—S. P. Andrew, photo.

## GIRLS OF THE TECHNICA I COLLEGE, WELLINGTON.

These talented young performers, who entertain the children from 2YA, show evidence of careful training. They have been heard in brightly-arranged programmes, and juvenile listeners look forward to their reappearance.

## 2YA NOTES

### IRRAWADDI BOAT SONG.

An excellent programme has been arranged by the Apollo Quartet for Monday, December 25, including several numbers worthy of special mention. "The Irrawaddi Boat Song" is a glitter with a rhythm descriptive of the undulating movement of waters, and this is clearly indicated in the bass parts. "A Spirit Flower," one of the solo numbers, is probably the best-known tenor ballade of Campbell Tipton's composition, and will be rendered with marked effect by Mr. Sam Duncan. Altogether a very entertaining evening is promised.

At the organ Mr. Temple White will play Elgar's "Idyll," "The Chorus of Angels" (Scottson Clarke), and Mailly's "Marche Solennelle." Mr. Stanley Warwick will contribute some of his ever-welcome elocutionary items, and Miss Mildred Kenny and party will be heard in Hawaiian melodies and banjo selection.

### "MARITANA" AT 2YA.

The Orpheus Musical Society, under the conductorship of Mr. Len. Barnes, will broadcast W. Vincent Wallace's beautiful opera "Maritana" on Thursday, December 29. The society recently gave a fine performance of this opera in the Concert Chamber, Wellington. There are many delightful and well-known numbers in the opera: "Harp in the Air," "Scenes That Are Brightest," "Let Me Like a Soldier Fall," "There is a Flower That Blooms," "In Happy Moments," "Angelus," etc. There is a splendid cast of principals. Miss

try dance. Another part-song, "Carinavili," by Rossini (1794-1868), is the song of the blind beggars, asking alms from the rich men and their beautiful ladies. They are "singing beggars," and sing their way into the hearts of the people. A third concerted number, "Sleep, Holy Babe," is a beautiful carol by Dr. J. Dykes. Miss Mackie and Mr. Len. Barnes will sing the duet, "Love Thou," by Piniotti, and Mr. Barnes and the quartet will be associated in a quaint negro



—S. P. Andrew.  
MR. KEITH GRANT.

Mr. Keith Grant, of Wanganui, who is coming to the microphone at 2YA on January 2, is the happy possessor of a high baritone voice of wide range and brilliant calibre. Although well on the sunny side of thirty, he has already made for himself an enviable reputation.

Mr. Grant has taken principal roles in "The Arcadians" and in "Our Miss Gibbs" with the Wanganui Amateur Musical Society, in both of which he scored great success. He has also assisted Mr. Herbert Carter in various operatic recitals, performing solo and concerted numbers from the operas. Only once before has Mr. Grant faced the microphone at 2YA, and listeners will welcome this further opportunity of hearing him.

number by Scott Gatty, "Far, Far Away." The solos will be "Dainty Dazozel," sung by Mrs. Alice Harris; "Meadowsweet," sung by Miss Lily Mackie; "The Brightest Day," sung by Mrs. Arthur Coo; and "The Carpet," sung by Mr. Len. Barnes.

Mr. Cedric Gardiner, a popular humorist, will also contribute to the evening's enjoyment.

### SYMONS-ELLWOOD-SHORT TRIO.

The Symons-Ellwood-Short Trio has as their contribution to the week's programmes a number of works which have been particularly appreciated by listeners since the trio began to broadcast. The "Novelletten" trio, by Gade; the early trio in C minor of

one of the most beloved of all works arranged for the violin. Some exquisite harp-like passages accompany the appearance of the melody in octaves. By special request Miss Symons will also play "Midnight Bells," a lovely melody from an operetta by Heuberger, arranged for the violin by Kreisler.

Mr. Gordon Short will play a selection of Viennese waltzes from the operetta "The Bat," by Johann Strauss, most effectively arranged by the great Viennese pianist, Gruenfeld. The beauty of the melodies of the composer of the "Blue Danube Waltz" has endeared his waltzes to musician and public alike, and few of his tunes are sweeter than those used in this arrangement.

## BATTERIES

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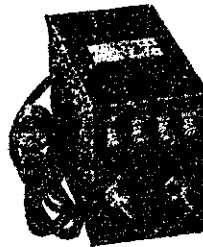
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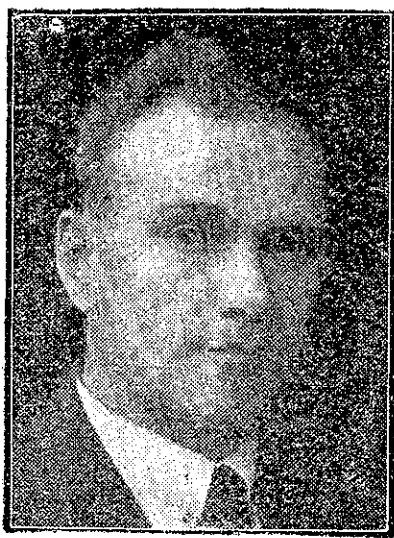
## NEWS AND NOTES

(By "Switch.")

Broadcast station 3AR, Melbourne, runs a prize guessing competition, in which the questions asked are to be answered by the name of some town in Australia. The prizes are two guineas for first and one guinea for second.

The difficulty of pleasing the varied tastes of listeners is now said to have found a solution by broadcasting simultaneously on two different wave-lengths from one station. An educational talk could be sent out on one wave-length, while musical items are put on the air per medium of another wave-length.

It has been frequently said that broadcasting will capture the whole world. In the United States radio is booming more than ever. New York "Radio Retailing" says: "The radio industry has enjoyed, to date, the most prosperous summer and autumn it has had, according to trade reports. Dealers, distributors, and manufacturers alike are unanimous in their declaration that business so far this season has exceeded every prediction. The entire trade is looking forward to Christmas with every expectation that the records for volume sales will be smashed."



Standish Preece, photo.

### MR. WILFRID PEERS.

Mr. Peers is the honorary secretary of the Christchurch Philatelic Society and is a member of the two Aero Philatelic Societies in England and U.S.A. He has arranged for a series of eight stamp talks to be given from 3YA. A talk on "Balloon and Pigeon Posts" will be given on Thursday, January 5.

A good "earth" for country listeners who have no waterpipe for use as an "earth" can be provided by soldering a thick copper wire to a sheet of plate copper two feet square. The copper plate should then be buried as deep as possible, and the soil all round it well saturated with water.

An American electrical company is making a radio trouble lamp equipped with battery clips, so that it may be attached to any six-volt storage battery. It is furnished complete with an electric light bulb, genuine silver-plated reflector, crystal glass lens, and ten feet of extra flexible cord. The intended retail price is four shillings.

The New Zealand Department of Education, in broadcasting instruction to the various schools, is only following in the wake of the Americans. The University of Paris, the oldest in Europe and "the mother of all universities," has now established a radio institute of university extension. Besides broadcasting courses direct from its amphitheatre it will send over the air specially prepared shorter courses.

An American journal says: "It took the automobile industry twenty years to learn the fallacy of the 'yearly model' plan, and we hope that the radio industry will be quick to perceive the hazards and pitfalls of that system. Let us put a stop to the yearly model plan lest it bring us that millstone of the automobile industry—the 'used model' business. A radio receiver does not seriously depreciate in use, and hence a used receiver business, the inevitable by-product of the yearly model plan, is of advantage neither to the dealer nor to the set owner."

"Mikitivity"—pronounced "mikitiv-ty"—is hailed as the last word in radio. The accent is placed on the second syllable. This word was coined by WLW (Cincinnati, U.S.A.) for its radio vocabulary, and is in common use at the Crosley station. According to Fred Smith, director of WLW, the new word is a noun which means "the quality with which a voice or musical instrument registers through the microphone; or the broadcasting capacity of a voice or instrument." In describing a sound in regard to its radiocasting quality, Mr. Smith says it is much simpler to speak of a performer's mikitivity in either positive or negative terms than to use some elaborate descriptive phrase.

## Sunday, December 25th

### 1YA AUCKLAND (333 METRES)—SUNDAY, DECEMBER 25.

- 3 p.m.—Afternoon session—Selected Studio items.  
4.30: Close down.  
6.0: Children's song service—Uncle Leo.  
6.55: Relay of church service from St. Andrew's Church. Preacher, Rev. Lamb-Harvey; organist, Dr. Neil McDougall.  
8.30: Relay of organ recital from Town Hall. Organist, Mr. Maughan Barnett.  
9.30: A thought.  
9.31: Close down.

### 2YA WELLINGTON (420 METRES)—SUNDAY, DECEMBER 25.

- 12.1 a.m.: Relay of Midnight Mass from St. Gerard's Redemptorist Church, Hawker Street, Wellington. Gounod Messe Solenne, St. Cecilia. Opening Motet, "Adeste Fideles." Offertoire, "Noel" (Adams). After the Mass, "Worthy is the Lamb" from "Messiah" (Handel). Choral Director, Mr. Frank J. Oakes; organist, Mr. H. Mount.  
1.30 a.m. (approx.): Close down.  
6.55 p.m.: Relay of evening service from St. Thomas's Anglican Church, Wellington South. Vicar, Rev. C. V. Rooke, M.A., T.C.D. Preacher, Rev. Percy Houghton, M.A., Vicar of Brooklyn. Organist and choir-master, Mr. W. H. Collie, L.L.C.M.

### 3YA CHRISTCHURCH (306 METRES)—SUNDAY, DECEMBER 25.

- 5.45 p.m.: Children's song service by Uncle Sam, assisted by scholars from Durham Street Methodist Sunday School, from 3YA Studio.  
7.0: Relay of evening service from Christchurch Anglican Cathedral. Full choral evensong and anthem. Christmas carols will be sung near the close of the service. Pipe organ voluntaries after the Benediction by the Cathedral organist. Preacher, the Very Rev. Awdry Julius, Dean of Christchurch. Organist and choir-master, Dr. J. C. Bradshaw, Mus.Doc.  
After the conclusion of the Cathedral service, the following programme will be given from 3YA Studio:—  
'Cello solo—Mr. Hamilton Dickson, "Slavonic Fantasia" (Dvorak-Kreisler).  
Tenor solo—Mr. Russell Sumner, "The Legend" (Tchaikowsky).  
Violin solo—Miss Thelma Cusack, "Valse Triste" from Arvid Jarufeldt's drama, "Kuolema," Op. 44 (Sibelius).  
Soprano solo—Miss Frances Hamerton, "O, Holy Night" with violin obbligato by Miss Thelma Cusack (Busch).  
'Cello solos—Mr. Hamilton Dickson, (a) "Harlequin" (Popper); (b) "Serenade Espagnole" (Glazunov).  
Tenor solo—Mr. Russell Sumner, "An Evening Song" (Blumenthal).  
Violin solo—Miss Thelma Cusack, "Siciliano and Rigaudon" (Kreisler).  
Soprano solo—Miss Frances Hamerton, "Rejoice Greatly" from "Messiah" (Handel).  
God Save the King.

### 4YA DUNEDIN (463 METRES)—SUNDAY, DECEMBER 25.

- 5.45 p.m.: Children's Christmas song service, by Big Brother Bill and a choir of children's voices.  
7.0: Town Hall chimes.  
Relay of evening service from Hanover Street Baptist Church. Preacher, Rev. E. S. Tuckwell, B.A. Organist, Mr. H. P. Desmoulin.  
8.15: Gramophone recital of Christmas music.  
Close down.

## Monday, December 26th

### 1YA AUCKLAND (333 METRES)—MONDAY, DECEMBER 26.

- 8 a.m.: Sports attractions, news, road conditions, race reviews, musical items.  
12.0 p.m.: Relay from Ellerslie of Auckland Cup meeting.  
5.30: Children's hour.  
6.30: Selected vocal and instrumental items.  
7.30: News and reports and sports results.  
8.0: Chimes.  
8.1: Relay of orchestral selections from Strand Theatre Orchestra, under the direction of Eve Bentley.  
8.11: Baritone solo—Mr. C. J. Spillane, "Through All the Ages" (Coates).  
8.15: Humorous recital—Mr. Rex Bates, "Misunderstood."  
8.20: Cornet solo—Mr. Fred Bowes, "Lizzie Polka" (Hartman).  
8.25: Vocal duets—Madame L. Spillane and Miss Marjorie Allomes, Tuscan folk songs, (a) "A Streamlet Full of Flowers" (Caracciolo); (b) "Nearest and Dearest."  
8.32: Pianoforte solo—Mrs. Hugh Morton, "Popular Medley."  
8.37: Soprano solo—Madame L. Spillane, (a) "The Star" (Rogers); (b) "A Birthday Song" (Woodman).  
8.44: Flute solo—Mr. H. McLennan, "Valse de Concert" (Lemmone).  
8.49: Contralto solo—Miss M. Allomes, "Hindoo Song" (Bemberg).  
8.53: Mouth-organ solo—Mr. A. S. Broadribb, "March, America."  
8.56: Vocal duo—Bohemian Duo, (a) "Just Wondering"; (b) "Me, Too."

- 9.1: Weather forecast.  
9.3: Relay of orchestral selections from Strand Theatre.  
9.8: Vocal duet—Madame and Mr. Spillane, "E Allor Per Che" from "Pagliacci" (Leoncavallo).  
9.12: Humorous recital—Mr. Rex Yates, (a) "I'm Not Old"; (b) "Lecture on 'Eater'."  
9.21: Pianoforte solo—Mrs. H. Morton, "Jazz Medley."  
9.25: Baritone solos—Mr. C. J. Spillane, (a) "Oh, Could I But Express in Song" (Malashkin); (b) "In Love" (Lohr).  
9.32: Flute solos—Mr. H. McLennan, (a) "Fantasie Pastorale" (Fischer); (b) selected.  
9.40: Contralto solos—Miss M. Allomes, (a) "Ships That Pass in the Night" (Stevenson); (b) "Lavender Days" (Drummond).  
9.48: Mouth-organ solos—Mr. A. S. Broadribb, (a) "You and I" (waltz), and burlesque, "Pilgrims of the Night"; (b) "Constellation March."  
9.52: Vocal duo—Bohemian Duo, (a) "Blue Skies"; (b) "Moonbeams, Kiss Her for Me."  
10.0: Cornet solo—Mr. F. Bowes, "Softly Awakes My Heart" from "Samson and Delilah" (Saint-Saens).  
10.4: Vocal trio—Madame Spillane, Miss M. Allomes, and Mr. C. J. Spillane, selected.  
10.9: A thought.  
10.11: Close down.

### 2YA WELLINGTON (420 METRES)—MONDAY, DECEMBER 26.

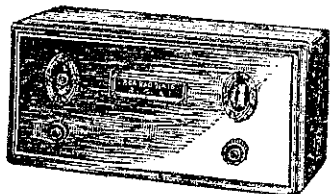
- Afternoon session—Results of Australasian athletic championships. Selected gramophone items.  
6 p.m.: Children's hour—Aunt Jo.  
7.0: News session, market reports, and sports results.  
8.0: Chimes of the General Post Office clock, Wellington.  
8.1: Overture.  
8.5: Quartet—Apollo Four, "Irrawaddi Boat Song" (Kratz).  
8.9: Recitals—Mr. A. Stanley Warwick, (a) "The Apple Winds"; (b) "After Marriage."  
8.18: Bass solo—Mr. Roy Dellow, "From Oberon in Fairyland" (Slater).  
8.23: Instrumental trio—Symons-Ellwood-Short Trio, "First and Second Movements, Novelleten Trio" (Gade).  
8.33: Vocal duet—Messrs. S. Duncan and E. W. Robbins, "The Day is Done" (Lohr).  
8.38: Guitar trio—Mrs. Mildred Kenny and party, (a) "Hawaiian Love Song" (De Lano); (b) "Honolulu Moon" (Lawrence).  
8.46: Tenor solo—Mr. E. W. Robbins, "Star of Bethlehem" (Jude).  
8.50: Violin solo—Miss Ava Symons, "Ave Maria" (Wilhelmig-Schubert).  
8.57: Quartet—Apollo Four, "'Cause I'd Nothing Else to Do" (Parks).  
9.2: Weather report.  
9.4: Organ recital—Mr. H. Temple White, (a) "Idylle" (Elgar); (b) "Chorus of Angels" (Clarke); (c) "Marche Solenne" (Maily).  
9.19: Vocal trio—Messrs. Duncan, Robbins, and Dellow, "Apolloton."  
9.23: Instrumental trio—Symons-Ellwood-Short Trio, "Third and Fourth Movements, Novelleten Trio" (Gade).  
9.33: Tenor solo—Mr. S. Duncan, "A Spirit Flower" (Tipton).  
9.37: Violin solo—Miss Ava Symons, "Midnight Bells" (Kreisler).  
9.42: Humorous recital—Mr. A. Stanley Warwick, "A Fishy Yarn" (Jerome).  
9.46: Banjo duo—Mrs. Mildred Kenny and partner, (a) "The Pipers" (Pidoux); (b) "Darkie's Awakening" (Lansing).  
9.55: Quartet—Apollo Four, "The Two Roses" (Hatton).  
God Save the King.

### 3YA CHRISTCHURCH (306 METRES)—MONDAY, DECEMBER 26.

- 3 p.m.: Afternoon session—Selected Studio items.  
4.30: Close down.  
6.0: Children's hour—Uncle Jack and Aunt Edna.  
7.0: Close down.  
7.15: News and reports.  
8.0: Chimes. Relay of orchestral selections from Strand Theatre Orchestra, under the direction of Mr. Harry Ellwood.  
8.10: Overture by Derry's Military Band, under the conductorship of Mr. E. C. Derry, "Lustspiel" (Kela-Bela).  
8.20: Male voice quartet—Beckenham Male Quartet, (a) "Old Black Joe" (Foster); (b) "Stars of the Summer Night."  
8.27: Minuet—The Band, "Minuet in G" (Beethoven).  
8.32: Tenor solo—Mr. E. R. Pitman, "A Chip of the Old Block" (Squire).  
8.36: Serenade—The Band, "Angel Kisses" (Lincoln).  
8.42: Coster sketch—Mr. Ernest G. Peek, "Our Wedding" (Wood).  
8.46: Selection—The Band, "Belle of New York" (Kerker).  
8.56: Tenor and bass duet—Messrs. W. H. Odell and F. S. Jackson, "Tenor and Baritone" (Wilson).  
9.0: Relay of orchestral selections from Strand Theatre.  
9.15: March—The Band, "Funiculi Funicula" (Roberts).  
9.20: Male voice quartets—Beckenham Male Voice Quartet, (a) "Love's Old Sweet Song" (Bingham); (b) "Holy Night, Peaceful Night" (Gruber).  
9.27: Waltz—The Band, "The Shamrock" (Tobane).  
9.35: Male voice trio—Messrs. Pitman, Odell, and Jackson, "Maiden Fair, O Deign to Tell" (Haydn).  
9.39: Overture—The Band, "Home Circle" (Reeves).  
9.49: Bass solo—Mr. F. S. Jackson, "Because" (d'Hardelot).  
9.52: Carols—The Band, (a) "Christians, Awake" (Byron); (a) "Hark, the Herald Angels Sing" (Wesley).  
10.2: Humorous part-songs—Beckenham Quartet, (a) "There Was an Old Woman" (Harris); (b) "An Alliterative Poem" (Hall).  
10.9: Fox-trot—The Band, "Collette" (Baer).  
10.14: Sketch—Mr. Ernest G. Peek, "Henpecked" (David).  
10.18: Male quartet chorus—Beckenham Quartet, "Chick, Chick, Chicken" (Holt).  
10.21: March—The Band, "Fort Frayne" (Farrar).  
Relay of dance music from Caledonian Hall (by kind permission of Canterbury Caledonian Society and Mr. Reg. Stillwell)—Music by Jackson's Orchestra.

### 4YA DUNEDIN (463 METRES)—MONDAY, DECEMBER 26.

SILENT DAY.



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# Week - All Stations - to Jan. 1

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## Tuesday, December 27th

1YA AUCKLAND (333 METRES)—TUESDAY, DECEMBER 27.

- 8 a.m.: Sports attractions, news, road conditions, race reviews, musical items.  
12 p.m.: Results of trots (as run).  
3 p.m.: Afternoon session—Selected Studio items.  
4.0: Literary selection by Mr. Culford Bell.  
4.30: Close down.  
5.30: Children's hour—Uncle Leo.  
6.30: Studio items.  
7.30: News, reports, and sports results.  
8.0: Chimes.  
8.1: Relay of orchestral overture from Majestic Theatre Orchestra, under the direction of Mr. J. Whiteford-Waugh.  
8.11: Soprano solo—Miss Marjorie Fair, "Michaela's Song" from "Carmen" (Bizet).  
8.16: Tenor solo—Mr. Arthur Ripley, "La Donna e Mobile" from "Rigoletto" (Verdi).  
8.21: Recital—Mr. J. Montague, "The Baby Show."  
8.28: Instrumental trio—Towsey-Bosworth-Hemus Trio, "Trio in D Major," Op. 70 (first part), (Beethoven).  
8.39: Baritone solo—Mr. James de Montalk, "Toreador Song" from "Carmen" (Bizet).  
8.44: Contralto solo—Madame Irene Ainsley, "Nobil Signore, Salute" from "Huguenots" (Meyerbeer).  
8.49: Humorous recital—Mr. Dan Flood, humour at the piano.  
8.54: Vocal duet—Messrs. A. Ripley and J. de Montalk, "The Moon Hath Raised Her Lamp Above" from "Lily of Killarney" (Benedict).  
9.0: Weather forecast.  
9.2: Relay of orchestral selections from Majestic Theatre.  
9.12: Contralto solo—Madame Irene Ainsley, "When All Was Young" from "Faust" (Gounod).  
9.16: Recital—Mr. J. Montague, (a) "Rosa"; (b) "You Do Look Queer."  
9.23: Violin solos—Miss Ina Bosworth, (a) "Chanson Meditation" (Cottetnet); (b) "Schon Rosmarin" (Kreisler).  
9.31: Baritone solo—Mr. J. De Montalk, "The Heart Bowed Down" from "The Bohemian Girl" (Balfe).  
9.36: Relay of orchestral entr'acte from Majestic Theatre.  
9.46: Humorous recital—Mr. Dan Flood, humour at the piano.  
9.51: Vocal duet—Madame Ainsley and Mr. Ripley, "Home to Our Mountains" from "Il Trovatore" (Verdi).  
9.54: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio in D Major," Op. 70 (Beethoven).  
10.3: Quartet—Madame Ainsley's Quartet, "Quartet" from "Rigoletto" (Verdi).  
10.7: A thought.  
10.9: Close down.

2YA WELLINGTON (420 METRES)—TUESDAY, DECEMBER 27.

- Afternoon session—Results of Australasian athletic championships. Selected gramophone items.  
6 p.m.: Children's hour—Uncle Jasper takes a trip to the Magic Cave, dolls and animals dance to orchestra. Items by orchestra include: "Savoy American Medley" (Somers), "Way Down Home" (Stampen), "Just a Little Bit of Heaven" (Bryan), "Eyes Were Never Made for Crying" (McPhail). Uncle Jasper, story time and birthday greetings.  
7.0: News, informations, reports, and latest cricket results.  
8.0: Chimes.  
8.1: Overture—"Merry Widow" (Lehar).  
8.5: Quartet—Orpheus Quartet, "Come, All Ye Lads and Lassies" (Wilson).  
8.9: Humorous recital—Mr. C. E. Gardiner, "Openings the Pineapple Tin" (Jerome).  
8.15: Tenor solo—Mr. Arthur Coe, "The Brightest Day" (Martin).  
8.20: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement Trio in B Flat" (Schubert).

- 8.30: Vocal duet—Miss Lily Mackie and Mr. Len Barnes, "Love Thou" (Pini-siti).  
8.34: Pianoforte solo—Mr. Gordon Short, "Viennese Waltzes" (Strauss-Grumfeld).  
8.40: Soprano solo—Mrs. Alice Harris, "Dainty Damsel" (Novello).  
8.46: Italian mandolin—Mr. Lad Haywood, "So Blue" (Henderson).  
8.50: Soprano solo—Miss Edna Greenwood, "A Forse Lui," No. 2 (Verdi).  
8.53: Quartet—Orpheus Quartet, "Sleep, Holy Babe" (Dykes).  
8.59: Weather forecast.  
9.1: Lecture—Mr. H. C. South, president, New Zealand Booksellers' Association, "Books: Grave and Gay."  
9.15: Piano and violin duet—Miss Ava Symons and Mr. Gordon Short, "Sonata in F" (Greig).  
9.20: Baritone solo—Mr. Len Barnes, "The Carpet" (Sanderson).  
9.24: Humorous recital—Mr. C. E. Gardiner, "Cabby's Lament" (anon.).  
9.28: Contralto solo—Miss Lily Mackie, "Meadow Sweet" (Brahe).  
9.32: Instrumental trio—Symons-Ellwood-Short Trio, "Trio in B Flat, Second Movement" (Schubert).  
9.42: Baritone and quartet—Mr. Len Barnes and Orpheus Quartet, "Far, Far Away" (Scott Gatty).  
9.47: Italian mandolin—Mr. Lad Haywood, "Song of the Wanderer" (Morel).  
9.50: Soprano solo—Miss Edna Greenwood, "Nymphs and Fawns" (Bemberg).  
9.55: Quartet—Orpheus Quartet, "The Carnevale" (Rossini).

3YA CHRISTCHURCH (306 METRES)—TUESDAY, DECEMBER 27.

- 3 p.m.: Afternoon session—Selected Studio items.  
4.30: Close down.  
7.15: News and reports.  
8.0: Chimes. Relay of orchestral selections from Crystal Palace Picture Theatre Orchestra, under the direction of Mr. A. J. Bunz.  
8.15: Baritone solo—Mr. R. Lake, "A Clinking Toast" (Wingrove).  
8.19: Banjolin solo—Mr. Arthur Hodgson, "Japanese Fan Dance."  
8.23: Soprano solos—Miss Alma Shuker, (a) "Drink to Me Only" (Quilter); (b) "Clavichord" (Gitana).  
8.30: Banjo and mandolin duets—Perce Skinner and Stan. Birch, (a) "Old Comrades' March"; (b) "Honolulu Moon."  
8.36: Tenor solo—Mr. H. R. Trewern, "Finiculi Finicula" (Capua).  
8.39: Humorous—Mr. H. Instone, "The Millinery Sale" (own composition).  
8.43: Contralto solo—Mrs. D. W. Stallard, "We'd Better Bide a Wee" (Clari-bel-Moffatt).  
8.49: Songs with ukulele—Mr. Roy August, (a) "I'm Sitting on Top of the World" (Henderson); (b) "Ukulele Lady" (Whiting).  
8.55: Banjolin solos—Mr. Arthur Hodgson, (a) "Washington Post March"; (b) "Butterfly Dance."  
9.2: Baritone solo—Mr. R. Lake, "The Sailor's Paradise" (Richards).  
9.6: Banjo and mandolin duets—Perce Skinner and Stan. Birch, (a) "To the Front" (b) "Popular Melodies."  
9.11: Soprano solo—Miss Alma Shuker, "Love's a Merchant" (Carew).  
9.14: Relay of orchestral selections from Crystal Palace Theatre.  
9.29: Tenor solo—Mr. H. R. Trewern, "Nirvana" (Adams).  
9.33: Humorous recital—Mr. H. Instone, (a) "Counting the Kids"; (b) "The Irish Fire Brigade."  
9.40: Contralto solos—Mrs. D. W. Stallard, (a) "In the Garden of My Heart" (Ball); (b) "The Rosary" (Nevin).  
9.47: Song with ukulele—Mr. Roy August, "There Ain't No Maybe in My Baby's Eyes" (Donaldson).  
Relay of dance music from Caledonian Hall (by kind permission of Canterbury Caledonian Society and Mr. Reg. Stillwell)—Music by Jackson's Orchestra.

4YA DUNEDIN (463 METRES)—TUESDAY, DECEMBER 27.

- 3 p.m.: Town Hall chimes.  
3.1: His Master's Voice recital.  
3.30: Sporting results and news.  
3.35: Studio music.  
4.0: Address—"Cooking by Electricity," by a representative of Turnbull and Jones, Limited.  
4.15: His Master's Voice recital.  
4.30: Close down.  
6.0: Town Hall chimes.  
6.1: Children's hour—Big Brother Bill.  
7.0: Close down.  
7.15: News session.  
8.0: Town Hall chimes. Studio concert by the Dunedin Banjo Trio and assisting artists.  
8.1: Popular numbers—Banjo Trio, (a) "California, Here I Come" (Meyer); (b) "Mexicali Rose" (Tenney).  
8.9: Light vocal solos—Mr. R. Wilson Brown, selected.  
8.16: Humorous recitation—Miss Roberta Williams, "Peach Pie."  
8.20: Popular numbers—Banjo Trio, (a) "Where the Lazy Daisies Grow" (Friend); (b) "Oh! How I Miss You To-night" (Fisher).  
8.28: Tenor solo—Mr. Alfred Walmsley, "The Trumpeter" (Dix).  
8.32: Monologue—Mr. J. B. McConnell, "An Old Bachelor" (Chevalier).  
8.37: Popular numbers—Banjo Trio, (a) "Mary Lou" (Robinson); (b) "In a Little Spanish Town" (Wayne).  
8.45: Baritone solos—Mr. Arthur Langley, (a) "The Spirit Flower" (Campbell-Tapton); (b) "Obstination" (de Fontenailles).  
8.52: Recital—Miss Roberta Williams, "Trooper Johnny Ludlow."  
8.55: Popular numbers—Banjo Trio, (a) "Drifting and Dreaming" (Curtis); (b) "Till We Meet Again" (Whiting).  
9.3: Light vocal—Mr. R. Wilson Brown, selected.  
9.7: Monologue—Mr. J. B. McConnell, "My Desire" (Richardson).  
9.12: Popular numbers—Banjo Trio, (a) "Story Book Ball"; (b) "Pall of My Cradle Days" (Piantadosi).  
9.20: Tenor solos—Mr. Alfred Walmsley, (a) "The Minstrel Boy" (Moore); (b) "Passing By" (Purcell).  
9.27: Recital—Miss Roberta Williams, "One's Life."  
9.32: Popular numbers—Banjo Trio, (a) "Carolina in the Morning" (Donaldson); (b) "Wonderful One" (Whiteman).  
9.44: Baritone solo—Mr. Arthur Langley, "Now Sleeps the Crimson Petal."  
9.48: Monologue—Mr. J. B. McConnell, "The Student" (anon.).  
9.52: Popular numbers—Banjo Trio, (a) "If You Knew Susie" (Sylvia); (b) "Hi, Ho, the Merrie" (Gerald).  
10.0: God Save the King.

## Wednesday, December 28th

1YA AUCKLAND (333 METRES)—WEDNESDAY, DECEMBER 28.

- 8 a.m.: Sports attractions, news, road conditions, race reviews, musical items.  
12 p.m.: Relay of Cup meeting from Ellerslie Racecourse.  
5.30: Children's hour—Uncle Tom.  
6.30: Selected vocal and instrumental items.  
7.30: News, reports, sports results.  
8.0: Chimes.  
8.1: Relay of orchestral selections from Rialto Theatre Orchestra, under the direction of Henry C. Engel.  
8.11: Mezzo-soprano solos—Miss Mary Wilson, (a) "Mifawny" (Forster); (b) "Break, Break" (Cary).  
8.18: Cello solo—"Sonata, First Movement" (De Fesch).  
8.24: Vocal duo—Bohemian Duo, (a) "Te Arava Maori"; (b) "Poatarau Maori."  
8.31: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio in B Flat Major," Op. 21 first and second movements (Dvorak).  
8.42: Mezzo-soprano solos—Miss M. Wilson, (a) "The Gleaner's Slumber Song" (Walthev); (b) "Danny Boy" (Old Irish).  
8.49: Cello solo—"Serenade Espagnole" (Glazounow).  
8.54: Vocal duo—Bohemian Duo, (a) "Yesterday"; (b) "Down Kentucky Way."  
9.2: Weather forecast.  
9.4: Relay of orchestral music from Rialto Theatre.  
9.14: Special presentation of the opera, "Maritana." Cast: Maritana, Miss Lola Solomon; Don Caesar, Mr. Jas. Simpson; Lazarillo, Mrs. Cyril Towsey; King, Mr. F. Sutherland. Chorus, Waita Quartet.  
Act I.  
Chorus—"Angelus."  
Duet—"Of Fairy Wand Had I the Power."  
Entr'acte—Instrumental trio (Towsey-Bosworth-Hemus Trio), "Trio in B Flat Major," Op. 21 (third movement), (Dvorak).

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A paradise for radio fans who like to get distance has been found at Bernard Harbour, North-west Territory. Constable Richard S. Wild, of the Canadian mounted police detachment reports that almost all the special Arctic broadcasts of KDKA, Pittsburgh, U.S.A., reach him, and that in daylight he has heard London, Newcastle, Dublin, Glasgow, Birmingham, and Paris clearly through the loud speaker.

Simplicity of control was the keynote of radio sets on view at this year's radio exhibition at the London Olympia. The panels were conspicuously free from many knobs and dials. Some of the principal novelties: A broadcast radio exchange as simple to operate as any ordinary telephone, so that by operating any of a number of switches an indicator is illuminated giving the name of the station which is being received. Clocks which automatically switch on any item of the programme desired by the listener. Batteries which "tell you" when they are charged, semi-charged, or run down. Sets for flat dwellers requiring neither aerial nor ground.

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# Programmes Continued

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## Act II.

Song—"Alas, Those Chimes."  
Trio—"Turn On, Old Time."  
Song—"Yes, Let Me Like a Soldier Fall."  
Ballad—"In Happy Moments."  
Entr'acte—Instrumental Trio, "Trio in B Flat Major," Op. 21 (fourth movement), (Dvorak).

## Act III.

Song—"Scenes That Are Brightest."  
Duet—"Oh, Maritana."  
Song—"The Mariner in His Barque."  
Duet—"Sainted Mother."  
Trio—"Remorse and Dishonour."

10.3: A thought.

10.5: God Save the King.

### 2YA WELLINGTON (420 METRES)—WEDNESDAY, DECEMBER 28. SILENT DAY.

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

4.30: Close down.

6.0: Children's hour—Chuckie and Chook.

7.0: Close down.

7.15: News and reports.

7.30: Tennis review by official of Canterbury Tennis Association.

8.0: Chimes. Relay of orchestral selections from Grand Picture Theatre Orchestra, under the direction of Mrs. Black.

8.15: Baritone solo—Mr. A. G. Thompson, "Give a Rouse" (Arnott).

8.19: Soprano solo—Miss Mary Shaw, A.R.C.M., "O, Primavera" (Tirindelli).

8.23: Instrumental trio—Christchurch Broadcasting Trio, "Finale" from "Trio in C Minor, Allegro Appassionata" (Mendelssohn).

8.35: Contralto and baritone duet—Miss Nellie Lowe and Mr. A. G. Thompson, "The Day is Done" (Lohr).

8.39: Cello solo—Mr. Harold Beck, "Melody" (Rubinstein).

8.41: Tenor solo—Mr. T. G. Rogers, "Eleanor" (Taylor).

8.45: Humorous sketch—Mr. J. P. Darragh, "A Coster's Visit to a London Theatre."

8.49: Contralto solos—Miss Nellie Lowe, (a) "How Many a Lonely Caravan" (Finden); (b) "If in the Great Bazaars" (Finden).

8.56: Vocal quartet—Misses Mary Shaw, Nellie Lowe, Messrs. T. G. Rogers, and A. G. Thompson, "In This Hour of Softened Splendour" (Pin-suti).

9.0: Relay of orchestral selections from Grand Theatre.

9.15: Talk—Mr. W. E. Merritt, "New Zealand Cricket Team: My Impressions of the Tour."

9.30: Baritone solo—Mr. A. G. Thompson, "I'll Sing Thee Songs of Araby" (Clay).

9.34: Instrumental trio—Christchurch Broadcasting Trio, (a) "Gavotte" (Don Juan), (Gluck); (b) "Serenade" (Widor); (c) "Grease Fest Dans" (Hartmann).

9.43: Soprano solos—Miss Mary Shaw, A.R.C.M., (a) "I Heard You Singing" (Coates); (b) "All in a Garden Green" (Lidgey).

9.47: Cello solo—Mr. Harold Beck, "The Dance" (Rossini).

9.51: Tenor solo—Mr. T. G. Rogers, "Laurette" (Gayne).

9.55: Humorous recital—Mr. J. P. Darragh, "Guy de Vere's Attempt to Propose a Toast."

10.0: Contralto solo—Miss Nellie Lowe, "Melisande in the Wood" (Goetz).

10.3: Vocal quartet—Misses Mary Shaw, Nellie Lowe, Messrs. T. G. Rogers and A. G. Thompson, "Softly Falls the Shades of Evening" (Hutton).

God Save the King.

### 4YA DUNEDIN (463 METRES)—WEDNESDAY, DECEMBER 28. SILENT DAY.

## Thursday, December 29th

### 1YA AUCKLAND (333 METRES)—THURSDAY, DECEMBER 29.

8 a.m.: Sports attractions, news, road conditions, race reviews, musical items.

12 p.m.: Results of trots (as run).

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

4.0: Literary selection, by Mr. Clifford Bell.

4.30: Close down.

5.30: Children's hour—Peter Pan.

6.30: Studio items.

7.30: News, reports, and sports results.

8.0: Chimes.

8.1: Relay of orchestral selections from Princess Theatre Orchestra, under the direction of Mr. Moody.

8.14: Tenor solo—Mr. Birrell O'Malley, "Take a Pair of Sparkling Eyes" from "The Gondoliers" (Sullivan).

8.15: Humorous recital—Mr. Rex Yates, "Nell Was a Collier's Daughter."

8.21: Vocal quartet—The Premiere Quartet, "Ye Little Bird" (Von Hult).

8.26: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio Novelletten," Op. 29 (first part), (Gade).

8.36: Contralto solo—Miss Caldwell, "Sapphic Ode" (Brahms).

8.40: Pianoforte solo—Mr. Cyril Towsey, "Adagio, Wanderer Fantasia" (Schubert-Liszt).

8.44: Baritone solo—Mr. Barry Coney, "Lorraine, Lorraine, Lorraine" (Spross).

8.49: Soprano solo—Miss Lola Solomon, "Il Est Bon, Il Est Doux" from "Hérodiade" (Massenet).

8.53: Vocal trio—The Snappy Three, (a) "Ain't She Sweet?" (b) "If I Only Had You."

9.1: Weather forecast.

9.3: Relay of orchestral selections from the Princess Theatre.

9.13: Humorous recital—Mr. Rex Yates, (a) "Italian Organ-grinder and His Monkey"; (b) "The Champagne Bottles."

9.22: Contralto solo—Miss Mina Caldwell, "My Jewel" (Sanderson).

9.26: Pianoforte solo—Mr. C. Towsey, "Study," Op. 23 (Chopin).

9.30: Tenor solo—Mr. B. O'Malley, selected.

9.34: Vocal trio—The Snappy Three, (a) "So Blue"; (b) "Lucky Day."

A Chicago daily says: "Like the automobile whose cylinders increased in number from the old-time 'one-lunger' until as many as twelve were used, radio receiving sets have developed in number of tubes. It wasn't so long ago that a three-tube set was considered quite deluxe. Receivers with ten tubes are becoming common now, and some with as many as 14 tubes have been built."

American radio fans who have been following the development of heavy-duty rectifying devices for supplying "A" power to receiving tubes from the house-lighting circuit may be interested in the "Sulfoltron," a new invention of Lucien Levy, the prominent French radio engineer. It is an electro-chemical rectifier and takes the form of a snub-nosed cartridge, about an inch in diameter and three inches long. It passes a current of one ampere, and thus is capable of supplying enough current to operate four standard 4-ampere tubes in parallel. Parallel connection of two or more such rectifiers, in suitable circuits, obviously will furnish heavier currents for sets employing a greater number of tubes.

As a general rule the insertion of a household 110 volt or 230 volt electric bulb in the negative "B" battery lead will save the valves if this battery is accidentally short circuited through the filament. The reason for this is that the high voltage of the "B" battery when connected directly across the lamp, as it is when short circuited, heats the filament in the lamp and stops the "B" battery current from passing further.



— Kinsey, photo.

### MR. L. HAYWOOD.

Mr. L. Haywood, exponent of the Italian mandolin, has been before the public in Australia and New Zealand for upwards of twelve years. He has been heard "on the air" on numerous occasions from SCL, Adelaide, and his contributions have always been very welcome. Mr. Haywood made his debut at 2YA on December 16, and will be heard again from time to time. His next appearance will be on December 27. His selections vary from jazz to classical.

Automobiles equipped with radio serve to keep the United States Federal Radio Commission in touch with the air conduct of broadcasters in every State. The country has been zoned by the commission and thirty-four supervisors listen in to see that power and wave-lengths used are in accordance with license requirements.

Mr. Godfrey Ludlow, the famous Australian violinist is now broadcasting from the New York station WJZ. Mr. Ludlow is again the recipient of the same glory and fame, which had formerly been showered upon him in Europe. He has unerringly sensed that the world is music-hungry, longing for the beauty of the old masters, and he confines his programmes to the classics, giving one sonata a month. Since beginning his broadcasts, Mr. Ludlow has received fifty thousand letters from people in every walk of life, all over the country.

The head of a big American storage battery corporation said recently: "A radio set is now easier to operate than an automobile, due to the perfection of light socket operation. A home without a radio to-day is out of touch with the world. The American public is never content to be behind the times; therefore, the demand for radio sets this fall is likely to exceed the manufacturers' capacity of the industry."

Unscientific people have attributed bad weather, heavy rains with floods to radio broadcasting, which has been blamed for every thing but prohibition and the World War, and would be blamed for those little annoyances as well if they had not antedated it. One of the most persistent of these eruptions of scapegoat psychology is the notion that broadcasting, or wireless communication in general, is responsible for heavy rainfall and floods. Only recently a noted French statesman is reported to have issued a discourse on this subject, suggesting solemnly that the excessive amount of broadcasting in Europe caused the Seine to overflow its banks.

9.41: Relay of orchestral selections from Princess Theatre.  
9.48: Baritone solo—Mr. Barry Coney, "Beware of the Maidens" (Cramer).  
9.52: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio Novelletten," Op. 29 (second part), (Gade).  
10.2: Soprano solo—Miss Lola Solomon, "Rain" (Curran).  
10.6: Vocal quartet—The Premiere Quartet, "Good Night" from "Marta" (Piottow).  
10.10: A thought.  
10.12: God Save the King.

### 2YA WELLINGTON (420 METRES)—THURSDAY, DECEMBER 29.

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

5.0: Close down.

6.0: Children's hour—Uncle Sandy. Uncle Sandy, story and birthday greetings. Mouth-organ duo by Pat and Mike. Story, Pat and Mike. Musical medley, consisting of five instruments, played by Pat. Recitation, Cousin Dot, "By Aeroplane." Mouth-organ solo by Mike.

7.0: News, information, and final sporting results.

8.0: A special Studio presentation of Wallace's "Maritana."

Direction, Mr. Len. Barnes. Principals: Maritana, Miss Joan Lowry; Lazarillo, Miss Margaret Smith; Don Caesar, Mr. George Wilson; Don Jose, Mr. Ray E. Kemp; the King, Mr. J. H. Cooke; the Captain, Mr. J. H. Cooke. Chorus, Orpheus Musical Society. Pianist, Miss H. W. Rowe. Organist, Mr. H. E. Brusey. Conductor, Mr. Len. Barnes.

## Argument.

Maritana, a handsome Gitana, whilst singing to a crowd of people in a square in Madrid, attracts the admiration of the King. Don Jose, an unscrupulous courtier, observing this, determines to satisfy the King's whim, and then to betray him to the Queen, with whom he is bold enough to be madly in love.

An impetuous spendthrift, Don Caesar de Bazan, arrives upon the scene, and, in order to protect a poor boy named Lazarillo, from arrest, challenges the Captain of the Guard, an action which, by a recent edict of the King, entails death by hanging. He is arrested and imprisoned, but by Don Jose's influence, his sentence is changed to the more soldier-like death of being shot, on condition that he marries a veiled lady; this he consents to do. After the ceremony, he is led away to the fortress to be shot. Don Jose conveys the veiled wife, who is none other than Maritana, to the palace of the Marquis Montefiore, where the King is introduced to her as the Count de Bazan, whom she has married. Unfortunately for Don Jose's scheme, the real Count was not shot dead, as the bullets had been withdrawn from the guns by Lazarillo whilst the soldiers had been drinking at the wedding feast, and he now appears, dressed as a monk, and searches the suburbs for his wife. Don Jose persuades the Marchioness to play the veiled lady, but the Count discovers the imposture, and Don Jose is compelled to have him rearrested to prevent his meeting with Maritana, who is conveyed by his orders to the villa d'Aranjuez. Here the King pursues her with unwelcome attentions, but she remains true to Don Caesar; the latter, having escaped from prison, forces his way into the room just as Maritana leaves the King. In the altercation which ensues, the King, whom Don Caesar recognises, says he is the Count de Bazan, and so Don Caesar assumes the character of the King, and learns for the first time that a pardon had been sent on the night of his condemnation; this pardon was intercepted by Don Jose. The King, receiving a message from the Queen, departs, giving orders to Lazarillo for the rearrest of the unfortunate Count Caesar, who, risking all peril, sees Maritana, and proves that he is the man to whom she was so mysteriously wedded. He then climbs over the wall of the villa into the Royal gardens adjoining, intending to beg the Queen's help, but arrives just in time to kill Don Jose, who is pressing his suit upon the indignant Queen. He returns to the villa, to find the King there again, who, on hearing of his loyal bravery, restores to him his bride and makes him Governor of Valencia. The scene is laid in Madrid.

## Act I.

Overture.

Chorus—"Sing, Pretty Maiden."

Romance—"It Was a Knight."

Aria—"Tis the Harp in the Air."

Trio—"Angelus."

Duet—"Of Fairy Wand Had I the Power."

Quartet and chorus—"See the Culprit."

Chorus—"Pretty Gitana."

Finale: Act I—"Farewell, My Gallant Captain."

## Act II.

Song—"Alas! Those Chimes."

Romance—"Hither As I Came."

Trio—"Turn On, Old Time."

Song—"Yes! Let Me Like a Soldier Fall."

Ballad—"In Happy Moments."

Quartet and chorus—"Health to the Lady."

Chorus—"Oh! What Pleasure."

Waltz and recitative.

Song—"The Mariner in His Barque."

Ballad—"There is a Flower that Blooms."

Finale: Act II—"That Voice, That Voice."

## Act III.

Introduction.

Recitative—"How Dreary to My Heart."

Song—"Scenes That Are Brightest."

Aria—"This Heart by Woe O'eraken."

Duet—"I Am the King of Spain."

Duet—"Oh! Maritana."

Duet—"Sainted Mother."

Trio—"Remorse and Dishonour."

Finale—"With Rapture Glowing."

God Save the King.

### 3YA CHRISTCHURCH (396 METRES)—THURSDAY, DECEMBER 29.

2.30 p.m.: Relay description of New Zealand lawn tennis championships from Welling Park.

6.0: Children's hour—Chuckie and Chook. Bed-time stories, songs, birthday greetings, and letters.

7.15: News and reports.

7.30: Lecture—Mr. C. H. Reese, "Variation and Hybridation of Forest Trees" (under auspices of Progress League).

8.0: Chimes. Relay of orchestral selections from Everybody's Picture Theatre, under the direction of Mr. Albert Bidgood.

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RIGHT IN YOUR OWN HOME.

—The thrilling voice from old England.  
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Weird words and music from Soviet Russia.  
Poppy jazz and queer quips from America.

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# Programmes Continued

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- 8.15: Tenor solo—Mr. Harold Prescott, "The English Rose" from "Merrie England" (German).  
8.19: Violin solo—Miss Irene Morris, "Air" from "Violin Concerto" (Goldmark).  
8.23: Recital—Miss Mavis Ritchie, "Queen Catherine's Defence" from "Henry VIII," Act II, scene 4 (Shakespeare).  
8.29: Instrumental trio—Christchurch Broadcasting Trio, "Allegro" from "Trio in E Flat Major" (Beethoven).  
8.38: Soprano solos—Madame Gower-Burns, (a) "Kissing Time" (Needham); (b) "The Cuckoo" from cycle, "More Daisies" (Lehmann).  
8.44: Cello solos—Mr. Harold Beck, (a) "Air" (Matheson); (b) "Scherzo" (Van Leons).  
8.51: Recital—Miss Mavis Ritchie, (a) "The Sisters" (Whittier); (b) "Rosie's Relations" (Godard).  
8.57: Pianoforte solos—Miss Aileen Warren, (a) "Refrain" from "Berceau" (Palmgren); (b) "German Dance, No. 3" (Beethoven).  
9.4: Relay of orchestral selections from Everybody's Theatre.  
9.44: "Flora's Holiday" (a cycle of Old English melodies), (Lane Wilson), by vocal quartet (Madame Gower-Burns, Miss Jessie King, Messrs. Harold Prescott and Bernard Rennell).  
Quartet—"Come, All Ye Lads and Lassies."  
Soprano solo—Madame Gower-Burns, "Love Greeting."  
Tenor solo—Mr. Harold Prescott, "Tell Me, Larming Creature."  
Quartet—"The Country Dance."  
Contralto solo—Miss Jessie King, "Maidens, Beware Ye."  
Baritone solo—Mr. Bernard Rennell, "Sound Argument."  
A catch—Madame Gower-Burns, Miss King, Messrs. Prescott and Rennell, "The Pedlar."  
Quartet—"The Communion of Love."  
9.45: Instrumental trio—Christchurch Broadcasting Trio, (a) "Songs Without Words"; (b) "Spring Song" (Mendelssohn).  
God Save the King.

4YA, DUNEDIN (463 METRES), THURSDAY, DECEMBER 20.

- 7 p.m.: Town Hall chimes.  
7.1: Request gramophone concert.  
7.30: News session.  
8.0: Town Hall chimes.  
8.1: Relay of orchestral selections from the Octagon Theatre Orchestra, under the direction of Mr. L. D. Austin.  
8.11: Baritone solos—Mr. F. M. Tuohy, (a) "Before You Came"; (b) "Elegie" (Massenet).  
8.18: Piano solo—Miss Alice Wilson, "Etude Appassionata" (Rosenbloom).  
8.22: Soprano solo—Miss Rita Holmes, "Homage" (Del Rio).  
8.27: Cello solo—Mr. Malcolm Robilliard, "Le Cygne" (Saint-Saens).  
8.32: Bass solo—Mr. E. G. Bond, "Yeoman of England" (German).  
8.36: Relay of orchestral selection from the Octagon Theatre.  
8.46: Mezzo-soprano solos—Mrs. J. Marshall, (a) "Rose in the Bud" (Forster); (b) "Homeland" (Drummond).  
8.53: Address—Pastor W. D. More, selected.  
9.10: Piano solo—Miss Alice Wilson, "Consolation" (Liszt).  
9.15: Baritone solo—Mr. F. M. Tuohy, "The Mountains of Mourne" (arr. Collinson).  
9.20: Cello solo—Mr. Malcolm Robilliard, "Meditation" from "Thais" (Massenet).  
9.25: Soprano solos—Miss Rita Holmes, (a) "Léte" (Chaminade); (b) "O Thank Me Not" (Mallinson).  
9.31: Piano solo—Miss Alice Wilson, "Sing a Song of Sixpence" (Nevins).  
9.35: Bass solos—Mr. E. G. Bond, (a) "Song of the North Wind" (Head); (b) "The Merry Monk" (Bevan).  
9.42: Cello solo—Mr. Malcolm Robilliard, "Serenade" (Squire).  
9.46: Mezzo-soprano solo—Mrs. J. Marshall, "The First Violet" (Mendelssohn).  
9.50: Relay of orchestral selections from the Octagon Theatre.  
10.0: God Save the King.

## Friday December 30th

1YA AUCKLAND (333 METRES)—FRIDAY, DECEMBER 30.

- 8 a.m.: Sports attractions, news, road conditions, race reviews, musical items.  
3 p.m.: Afternoon session—Selected Studio items.  
5.0: Close down.  
5.30: Children's hour.  
6.30: Selected vocal and instrumental items.  
7.30: News and reports and sports results.  
8.0: Chimes.  
8.1: Quartet—St. Andrew's Quartet, "How the Fates" (Sullivan).  
8.5: Humorous monologue—Mr. Dan Flood, humour at the piano.  
8.9: Contralto solo—Miss Phyllis Gribben, "Silvered is the Raven Hair" from "Patience" (Sullivan).  
8.13: Relay of orchestral selections from Majestic Theatre Orchestra, under the direction of Mr. J. Whitford-Waugh.  
8.23: Humorous recital—Mr. Alan McElwain, humorous speeches.  
8.27: Vocal duet—Messrs. Peter and Colledge, "Flow, Gently Diva" (Parry).  
8.30: Soprano solo—Miss Adelaide Taylor, "Orpheus With His Lute" (Sullivan).  
8.34: Humorous sketch—Miss Linda Murphy and Mr. J. Montague, "Wednesday or Thursday."  
8.41: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio in B Flat Major," Op. 15 (first part), (Mozart).  
8.51: Quartet—St. Andrew's Quartet, "Then Said They to Chibabos" (Colebridge-Taylor).  
8.56: Humorous recital—Mr. A. McElwain, "Uncle Goose and the Eggs."  
9.1: Weather forecast.  
9.3: Tenor solo—Mr. Robert Peter, "The Rowan Tree" (Nairn).  
9.8: Vocal duet—Miss Gribben and Mr. Colledge, "The Day is Done" (Loehr).  
9.12: Humorous monologue—Mr. Dan Flood, humour at the piano.  
9.17: Relay of orchestral entr'acte from Majestic Theatre.  
9.23: Bass solo—Mr. Arthur Colledge, "Arm, Arm, Ye Brave" (Handel).  
9.28: Humorous sketch—Miss L. Murphy and Mr. J. Montague, "At the Fire Station."  
9.35: Soprano solo—Miss A. Taylor, "The Piper of Love" (Carew).  
9.40: Instrumental trio—Towsey-Bosworth-Hemus Trio, "Trio in B Flat Major," Op. 15 (second part), (Mozart).  
9.50: Humorous recital—Mr. A. McElwain, "Cohen and His Taylor."  
9.55: Quartet—St. Andrew's Quartet, (a) "When Evening's Twilight" (Haddon); (b) "Sleep, Dear One, Sleep" (Haddon).  
10.2: A thought.  
10.4: God Save the King.

2YA WELLINGTON (420 METRES)—FRIDAY, DECEMBER 30.

- 3 p.m.: Afternoon session—Selected Studio items.  
Chimes of the General Post Office clock, Wellington.  
3.1: Selected gramophone items.  
3.30: Lecturette—Miss Marion Christian, "Gas Cooking."  
3.45: Selected gramophone items.  
Relay of Manuel Hyman's Exhibition Band from the Adelphi Cabaret.  
5.0: Close down.  
6.0: Children's hour—Uncle Ernest.  
7.0: News session, market reports, and sports results.  
8.0: Chimes of the General Post Office clock, Wellington.  
8.1: Overture—"Estudiantina" (Waldteufel).  
8.5: Quartet—Celeste Quartet, "March of the Men of Harlech" (Barnby).  
8.10: Humorous recital—Miss Norah Burt, "The French Maid" (May).  
8.17: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement, C Minor Trio" (Beethoven).  
8.28: Tenor solo—Mr. Edgar Swain, "On Wings of Song" (Mendelssohn).  
8.33: Italian mandolin—Mr. Lad Haywood, "Nocturne" (Bergmuller).  
8.40: Vocal duet—Miss Myra Sawyer and Mr. Wm. Boardman, "In a Garden of Roses" (Sanderson).  
8.46: Cello solo—Mr. Geo. Ellwood, "The Swan" (Saint-Saens).  
8.53: Soprano solo—Miss Myra Sawyer, "Solweig's Song" (Greig).  
8.59: Weather forecast.  
9.0: Imperial Affairs—Editor-Announcer.  
9.1: Contralto solos—Mrs. Edgar Swain, (a) "Through the Sunrise" (Nutting); (b) "Mighty Like a Rose" (Nevin).  
9.18: Instrumental trio—Symons-Ellwood-Short Trio, "Trio in C Minor, Second Movement" (Beethoven).  
9.28: Vocal duet—Mr. and Mrs. Edgar Swain, "In a Little Old Garden" (Hewitt).

At the headquarters of the United States Navy in Washington there has been installed radio equipment for transmitting to vessels at sea facsimiles of maps, drawings and written orders.

Uncle Sam has been bitten by the radio bug just as have his citizens in the States. Many government branches are now busy developing and using the new means of communication.

Scorpions out on the Nevada desert seem to prefer cake-walks and minuets to Black Bottom tunes, according to a letter received by the director of broadcast station KGO, Oakland. The writer said: "These two old boys crawled through a crack in my cabin floor when the jazz stopped and danced the snappiest minuet I ever saw, when you played some old-time numbers. If they weren't so old I wouldn't have been surprised at their pep, which goes to show how good your music was, KGO."

Mr. David Sarnoff, vice-president of the Radio Corporation of America, recently stated: "Facsimile transmission by wireless in 1927 brought clearly into view the great possibilities of an entirely new system of telegraphic communications. News pictures, portrait photographs and documents have been transmitted by radio across the ocean in facsimile form. From an average sending time of 40 minutes per photograph when the service was first established, the commercial time of transmission has been reduced to 20 minutes. Under special conditions photographs have been transmitted by our engineers in two minutes with satisfactory detail, and much greater speeds are forecast by laboratory developments now in progress."



Photo Elizabeth Greenwood.  
MISS EDNA GREENWOOD.

Miss Edna Greenwood, L.A.B., who is to sing from 2YA on the evening of Thursday, December 29, is a talented young soprano with a voice of beautiful quality. Two years ago, at the Wanganui Competitions, she carried off the vocal championship, and the following year, at the same Competitions, she won the scholarship. She has appeared successfully as soloist for the Wanganui Orchestral Society and also at recitals given by Mr. Gordon McBeth, who is recognised as one of the foremost pianists of the Dominion. Miss Greenwood will be heard in Verdi's "Ah, Fors e Lui," and "Nymphs and Fawns," by H. Bemberg.

Drum tuning controls, complete shielding, and high-gain radio-frequency amplifiers are the predominant trend in kit receivers to home constructors in America this winter. All of the new kits also provide for the use of power valves in the output stage so that good quality can be obtained, and in many cases it is possible to operate the receiver either from batteries or from alternating current, using, in the latter case, a.c. valves or special rectifier valves with the filaments of the tubes in the receiver connected in series.

M. Descarsins, a French military radio engineer, has developed a circuit into which he can put as much as 20,000 watts using a 45-meter wave. His transmitter has been heard throughout Europe and the East as well as South America. He utilises a new type of the Holweek demountable tube, which can be repaired if it is damaged.

Carl H. Butman, secretary of the United States Government Radio Commission, says: "So far, only a start has been made on this huge task of equipping the great American family with radio. To date there are fitted up only 6,000,000 homes with radios, out of the 22,000,000 on the Continent, a saturation of barely 25 per cent. Only 6,000,000 radio sets are in use, yet we have 18,000,000 automobiles, 15,000,000 electrically wired homes, and 8,000,000 phonographs."

The radio sales manager of the big radio shops should not hide himself away in his office during this busy season. He should keep an eye on the sales counter, and see that some system is followed in handling the rush of business. It should not be beneath his dignity to move amongst the customers advising and helping where he can. He should avoid long fruitless gossip with friends.

- 9.33: Cello solo—Mr. Geo. Ellwood, "La Cinquantaine" (Marie).  
9.38: Baritone solo—Mr. Wm. Boardman, "Within These Sacred Bowers" from "Magic Flute" (Mozart).  
9.44: Humorous recital—Miss Norah Burt, "The Last Half-hour at School" (anon.).  
9.50: Italian mandolin—Mr. Lad Haywood, "Doll Dance" (Brown).  
9.55: Quartet—Celeste Quartet, "O, Hush Thee, My Babe" (Sullivan).  
3YA CHRISTCHURCH (306 METRES)—FRIDAY, DECEMBER 30.

- 2.30 p.m.: Relay description of New Zealand lawn tennis championship finals from Wilding Park.  
6.0: Children's hour—Big Brother.  
7.0: Close down.  
7.15: News and reports.  
8.0: Chimes. Relay of orchestral selections from Liberty Theatre Orchestra, under the direction of Mr. Ernest Jamieson.  
8.15: Soprano solo and chorus—Miss Frances Hamerton, "Love Maketh the Heart a Garden" (German).  
8.19: Violin solo—Miss Irene Morris, "Melodie" (Bridge).  
8.25: Vocal quartet—The Melodious Four, "Awake, Awake!" (Bantock).  
8.30: Instrumental trio—Christchurch Broadcasting Trio, "Adagio Cantabile and Scherzo" from "Trio in E Flat" (Beethoven).  
8.44: Tenor and baritone duet—Messrs. Russell Sumner and T. D. Williams, "Army and Navy" (Cooke).  
8.48: Humorous recital—Mr. James Laurensen, "The Colonel" (Winter).  
8.52: Happy song—Mr. Cheslyn O'Connor, "That's a Good Girl" (Berlin).  
8.56: Contralto solos—Miss Belle Renaut, (a) "Woodland Thoughts" (Franz); (b) "Seen Above Me" (Pergolesi).  
9.2: Instrumental trio—Christchurch Broadcasting Trio, "Intermezzo" (Bizet).  
9.6: Tenor solo—Mr. Russell Sumner, "A Sailor's Grave" (Sullivan).  
9.10: Violin solo—Miss Irene Morris, "Rondino" (Beethoven-Kreisler).  
9.11: Bass solos—Mr. T. D. Williams, (a) "Dear Gift of a Sister" (Gounod); (b) "Even Bravest Hearts May Swell" (Gounod).  
9.16: Recital—Mr. James Laurensen, "The Eatonswill Election" from "Pickwick Papers" (Dickens).  
9.21: Relay of orchestral selections from Liberty Theatre.  
9.36: Soprano solos—Miss Frances Hamerton, (a) "Lilacs" (Rachmaninoff); (b) "Into My Open Window" (Rachmaninoff).  
9.41: Tenor recitative and solo—Mr. Russell Sumner, (a) "Comfort Ye"; (b) "Every Valley Shall Be Exalted" (Handel).  
9.49: Instrumental trio—Christchurch Broadcasting Trio, "Petite Bolero" (Ravino).  
9.54: Bass solos—Mr. T. D. Williams, (a) "Thou Art So Like a Flower" (Liszt); (b) "When Thy Blue Eyes, Beloved" (Lassen).  
10.0: Soprano solo—Miss Frances Hamerton, "The Coming of Spring" (Rachmaninoff).  
10.6: Comic songs—Mr. Cheslyn O'Connor, (a) "Sweet Child" (Whiley); (b) "Baby Face" (Davis).  
God Save the King.

4YA, DUNEDIN (463 METRES)—FRIDAY, DECEMBER 30.

- 3 p.m.: Town Hall chimes.  
3.1: His Master's Voice recital.  
3.15: Afternoon tea music from the Savoy.  
3.30: Studio music.  
4.0: Music from the Savoy.  
4.15: His Master's Voice recital.  
4.30: Close down.  
6.0: Town Hall chimes.  
6.1: Children's hour—Big Brother Bill. "The Happy Ditty." Letters, New Year greetings, and the birthday basket. Big Brother Bill takes the Radio Family in the Wonder Car to see the New Year customs in many lands. Little Brother Ray plays the violin; little Sister Dorothy recites, and Sister Valda plays the piano.  
7.0: Close down.  
7.15: News session.  
7.30: Reviews of latest books by Mr. H. Greenwood, of the Athenaeum.  
8.0: Town Hall chimes.  
8.1: Tenor solo—Mr. Les. Dalley, "When the Stars Are Brightly Shining" from "Tosca" (Puccini).  
8.5: Pianoforte solo—Mrs. W. Munro, "Sonata No. 8, First Movement" (Beethoven).  
8.10: Soprano solo—Mrs. D. Carty, "Arise, O Sun" (Day).  
8.16: Bass solos—Mr. J. B. Macpherson, (a) "Friend" (Davies); (b) "The Rice Was Under the Water" (Woodford-Finden).  
8.23: Recital—Miss Sheila Neilson, "The Old Stage Queen."  
8.29: Mezzo-soprano solos—Miss Mollie Andrews, (a) "The Gentle Shepherd" (Pergolesi); (b) "Love's a Merchant" (Carew).  
8.36: Piano solo—Mrs. W. Munro, "Nocturne in E Major" (Chopin).  
8.41: Monologue—Miss Sheila Neilson, "Bredon Hill."  
8.46: Soprano solos—Mrs. D. Carty, (a) "Mary of Argyle" (Moffatt); (b) "Danny Boy" (Weatherley).  
8.54: Pianoforte solo—Mrs. W. Munro, "Prelude in G Minor" (Rachmaninoff).  
9.0: Tenor solos—Mr. Les. Dalley, (a) "She is Far From the Land" (Lambert); (b) "Oft in the Stilly Night" (Moore).  
9.7: Recital—Miss Sheila Neilson, "The Photographers."  
9.12: Bass solo—Mr. J. B. Macpherson, "Bells of the Sea" (Solman).  
9.16: Relay of dance music from the Savoy.  
10.0: Close down.

## Saturday December 31st

1YA AUCKLAND (333 METRES)—SATURDAY, DECEMBER 31.

- 8 a.m.: Sports attractions, news, road conditions, race reviews, musical items.  
12.0: Results of trots (as run).  
3 p.m.: Afternoon session—Selected Studio items.  
4.0: Literary selection by Mr. Culford Bell.  
4.30: Close down.  
5.30: Children's hour—Cinderella.  
6.30: Studio items.  
7.30: News, reports, and sports results.  
8.0: Chimes.  
8.1: Relay of special New Year organ recital from Town Hall. Organist Mr. Maughan Barnett.  
9.30: A special humorous diversion.  
9.40: Relay of New Year dance music from Click-Clack Cabaret by the Click-Clack Orchestra, under Mr. Walter Smith, and from the Dixieland Cabaret by The Internationals, under Mr. Clyde Howley.  
12.0: Relay of city noises and chimes in celebration of New Year.  
A New Year thought.  
"A Happy New Year to Radioland."  
"Anld Lang Syne."  
God Save the King.

2YA WELLINGTON (420 METRES)—SATURDAY, DECEMBER 31.

- 3 p.m.: Afternoon session—Selected Studio items.  
5.0: Close down.  
6.0: Children's hour—Aunt Gwen and pupils of Miss Gwen Shepherd. Chorus, cousins, "Hush, Here Comes the Dream Man" (Weston and Scott). Piano solo, Cousin Betty, "Prelude in C" (Bach). Musical monologue, Cousin Molly, "Old Sunshine." Aunt Gwen sends birthday greetings. Piano duet, Cousins Joan and Molly, "Hungarian Dance" (Chaneet). Recitation, Cousin Betty, "The Soliloquy of a Chicken." Chorus, cousins, "The Little Window." Piano solo, Cousin Ruth, "Prelude" (Rachmaninoff). Vocal solo, Cousin Rosina, "In Japanese Butterfly Land" (Hersley). Recitation, Cousin Molly, "A Child's Evensong" (Gallienne). Piano solo, Cousin Joan, "Anitra's Dance" (Greig). Chorus, cousins, "Kisses" (Hill). Aunt Gwen, story.  
7.0: News session, market reports, and sports results.  
8.0: Chimes of the General Post Office clock, Wellington.  
8.1: Overture, "Luxembourg Waltz" (Lehar).  
8.5: All vocal selections rendered by members of the William Renshaw Quartet from the comedy opera, "Dorothy" (Collier). Dorothy, Mrs. Amy Dunn; Lydia and Phyllis, Miss Nora Greene; Wilder, Mr. William Renshaw; Sherwood, Mr. Thomas C. Wood. Quartet—"We're Sorry to Delay You." Ballad—Wilder, "With Such a Dainty Maid." Quartet—"You Swear to Be Good and True."  
(Continued on page 13.)

# Mainly about Construction

BY "MEGOHM"

## The "Record" Short-Wave Receiving Set

### HOW TO CONSTRUCT A "CONVERTER"

#### USEFUL HINTS FOR OPERATING THE SET

##### CONSTRUCTING THE SHIELD.

In order to make the construction of the copper shielding as clear as possible, a diagram is given of the respective parts in relative positions. As already mentioned, the back of cover has a half-inch flange on three sides and these flanges go inside the main portion of cover and are soldered to it to hold the back in place. The ordinary radio soldering-iron will not be equal to this job, which was easily carried out with a small blowpipe blown with the mouth, heat being supplied with a tuft of cotton-wool soaked with methylated spirits and placed in the lid of a metal shaving-soap container. Ordinary "killed acid" flux is most suitable for the work.

All bending of the copper sheet should be done over the edge of a piece of wood to ensure a straight, neat bend. The portion to be bent over should be pushed down with a piece of wood, a small amount all along, then go over again, pushing further, and so on, until the required bend is arrived at.

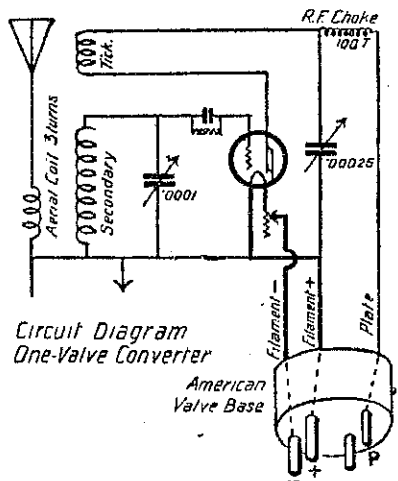
##### BUILDING THE CONVERTER.

The converter, or adapter, is a means whereby the one-valve portion of the short-wave set alone may be built, and by means of three wires connected to an old valve base, the necessary battery connections to the converter are made by plugging in the valve-base to the detector valve socket of any ordinary broadcast receiver, and at the same time this connection puts the broadcast amplifier into use to amplify the short wave signals.

The main components constituting the two-valve amplifier are two audio transformers, and two valve sockets. In constructing the converter, these are omitted, thus allowing the total width of baseboard to be reduced to 14½ inches instead of 20 inches. The rheostat must then be placed on the front panel between the two condensers, and the position of the radio choke will be slightly altered to place it about centrally in the space provided. All other spacing of components and above-board wiring will be just the same as for the full set, except that one end of the choke, instead of connecting to a transformer, will go under the board to connect to the wire running to the plate pin in valve base plug.

It is unnecessary to give fresh diagrams of shielding, as if this is adopted, all dimensions will be the same, with the exception of those for widths, which will all be reduced by 5½ inches, giving 14½ inches in place of 20. The old valve base is best obtained from an old valve, British or American, to suit the detector socket on the broadcast set. The connecting wires should first be unsoldered from the pins, and then the cement fixing the glass to the base is dissolved with methylated spirits, and the bulb removed. Three lengths of single lighting flex are now taken, each sufficiently long to reach from the converter to the broadcast detector socket. To one end of each of these a wire is soldered, which must be thin enough to go through the holes in base. Each thin wire is then threaded through its respective hole and soldered to the valve pin. The three flexes can then be taped together with adhesive tape just above the valve base, and may be plaited together and then connected to their respective points on the converter.

The diagram shows an American socket, but if a British socket is used the same connections are made; that is, to the two filament pins and the plate



or anode pin. The grid pin is not used in either case.

Every broadcast amplifier is not the same, and there may be cases in which the converter does not work at its best unless some small temporary change is made, perhaps in condenser value across the first audio transformer.

##### CONNECTING TO REFLEX SETS.

Reflex sets employing a crystal detector have no detector valve socket, so in order to make use of the amplifier for the converter it will be necessary to wire in a socket that will not affect the ordinary working of the set, and yet is always ready for the application of the converter.

Taking the All-Amaz three-tube as a typical reflex of this class, a Klossner or similar UX socket and a double-pole double-throw switch would be required.

The two ends of the primary winding of the first audio transformer are then both connected to the two arms of the switch, and the two connections that went to the transformer are now wired to a pair of the switch contacts. The two other switch contacts are wired respectively to the plate socket of extra valve holder, and to a special B positive voltage tap for high tension on detector. The two filament sockets of holder are wired to respective A battery leads. For normal use the switch is put over to connect as usual. When the converter is to be used it is plugged into the extra socket and the switch thrown over, when all is ready for short-wave. A diagram shows this arrangement. This has been worked out in response to a number of requests, and appears to be the simplest way of utilising the double amplification of the type of receiver in question.

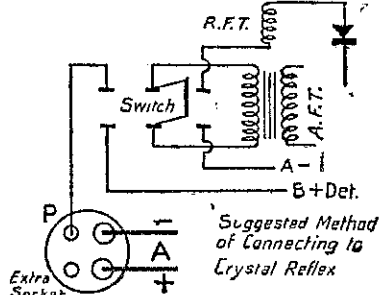
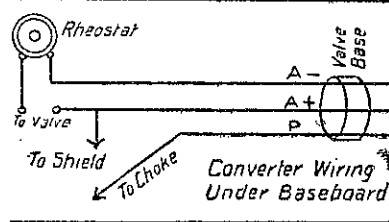
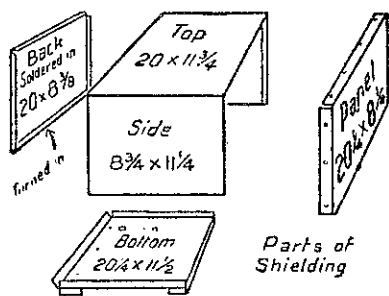
##### OPERATING FULL RECEIVER OR CONVERTER.

The novice at short-wave reception must remember that until a fair amount of practice has been put in, tuning is more difficult than on the broadcast wave-lengths. The reason for this is that upon the lower wave-lengths the frequencies are so great, and a small movement of the dial that in the broadcast would cover less than one kilocycle, would on short-wave cover several kilocycles. At 40 metres the frequency is 7,500,000 a second, and at 15 metres 20,000,000. This means that unless the dials are turned very slowly indeed stations will be passed by unheard and unnoticed.

To start with, detector high tension voltage must be cut down to 15 or 20 volts, and the filament voltage kept at a minimum. The reaction condenser is now set to zero, and if the set has not a "live" sound when off oscillation, increase filament voltage slightly. When the "live" condition has been reached, turn the reaction condenser about half in, when the set should begin to oscillate quietly and smoothly, with a louder characteristic hiss or liveliness off oscillation.

To search, carefully turn the secondary condenser, all the time keeping the set just oscillating by following with the reaction condenser. If reaction comes on with a click, then filament current must be increased; if it starts with a bang and a squeal, then try decreasing filament and plate voltages.

With different coils a slight adjustment of a filament may be required in order to maintain oscillation at all parts of the secondary dial. Aerial coupling should be quite loose, reducing static and enabling the set to oscillate more easily. Remember other listeners, and keep the oscillation as gentle and quiet as possible, which will also make your own reception easier.



Usual suitable amplifier voltages are employed.

##### SUITABLE VALVES.

Quite a number of valves have been tested as detectors, including a couple of anti-capacity types, and the two six-volt that came out best are the UX201A and the PM5X. The PM3 makes a very good four-volt detector, and the PM1L a good two-volt. American valves were not tested in the lower voltages, but no doubt the equivalents will be found equally satisfactory.

When using a four-volt detector it will be necessary, in order to get the low filament voltage required, to include resistance in addition to the 80-ohm rheostat, and this may be done by means of an extra rheostat in series behind the panel, or by a length of resistance wire wound on fibre. The advantage of an extra rheostat is that it can be cut out at any time by a turn of the knob.

## With the Crystal User

### USEFUL POINTS FOR BETTER RECEPTION

If you would maintain your galena crystal in tip-top condition, use it in a glass or celluloid enclosed detector. It is not so much the dust in a room which effects its sensitivity, but the impure atmosphere to which it is generally exposed when it is employed in a detector of an open type.

A good way of storing a spare crystal or two is to bury them in a little box containing perfectly pure white sand. See that the sand is quite dry to begin with, and then place the box in a perfectly dry place. Treated in this manner any good crystal will retain its initial sensitivity for an almost indefinite period.

If you are out of long-range work with a crystal set, use a fairly coarse grain galena crystal (preferably one of the "natural" as opposed to the synthetic variety), with a fine graphite of soft lead pencil contact. For ordinary work, however, where the crystal set is not very far away from the broadcasting station, there are very few things to heat a zincite-tellurium contact mounted in a "perikon" detector. With initially strong signals, this device gives loud and clear reception, and it does not require very much adjusting. This is the usual semi-permanent type of detector.

Unsatisfactory valve-crystal reception may very often be due to the use of an unsuitable crystal. Try a small piece of iron pyrites, and your troubles will cease. Iron pyrites is rather difficult to obtain in a perfectly satisfactory sensitive condition, but if you can get hold

of a piece of this mineral you will find that it will give clearer reception than any other.

##### OSCILLATING CRYSTALS.

Perhaps you are interested in the subject of crystal oscillation, and you have been experimenting with steel-zincite contacts? However, there are other metals which will give rise to oscillations in the circuit when they are used in contact with zincite. Chromium and manganese are two. Cobalt is another. There is room for innumerable experiments in this direction.

On the seashore you sometimes see a number of small pebbles which possess a greenish-grey metallic lustre. Next time you have the chance, take a number of these home with you, and try them out in contact with zincite. In many instances you will find that excellent rectifying contacts are provided.

##### MAKING YOUR OWN.

The very simplest "crystal" to make is obtained by placing a strip of copper in a red fire for about half a minute, or even less, until its surface has acquired a greyish-black appearance. Allow the metal to cool down to ordinary temperatures, and then test its rectifying properties by means of a very lightly applied No. 30's wire cat's-whisker. You will be able to get quite good reception. Further, the strength of the reception is still more increased by having, as the contact point, a piece of stout copper rod, the end of which has been dipped in molten rock sulphur for a minute or two, and then heated in a non-luminous gas flame so as to drive off the excess of sulphur.

##### USE A FIXED CONDENSER.

Always employ a small fixed condenser across the 'phone terminals. With some crystals the degree of improvement which it brings about in the reception is striking. Choose the capacity of the condenser well, however, for the latter is too large there will be a damping effect, and the signal strength will decrease instead of increasing.

It is a remarkable fact that a resistance-capacity coupled amplifier, if overlooked, mutilates the incoming signal much more obviously than does a transformer-coupled set of the same nominal capabilities. This is due to the fact that if the grid of a resistance-coupled valve becomes negative, a certain time must elapse before the charge which inevitably accumulates has time to leak away through the high-resistance grid-leak. In a transformer-coupled set the grid current can leak away through the secondary winding with comparative ease.

(Continued on Page 15.)

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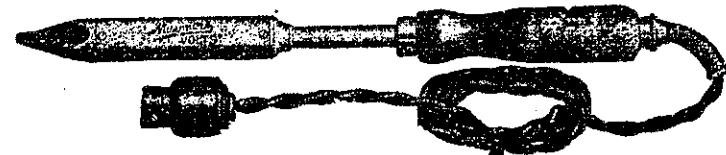
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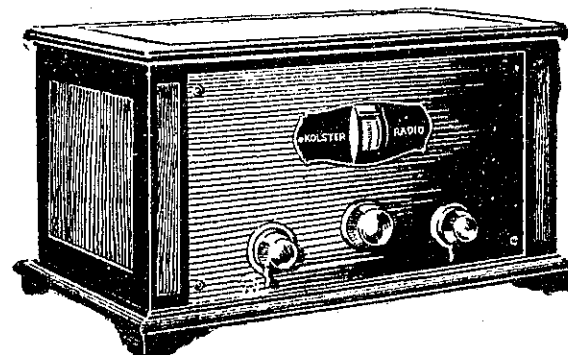
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## Programmes Continued

(From page 11.)

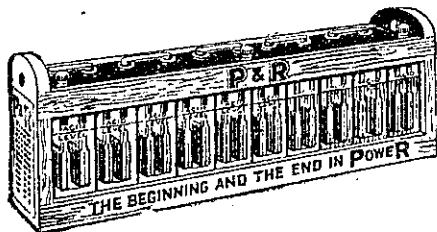
- 8.20: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement, Trio in G" (Reissiger).  
 8.30: Song—Sherwood, "Queen of My Heart." Recitative and quartet, "One Moment, Pray." Ballad—Phyllis, "The Time Has Come."  
 8.45: Instrumental trio—Symons-Ellwood-Short Trio, "Second and Third Movements Trio in G" (Reissiger).  
 8.55: Quartet—Dorothy and quartet, "You Swear to Be Good and True."  
 9.0: Weather forecast and cricket results.  
 9.2: Comedian—Mr. Doug. Stark, (a) "I'm Looking for a Bonnie Laugh" (Lauder); (b) "Rosie" (Lauder).  
 9.10: Steel guitar duo—Berthold and Bent, (a) "I Wonder Where My Baby is To-night?" (b) "Some Time" (Foiriti).  
 9.19: Humorous recital—Mr. R. Walpole, "Radio in the Air We Breathe."  
 9.23: Relay of Manuel Hyman's Exhibition Band from the Adelphi Cabaret.  
 9.43: Sketch—Mr. Doug. Stark, "The Caddie."  
 9.49: Steel guitar duo—Berthold and Bent, (a) "Kamehameha March"; (b) "Old Black Joe."  
 9.58: Humorous recital—Mr. R. Walpole, "The Sad Story of Mrs. Pabblewick" (Hayes).  
 10.4: Relay of Manuel Hyman's Exhibition Band from the Adelphi Cabaret.  
 11.0: Close down.  
 11.15: Relay of New Year's Eve Watch Night Service from St. Andrew's Presbyterian Church. Preacher, Rev. R. Howie; organist, Mr. Frank Thomas.  
 12.10 a.m.: Close down.

### 3YA CHRISTCHURCH (306 METRES)—SATURDAY, DECEMBER 31.

- 6 p.m.: Children's hour—Uncle Sam and Aunt May. Bed-time stories. New Year and birthday greetings and letters.  
 7.0: Close down.  
 7.15: News and reports.  
 7.30: Sports results.  
 8.0: Chimes. Relay of orchestral selections from Crystal Palace Theatre Orchestra, under the direction to Mr. A. J. Bunz.  
 8.15: Baritone solo—Mr. F. R. Hawker, (a) "Rip Van Winkle" (Carroll); (b) "Tops! Halyards" (Harry).  
 8.21: Comedy sketch—Mr. Ernest G. Peek, "Cuthbert on Songs and Singers" (Peek).  
 8.26: Instrumental trio—Christchurch Broadcasting Trio, "Finale Prestor" from "Trio in E Flat Major" (Beethoven).  
 8.32: Soprano and tenor duet—Miss Mabel Thomas and Mr. David McGill, "Eil Sol Dell Anima" from "Rigoletto" (Verdi).  
 8.36: Scottish humorous song—Mr. Jock Lockhart, "When I Was Twenty-one" (Lauder).  
 8.40: Soprano solo—Miss Mabel Thomas, "One Fine Day" (Puccini).  
 8.43: Hawaiian string trio—Miss Elaine Moody's Trio, (a) "My Dorothy"; (b) "Somewhere in Honolulu."  
 8.50: Tenor solo—Mr. David McGill, "If You Would Love Me" (McDermid).  
 8.54: Highland warpipes—Mr. Angus MacIntosh, "Bonawe Highlanders."  
 8.58: Soprano and tenor duet—Miss Mabel Thomas and Mr. David McGill, "O Tender Moon" from "Faust" (Gounod).  
 9.3: Instrumental trio—Christchurch Broadcasting Trio, (a) "Humoresque" (Widor); (b) "Chanson Triste" (Tschaiakowski); (c) "April's Lady" (Ancliffe).  
 9.13: Recital—Miss Lucy Cowan, (a) "New Year's Day and Every Day" (Oxenham); (b) "Carry On" (Oxenham).  
 9.18: Relay of orchestral selections from Crystal Palace Theatre.  
 9.35: Baritone solo—Mr. F. R. Hawker, "The Merry Monk" (Bevan).  
 9.38: Song and patter—Mr. Ernest G. Peek, "Something to Practice On" (David).  
 9.42: Instrumental trio—Christchurch Broadcasting Trio, (a) "Autumn" (Tschaiakowski); (b) "Hongroise, Fourth Dance" (Brahms).  
 9.52: Soprano solo—Miss Mabel Thomas, "Sing, Sweet Bird" (Ganz).  
 9.56: Hawaiian string trio—Miss Elaine Moody's Trio, "A Plaintive Melody."  
 10.0: Tenor solo—Mr. David McGill, "Annie Laurie" (Scott).  
 10.14: Highland warpipes—Mr. Angus MacIntosh, (a) "Lochiel's Welcome to Glasgow"; (b) "The Devil in the Kitchen"; (c) "The Marquis of Tullobardine."  
 10.21: Scottish humorous song—Mr. Jock Lockhart, "Shes the Lass For Me" (Lauder).  
 Relay of dance music from Caledonian Hall, by kind permission of the Canterbury Caledonian Society and Mr. Reg. Stillwell—Music by Jackson's Orchestra.  
 11.30 to 12.0: Relay from Cathedral Square (a) of farewell to the Old Year, 1927; (b) ringing in a welcome to the New Year, 1928, by the full peal of Christchurch Anglican Cathedral bells.  
 God Save the King.

### 4YA DUNEDIN (463 METRES)—SATURDAY, DECEMBER 31.

- 7.15 p.m.: News session.  
 8.0: Town Hall chimes.  
 8.1: Orchestral music from the Empire Theatre Orchestra, under the direction of Charles Parnell.  
 8.11: Mezzo-soprano solos—Miss Florence Sumner, (a) "The Rowan Tree"; (b) "Comin' Through the Rye."  
 8.18: Flute solos—Mr. A. Levi, (a) "Melody" (Levi); (b) "Idylle" (G. Coleridge-Taylor).  
 8.24: Pianoforte solo—Miss A. D. Allen, "Sonata in D Minor" (Beethoven).  
 8.29: Baritone solos—Mr. Arthur Lungley, (a) "Border Ballad" (Cowen); (b) "Loch Lomond and You" (Drummond).  
 8.36: Violin solo—Mr. A. Watson, "Serenade" (Widor).  
 8.41: Contralto solo—Miss Irene Horniblow, "Peace" (Schubert).  
 8.45: Orchestral music from the Empire Theatre.  
 8.55: Tenor solos—Mr. Frank Stewart, (a) "Kashmiri Song" (Woodford-Finden); (b) "Till I Wake" (Woodford-Finden).  
 9.2: Flute solo—Mr. A. Levi, "Romance" (Bowen).  
 9.7: Mezzo-soprano solo—Miss Florence Sumner, "The Spinning Wheel."  
 9.11: Pianoforte solo—Miss A. D. Allen, "Toccato" (Bennett).  
 9.14: Violin solo—Mr. A. Watson, "On Wings of Song" (Mendelssohn).  
 9.19: Baritone solo—Mr. Arthur Lungley, "Annie Laurie."  
 9.24: Orchestra music relay from Empire Theatre.  
 9.34: Contralto solos—Miss Irene Horniblow, (a) "The Portrait" (Schubert); (b) "Whither" (Schubert).  
 9.43: Flute solo—Mr. A. Levi, "Variations on Old Danish Theme" (Kuhlan).



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## PROGRAMME FEATURES

(Continued from Page 7.)

"Impressions of the New Zealand Tour," a talk by Mr. Merritt, of the New Zealand team, which toured Britain, will be given at 3YA on Wednesday.

Mr. J. P. Darragh, a very welcome artist at 3YA, will be heard again in two of his humorous recitations on Wednesday.

Miss Mavis Ritchie, who has won prizes for elocution at competitions, is on the programme at 3YA for Thursday.

The Melodious Four, the quartet composed of Misses Hamerton and Renault, and Messrs. Williams and Sumner, have a wide range of songs, individually and collectively, for Friday evening.



—Photo, Steffano Webb.

Mr. F. E. Boulton, who with his brother gives instrumental items from 3YA.

A Dickens sketch of an election in his day will be given by Mr. James Laurensen. Lovers of Pickwick Papers will look forward with pleasurable anticipation to hearing how the contest for the Eatons will seat was fought and won.

The Boulton Brothers, Messrs. Rou and Linton, have been asked to bring their flute and clarinet along to 3YA on Friday.

A quartet of exceptional talent in the persons of Miss Mary Shaw, Miss Nellie Lowe, Mr. T. G. Rogers and Mr. A. G. Thompson will be heard from 3YA on Wednesday in "Softly Falls the Shades of Evening." These artists are a happy combination whose voices harmonise extraordinarily well.

9.52: Violin solo—Mr. Frank Stewart, "My Desert Flower" (Norton).  
 10.0: Pianoforte solo—Miss A. D. Allen, "Marche Militaire" (Schubert).  
 10.5: Close down.

## Sunday, January 1st

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

- 3 p.m.: Afternoon session—Selected Studio items.  
 4.0: Literary selection by Mr. Calford Bell.  
 4.30: Close down.  
 6.0: Children's song service—Uncle Leo.  
 7.0: Relay of New Year service from the Baptist Tabernacle. Preacher, Rev. Joseph Kemp. Organist and choirmaster, Mr. Arthur E. Wilson.  
 8.30: Relay of Municipal Band concert from Town Hall.  
 9.30: A thought.  
 9.32: Close down.

### 2YA WELLINGTON (420 METRES)—SUNDAY, JANUARY 1.

- 6 p.m.: Children's service conducted by Rev. M. Holland.  
 6.55: Relay of evening service from Vivian Street Baptist Church. Preacher, Rev. F. E. Harry. Organist, Mr. Chas. Collins.  
 8.15 (approx.): Close down.  
 8.30: Studio concert.  
 Quartet—Orpheus Quartet, "Evening Hymn" (Buck).  
 Instrumental Quartet—Symons-Ellwood String Quartet, "Allegro and Scherzo" from C Minor Quartet" (Beethoven).  
 Soprano solo—Mrs. Alice Harris, "How Lovely Are Thy Dwellings" (Liddle).  
 Quartet—Orpheus Quartet, "Consider and Hear Me" (Pluegar).  
 Instrumental quartet—Symons-Ellwood String Quartet, "Adagio" from "C Major Quartet" (Haydn).  
 Quartet—Orpheus Quartet, "As Pants the Heart" (Thomas).  
 Baritone solo—Mr. Len. Barnes, recitative and aria from "Creation," "Now Heaven in Fullst Glory Shone" (Haydn).  
 Violin solo—Miss Ava Symons, with string accompaniment by Symons-Ellwood String Quartet, "Hungarian Dance" (Brahms).  
 Quartet—Orpheus Quartet, "The Homeland" (Sullivan).

### 3YA CHRISTCHURCH (306 METRES)—SUNDAY, JANUARY 1.

- 5.45 p.m.: Children's song service by Uncle Sam, assisted by cousins from St. David's Presbyterian Sunday School.  
 7.0: Relay of evening service from St. Paul's Presbyterian Church, Cashel Street. Preacher, Rev. Gilman Dunn, of Kaikoura. Organist and choirmaster, Mr. Norman R. Williams.  
 an after-service vocal and organ recital will be given from St. Paul's Church, under the direction of Mr. Norman R. Williams.

### 4YA DUNEDIN (463 METRES)—SUNDAY, JANUARY 1.

- 5.45 p.m.: Children's song service, conducted by Big Brother Bill and choir of children's voices.  
 7.0: Relay of service from St. Paul's Cathedral (Anglican). Preacher, Archdeacon Curzon-Siggers. Organist, Mr. E. Heywood, F.R.C.O.  
 8.15: Studio concert.  
 9.15: Close down.

A set builder who studies radio cannot but be awed by the mystery of the electron, which he can control in some of its wanderings although he cannot see it. According to science it is the very basis of our physical being, the things from which all other things, animate and inanimate, are formed.

A report received by the U.S.A. Department of Commerce from Joseph F. Hunt, vice-consul at Rio de Janeiro, shows that Brazil now has 12 broadcasting stations. They are in Rio de Janeiro, one in Minas Geraes, six in Sao Paulo, one in Pernambuco, and one in Bahia.

## Ocean Deep Tone!

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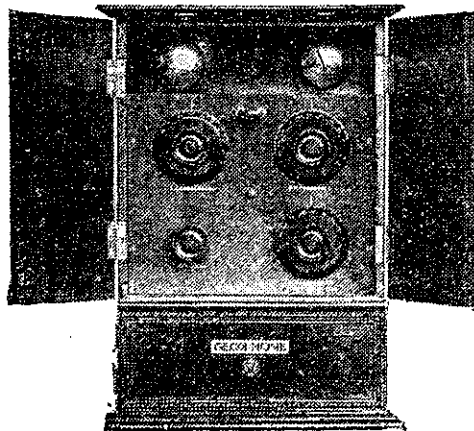
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# The Ideal Small Set

## How to Get it and How to Work it

(BY M.I.R.E.)



In our last week's column information of value to the Christmas shopper and to the seeker after radio programmes was given regarding the purchase of apparatus of modest value, and receivers of crystal design were discussed. Judging by the activity there has been in the radio shops this last week, there will be an additional number of licenses to swell the New Zealand total and bring it nearer the 40,000 mark. Programmes of outstanding merit are promised for Christmas and New Year week, and the country dweller's attention is specially directed towards the fact that a very nominal expenditure will permit of the purchase of a two-valve set, for instance. Complete with batteries, aerial equipment, and two pairs of headphones, or even a small speaker, an outlay of only £10 to £15 is required, and this figure will include the cost of a year's license fee.

### A Modest Outlay.

A sum of £20 will enable the purchaser to install apparatus capable of bringing in 2YA, Wellington, anywhere in New Zealand on the 'phones, and will put this station on the speaker within 100 to 150 miles of Wellington. So far as the other three centres are concerned, the results will be commensurate with the power of the stations. Surprisingly effective reception is being obtained all over New Zealand on two and three-valve sets, using head telephones, of course.

It has been explained before that with a crystal set there is a limit to the number of head telephones which

can be used if the receiver is situated some distance from the transmitter, and that, just as the distance at which a loudspeaker can be used with a crystal falls off rapidly, so it does with multiple pairs of head telephones in use.

If, however, a valve is added as an amplifier after the crystal, the results are very different, because under these circumstances the energy from the transmitter acts in such a manner as to "impulse" the receiver, and not "drive" it.

The energy which actually drives the sound reproducer (head-telephones or speaker) is released from the batteries attached to the valve, or, in other words, the valve acts as a relay. It will therefore be appreciated what a difference the addition of a valve makes to a crystal set, and incidentally what a difference the addition of an extra valve makes to a two or three-valve set, or even larger set. (There are limits, of course.)

### Valve on Crystal Set.

The most marked difference is seen by the crystal user, however, and he quickly becomes satisfied that his expenditure has been warranted, because unless he lives many miles from a transmitting station he now has a reliable receiver and can go and switch on and get satisfactory results maintained throughout the whole programme as a

Satisfactory reception does not necessarily entail heavy outlay in the purchase of a set. Excellent results can be secured from inexpensive equipment, properly managed. Here are discussed the various features of moderate priced, efficient small sets, which will give users satisfaction. It is worthy of careful study.

result of one adjustment of the crystal. Only those who have used a crystal set for the reception of weak signals will appreciate just what a huge relief the ability to do that represents. Nevertheless, the main thing a valve does in amplifying crystal detected signals is to release enough battery power to drive a sufficient number of 'phones for the whole family to enjoy the radio instead of a single member. There is nothing more annoying to the family than to see one of their number with his eyes twinkling and a grin on, or with an angelic expression on his face, according to the style of broadcast item, while the remainder of the family is shut out. Invariably the listener is unable to satisfy the curiosity of the others regarding the item just concluded, because the next one has begun, and he's simply not going to miss it!

The addition of one or two stages of amplification means extra cost, of course.

Very few people get something for nothing in this world, and when buying anything electrical very little is purchased with very little, but a great deal may be purchased for a moderate figure.

### Proper Selection.

Wise buying consists of a choice of good apparatus without paying an unnecessary amount for needless embellishments of a purely fancy nature. The crystal or small valve set prospective purchaser or owner would be well advised to pass over the cheap stuff and go for good standard lines of apparatus. There are many lines offering on the New Zealand market to-day which claim all manner of wonderful performances, and the unwary purchaser is falling every day for substitutes for standard methods of doing things.

There are even substitutes for valves being seriously offered. In the case of mechanical amplifiers for crystal sets, undoubtedly claims of amplification of signal strength without valves are justified, but even with these great care should be taken to see that the tonal quality of the signals is maintained. This is not such an important consideration with the headphones as with the speaker, because tonal faults are naturally much more glaring with the latter than with the former, but the results, nevertheless, are frequently disappointing unless a good price is paid for the apparatus.

In order to definitely classify the forms of apparatus available for the purpose of consideration by prospective purchasers of modest sets, it is necessary to lay them out as follows:—

1. Plain crystal.
2. Crystal and mechanical amplifier.
3. Crystal and single valve.
4. Crystal and two valve.
5. Crystal and three valve (resistance, capacity, amplification).
6. Single valve.
7. Two valves.
8. Three valve.

### Two-valve Amplifier.

The first has been dealt with in last week's issue of this paper. The second has been mentioned this week, and is recommended as a cheap way of accomplishing amplification. The writer is prepared to pass his personal opinion that the really discriminating purchaser who has the cash available will pay the extra and purchase the third or another alternative if he compares the performances of the item under consideration.

A crystal and two-valve (transformer coupled) amplifier represents the most comprehensive piece of receiving apparatus of a modest value that there is on the market to-day. The distance friend is warned to leave it well alone, because it will never satisfy him, but

for the average individual who wants real entertainment with a minimum of bother and a maximum of "cleanliness" of tone, then here is the outfit to be inquired into.

The fifth alternative, a three-valve amplifier, calls for the same remarks as have been applied to the fourth in the last paragraph. The method of amplification is different, and is of a type which invariably results in particularly distortionless results. The three valves give a total amplification which just exceeds that of the two with the transformer-coupled system of the fourth alternative.

Before passing to a consideration of the other alternatives it should be remarked that in most cases it will be necessary to purchase the various units separately, and either assemble them into a container or place them in a cupboard or on a table, wired together in working order. Such an arrangement is all right till the housewife arrives with the duster, and then the growls of the "Three Bears" over their despoiled breakfast are simply not in it. The remedy is to purchase a machine which has the various units wired up in a single container, and there are beautifully finished and efficiently performing outfits of New Zealand manufacture now available. It is unusual for battery space to be made available in the receiver case itself, but the batteries may be easily stowed away in a corner and wires run to the receiving set itself.

### Single Valve Receivers.

Single valve receivers, as mentioned under heading six, are definitely only of use for headphone reception. When close up against a transmitter.

A single-valve receiver will not perform with the efficiency of a crystal, and undistorted volume can never be forthcoming.

Of course it is more sensitive for distance than a crystal. It is a far better proposition to combine a crystal and a valve by making the valve either a high-frequency amplifier before the crystal, or an audio amplifier after the crystal, using the crystal as a detector in each case. The most important consideration, however, is that the "single-valve" is either wittingly or unwittingly the gentleman who should be hung, drawn, and quartered as the chief "howler" and disturber of the peace at present. To get any sense out of a single-valve set, reaction simply must be used, and when the very maximum of reaction is necessary to get results the trouble begins and the "veriest expert" is just as much up against it as the most humble layman.

A reaction control is really a volume control, but in contradistinction to the volume control of a well-designed multi-valve set, the more the volume control or reaction is turned on the nearer the set

gets to the danger point of "spilling over" and annoying the operator himself as well as the neighbours. When reaching out for a weak station the volume control will inevitably be moved into the danger zones. Nobody can help it. In consideration of the community at large the single-valve set should receive mature consideration before deciding on it.

### A Vexed Question.

This question of "howling" and consequent interference is a very vexed question, especially in New Zealand, where so many people consistently listen to Australian stations. It is purely a question of educating set owners to the right point of view to minimise or eliminate the trouble and attempts in this direction are due for treatment in this column. Nevertheless it is obviously the duty of every person to take this question into very serious consideration when purchasing. It is only necessary to point out to the average citizen that a certain style of equipment will cause trouble to influence him into giving it a wide berth. Even the most self-centred, prospective purchaser must appreciate the fact that he is due to give himself some consideration in this respect.

### Two-valve Sets.

The two-valve set is not as dangerous from the point of view of interference as the single valve, but is an offender.

A two-valve set will give loud-speaker signals close in to a transmitter and will give good 'phone signals elsewhere.

The user should understand, however, that he is a potential source of interference to other listeners, and it is to his own and the community's interest to always exercise the very greatest care in working his equipment.

There is one infallible method of knowing whether a certain receiver is "howling," and that is to vary the tuning control, and if a continuous "howl" is heard, or if the frequency on note varies as the tuning is varied, then the set is out of adjustment. In any case, if a set is oscillating or "howling," a breathing noise will always appear in 'phones or speaker, and the set will become ultra-sensitive to static or electrical interference. Received signals will always be blurred, and blurring will always become emphasised if the tuning is altered slightly, and this blurring will finally end up in a "howl," the note of which will alter with a movement of the tuning controls.

Adopt the slogan coined by the British Broadcasting Company in an endeavour to clean up this trouble:

"Don't do it!"

So far as the three-valve set is concerned, there is little cause to recover ground already treated in these columns. It is only necessary to point out that this is the ideal receiver for the person who requires maximum results, measured in entertainment and in terms of minimum expenditure.

## Tested by CANTERBURY COLLEGE School Of Engineering Manufacturers' Statements. Proved

Last month the School of Engineering, Canterbury College, performed exhaustive tests with "TAB" Rechargeable Dry Batteries.

The 45-Volt 30-Cell "B" Battery was used, and the test was performed by discharging the battery continuously through a resistance of 2250 ohms, until the voltage fell to 32 volts, while still discharging. The battery was then connected and recharged off the 110 d.c. supply. In all, six such operations were conducted, with very excellent results, the total discharge of the battery as follows:—

Hours Run ..... 268  
Watt Hours ..... 158  
Ampere Hours ..... 4.46

after which the Battery was still in good condition.

### HERE IS CONCLUSIVE EVIDENCE OF THE PERFORMANCE AND CAPABILITIES OF "TAB" RECHARGEABLE BATTERIES

Because "Tab" Batteries can be recharged 6 to 8 times, thus ensuring a life of between 18 months and two years when used with the average radio receiver, it is calculated to be a conservative estimate to say that "TAB" Batteries ultimately cost less than 1/6th of the cost of other "B" Batteries.

### A TAB "B" BATTERY WILL ENSURE PERFECT RECEPTION FOR THE NEXT 18 MONTHS AT LEAST.

Ask your Radio Dealer, or write direct to the Provincial Agents.

Auckland Province:  
Radio, Ltd., Fort St., Auckland.  
Wellington, Taranaki and Hawke's Bay:  
Mandel and Laurance, Wakefield St., Wellington.

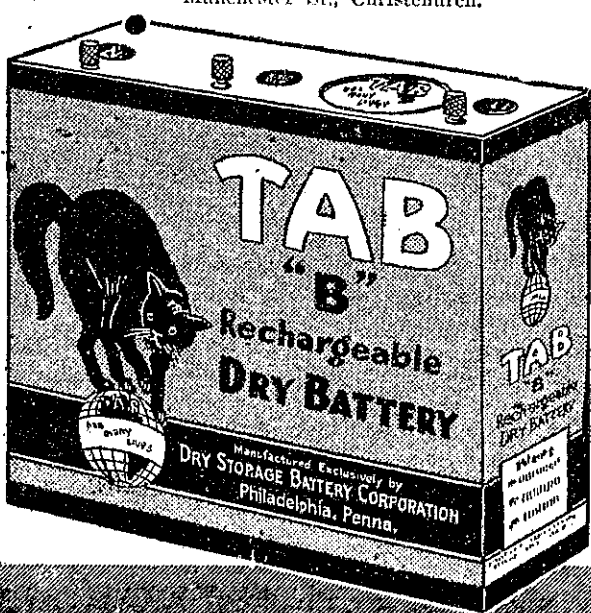
Provincial Agents required for South Island.

New Zealand and South Island Distributors:

The Rodger Importing Company, 159 Manchester St., Christchurch.

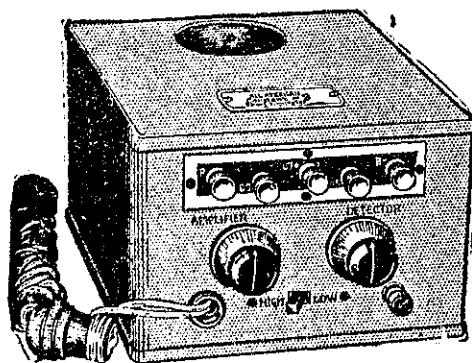
32/6

Postage Extra.  
2/-, 1 Battery.  
3/-, 2 Batteries.



## Eliminate Your "B" Battery Troubles with the DEMAND EXCEEDS SUPPLY

CONSTANT "B" BATTERY ELIMINATORS have proved easily the best power units yet brought into this country, and the demand has always exceeded the supply.



CONSTANT "B" BATTERY ELIMINATOR complete with Raytheon Tube £10-10

## ALL-AMERICAN Constant-B Battery Eliminator

Their remarkable feature is that comparative tests prove that the "CONSTANT 'B'" causes any receiver to deliver GREATLY-INCREASED POWER; in fact, it is safe to say that, compared with any other well-known eliminators or ordinary "B" Batteries the CONSTANT "B" IS EQUAL TO AN ADDITIONAL STAGE OF AMPLIFICATION.

A well-known radio technician reports that this is as true on short-waves as on broadcast-wave receivers. The wide range of available voltages on the taps provided, together with the Hi-lo switch, adapts this Eliminator to almost any make of receiving set from 1 to 10 valves. On the low side of switch it will satisfactorily supply current for sets requiring up to 25 135 volts, of 35 mills at 180 volts. There is nominal .a60 up to 60 mills at 135 volts, or 35 mills at 180 volts. There is no hum, ripple or other extraneous noise with a "CONSTANT 'B'."

Let your local Dealer demonstrate.

Wholesale Distributors:

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### King in Radio

Browning Drake Sets, made up to order.

From £8/5/-.



NEW ZEALAND CIRCUIT SETS ..... From £5  
KING 5-VALVE NEUTRODYNE ..... £36/10/-

Nothing Else to Buy.

CRYSTAL SETS, 10/6 One-valve Amplifier, including Batteries, Loud Speaker and Crystal Set ..... £4/10/6

RADIO HOUSE. PHONE 41-446.

F. J. W. Fear & Co. 63 Willis Street, Wellington



# The Children's Corner

By "ARIEL"

## HAPPY CHILDREN'S HOURS

## XMAS-NEW-YEAR-WEEK PROGRAMMES

Christmas time abounds in surprises, so listen in on Monday.

How about Uncle Jasper taking you to see the magic cave on Tuesday? The animals dance there, and a real jazz band will play for them. Such a frolic as never was known. Come along all little people and enjoy the fun.

On Thursday two friends called Pat and Mike will play for you. They play five different instruments, so there will be quite a medley of music. Uncle Sandy has a wonderful story for you. You will have to wait till Wednesday to hear it.

On Friday Uncle Ernest will be away and a kind friend will be Auntie. It is whispered that a clever little trio of boys may perform for you on this night. Their numbers will be various and interesting. A juvenile musical trio! What a treat, kiddies!

On Saturday (New Year's Eve) an entertainment is being provided by the pupils of Miss Gwen. Shepherd. Choruses, duets, solos, monologues. Oh, lucky little people. Don't forget to "listen in." Aunt Gwen, too, will be there to tell you her Christmas experiences.

## A GREAT SURPRISE

There is one boy who will this Christmas be supplied with an answer to the question "What's in a name?" He is a lonely little chap living on a lighthouse, and he wrote to Uncle Leo, of IYA. And Uncle Leo replied. The boy, no doubt, got his message and was perfectly delighted; but he will be more pleased and surprised still when the Christmas mail boat arrives. For, listening in on Auckland that night was a man whose name is the same as that of the boy at the lighthouse, and he rang up Uncle Leo to tell him that he would send the boy a Christmas present.

The Rev. Lionel B. Fletcher, one of the Uncles at IYA, is at present under the care of a doctor, who has ordered him to have a spell, owing to overwork. Mr. Fletcher, however, insists on carrying on his radio work for the children. "I just love it," he says emphatically and enthusiastically. So do his nephews and pieces.

## A TRICK TO TRY ON YOUR FRIENDS.

On a piece of paper write ALL O. When they have guessed everything they can think of, say, "Oh, don't bother about it any more. It's nothing after all!"

## MY FATHER'S A GARDENER.

In each of these sentences is a word which tells something a gardener does. The letters spelling the words are in correct order:—

1. A spark may start a fire and ignite a whole forest.
2. Take this lock to the town and ask for a key to fit it.
3. He tripped at the top and so went head over heels down the steps.
4. The 5.30 was a through train, but it stops now at Birri.
5. Look at that poor wee dog. He must be lost.
6. I shall go to Idaho early next year.
7. Let us beg a thermos flask from Aunt Kate for the journey.

Answers.—1 Dog. 2 Rake. 3 Sow. 4 Water. 5 Weed. 6 Hoe. 7 Gather.

## A RIDDIE-ME-REE.

My first is in seaweed and also in sea. My second's in honey but never in bee. My third is in heather but not in ling. My fourth's not in feather—you'll find it in wing. My fifth is in melon but not in peach. My sixth is in pebble but not in beach. My whole is a fellow brought in by the sea. To be caught in a net and boiled for your tea.

Answer.—Shrimp.

## WHAT AM I?

I am in the middle of England and am also in Ireland, Scotland and Wales. I am always found in battles, brawls, and blunders, but never in peace and quietness, yet I have something to do with the lamb as well as the lion. Without me you could not have pleasure or play, balls or balloons, lads or lassies, or laughter. I have twenty-five brothers and sisters, and am so thin that I take up very little room in the family.

Answer.—The letter "I."

## THE LAST STRAW.

The parish visitor found the small boy, who had always worn his father's old suits cut down, crying bitterly. "What's the matter, my boy?" she asked. "Father's been and shaved his face," the boy sobbed in reply, "and I don't want to wear red whiskers."

## ANSWER TO WHO AM I?

Bec R  
are R  
oh O  
tea T  
h H  
(h) e R  
are R  
Bec B  
eye I  
ell L  
ell L

## THE LITTLE BUFFALO.

Once upon a time there was a little buffalo who lived with his mother and father in a water-hole. Alfred was the little buffalo's name. He was a good little buffalo, clean and tidy in his habits and not at all greedy—for a buffalo. He always did what his mother told him at once, and he always said "sir" to his father's friends.

One day Alfred was out for a walk in the wood when he saw an enormous snake that was just going to strike an unfortunate panther at the moment when the panther was getting ready for his dinner. The panther had chosen for his dinner a large kind of rat. Now the rat had at that moment seized hold of a magpie by the tail, and was preventing the magpie from swallowing a spider which had a fine fat fly in his grasp.

"Oh, dear," said Alfred. "I wonder what I ought to do. I'm sure mother wouldn't like me to let that snake kill that panther. And yet she told me only yesterday not to interrupt people at mealtimes. I don't know what to do. I think I'd better run back and ask."

So he ran back home and told his mother that he had seen a poor fly being eaten by a poor spider that was being eaten by a poor magpie that was being eaten by a poor rat that was going to be eaten by a poor panther that was in danger of being swallowed by a horrid great python snake. What should a poor little buffalo do about it?

"Think for yourself," said Alfred's mother.

But when Alfred got back to the place there was nothing there but a very thick python snake more than half asleep.

# Our Mail Bag

## The Anglican Proposal.

Sir,—We gladly accept your invitation to accept any misreading of your previous article. We will adopt your categorical method in our reply, using your numbering.

(1) Although your article of November 18 did not mention our association by name, it was taken by the general public as a direct attack upon our association, as is quite evident from the number of letters we received from all parts of the Dominion, from members of the Church of England who were very concerned with what was generally understood to be the attitude of the Radio Broadcasting Company of New Zealand. It was this that led us to see the chairman of the company on the matter and to write to the managing director, and to send our protest to your paper.

(2) It is quite true that you do not in actual words describe the Anglicans as "a small percentage of the minority," etc., yet your reference is taken by Anglican readers as applying to them, for you go on to say "only a small percentage . . . would be concerned with any particular service." The members of the Church of England (and perhaps the Roman Catholics) are practically the only listeners who are concerned with any particular service. The Anglicans certainly are concerned about not being able to have their own service and are, we know, prepared to provide it every Sunday. We quite recognise that those who are not members of the old national Church cannot understand our love for prayer book services.

(3) We regret that we did not use the word "imply" instead of "state" in our protest. We evidently misread this paragraph. The words "If their own station were on the air" could apparently be taken in more than one way. The trend of your article was to alarm the public by causing them to believe that what is done in other large cities, such as Sydney and Melbourne, cannot be done in the smaller cities of New Zealand.

(4) The Radio Broadcasting Company and the Anglican Broadcasting Association quite frankly understand each others position, and we think we quite fairly set it out in our protest.

(5) You accuse us of the common failing of assuming that Auckland is New Zealand. Of course, living in the Queen City we cannot be unconscious of the fact that Auckland is the number one district and contains over one-third of the whole of the population of this Dominion. In connection with this paragraph we would like to point out that our booklet, from which you quote is issued to members of the Church of England and embodies extracts from purely church reports concerning the religious outlook of the Church of England members alone. We have no intention of entering upon a theological or denominational controversy, and the general public are not likely to take seriously your contention that the teaching of the Church of England Catechism to Church of England children scattered over the Dominion, and the regular provision of Church of England services for Church of England people, who dislike services other than the old national prayer book services, is a wild propagandist movement which will stir up dissent and religious strife. In other places the Roman Catholic Church is doing for its adherents just what we now propose doing for the Church of England people of this Dominion. No one listens to these Roman Catholic services and instructions to their young unless they wish to, and such stations have caused no religious strife. When our station is on the air no one who does not belong to the Church of England need listen to us; a flip of the dial and we are gone.

If we have unduly misread or attacked your article of November 18 we are sorry; we simply treated it as we found the general public treating it, and we thank you for so courteously publishing our protest and for giving us this further opportunity of clearing the air.—Yours faithfully, CECIL A. B. WATSON, President.

H. M. SMYTH,

Hon. Gen. Sec. pro tem.

We accept the admission of our correspondents that they misread our article on several points.—[Editor.]

## Australian Stations.

"J.B." (Blenheim).—The atmospheric conditions for several weeks past have rendered long-distance reception remarkably weak. The Australian stations have suffered considerably, and the other station is also adversely handicapped. We do not think your valves are at fault.

## Log of 125 Stations.

A. P. Morrison (Brooklyn).—Since writing you last, I have been successful in logging a great number more, which might be of interest to other listeners of the number of S.W. stations which can be logged. I would be very glad if any listener could give me the call sign of a station operating in South Africa on about 40 metres. I heard this station operating on Monday morning between 1.3 a.m. and 2 a.m. A musical programme was received which was equal to the strength of RIN. On his announcing I could get South Africa, but his call I could not get. It sounded like 2AE or 2AM, and also would like to know if a China station is operating on 32 metres between 4 and 5 a.m. on most mornings in the week. The new stations heard are:—2AQ, 5AH, 2BH, 3BP, 2NO, 2AJ, 1AI, 2HW, 2BA, 2AV, 2HB, 7NW, 5GC, 7NE, 7CW, 6AG, 7ZW, 6AR, 2RB, 5IAI, 4GD, 4QR, 3WA, 7ZL, 2WW, 2AB, 2BC, 2BY. With the list of stations I sent you in before makes my list now 81 S.W. stations, in all, counting the stations I have received on the higher wave band my total for five years as a listener is 125 stations.

# Mainly About Construction

(BY "MEGOHM")

(Continued from Page 12.)

## ABOUT CATS' WHISKERS

### CUTTING THE POINT.

With the ordinary galena crystal, the nature of the wire which is used as the cat's-whisker makes practically no difference at all in the resulting reception, providing the wire is made from some non-corrodible metal or alloy. There is no need to go to the expense of platinum or gold cat's-whiskers, when you can get such articles made out of non-corrodible alloy for a fraction of the price.

Silver, although it does not oxidise in the common sense of the term, rapidly acquires a film of black silver sulphide on its surface when it is exposed to gas fumes and to the smoke-laden atmospheres of industrial cities, and as silver sulphides is only a poor rectifier, the reception falls off in consequence. Silver, therefore, is not an ideal metal for cat's-whisker work, although, of course, it will afford very satisfactory results when used in a perfectly bright condition.

If you use an ordinary copper or brass cat's-whisker, it is an excellent practice to occasionally snip off the extreme end of the whisker with a pair of scissors. In fact, in many cases this simple operation alone is sufficient to cause a considerable improvement in reception which was gradually becoming poor in quality and in signal strength.

If you use carborundum as a crystal rectifier, see that it has a silvery or light bluish-grey appearance. All other specimens of this compound usually give unsatisfactory results. To get the utmost out of your crystal or crystal combination, always make the final crystal adjustment with the set detuned. Then re-tune the circuit, and then compare the result which you get.

## GENUINE APPRECIATION.

Lower Hutt.—On more than one occasion, after reading the remarks of some of your "Radio Record" correspondents against 2YA programmes, I have felt that I should write to say how they are appreciated by others. It is our pleasure to invite friends to "listen-in," and the remarks generally are that the programmes are very good, especially the Symons-Ellwood Short Trio.

What has prompted me to write now is the excellence of last Sunday night's programme from the studio. It is a long time since we have had a programme in keeping with Sunday, and, on behalf of my "listening-in" friends and myself, I write to say that this programme was appreciated very much, and it is hoped you will receive sufficient encouragement to carry on.

with that obtained by making the final adjustment of the crystal with the set fully tuned.

If you want to break a crystal, rest a small penknife blade on its straightest surface, and exactly parallel to its straightest edge. Then tap the blade once or twice very lightly with a small hammer. The crystal will then break cleanly into two pieces, and with a minimum of waste.

## Next Week — "Crystal Receiver Construction"

## ANSWERS TO CORRESPONDENTS

A.N.J. (Dunedin).—(1) No need to take condenser plates out if you put fewer turns on coil. Number of plates now in would be required to find how many to take out for given value. (2) For 24 diam. secondary coil use 70 turns. Average tickler turns, 16. (3) Certainly there is a big difference between close and space-wound coils. (4) For turns on 2½ primary you will have to experiment to suit the R.F. value. If you want voltage let me know what valves you will use. Why not keep to specifications, and build a set that will give good service, unless you are using parts already on hand?

G.A. (Wanganui).—If you find the set unsatisfactory, the originators of the circuit will be able to help you.

A.B.C. (Christchurch) asks the following:—"In what character does the human body (e.g., hand to hand) act in a radio circuit, and at what approximate value (i.e., in electrical units)?" The earth-capacity value of the human body appears to be what is required. The electrostatic capacity of the earth, considered as a sphere of conducting material, works out at 72,100,000 of a farad; that is, 720 microfarads, so that the capacity of a human body would be a proportionate fraction of this amount.

W.H.P. (near Cambridge) has completed the Browning-Drake, and says: "Commenting on the whole set, now working perfectly satisfactorily, I must say that it is the best thing I have struck in receivers during my five years' radio experimenting."

"Browning-Drake" (Stratford).—The crackle, "something like static," can be caused by a dry B battery. The short-wave converter now being described will suit you well. It works splendidly with the Browning-Drake amplifier.

## FOR OLD BOYS AND YOUNG BOYS "THE BOY'S WIRELESS BOOK"

OR WIRELESS IN SIMPLE LANGUAGE, Price 4/6. Posted 4/10 Just the Gift HE would appreciate.

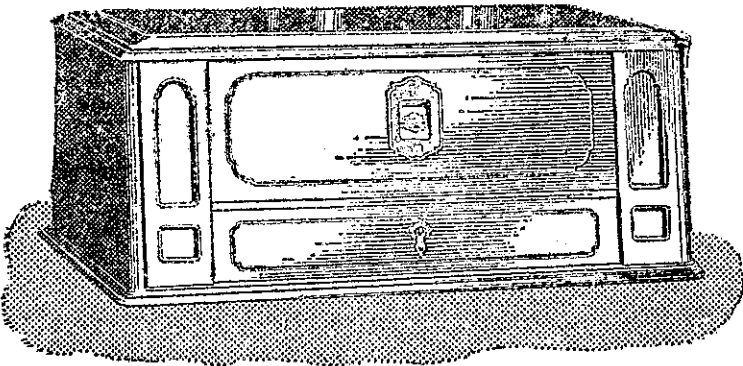
CRYSTAL SETS from 8/6 AMPLIFIERS, DETECTORS, PHONES, ACCESSORIES AND ALL EQUIPMENT.

Arrange for a free Demonstration of the New CROSLY BANDBOX from

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CROSLY SALES AND SERVICE. 95 WILLIS STREET Phone 45-865 WELLINGTON SETS BUILT TO ORDER.

Premier Tully



## COUNTERPHASE 6 AND 8 RECEIVER

Admitted the BEST

Installed recently for Commercial use by the leading N.Z. Newspaper Offices, including:—

CHRISTCHURCH "STAR" OFFICE. CHRISTCHURCH "SUN" OFFICE. AUCKLAND "STAR" OFFICE. AUCKLAND "SUN" OFFICE.

The BEST WAS REQUIRED—

BREMER TULLY WAS INSTALLED! "THE WORLD'S BEST"

Sole Canterbury Agents:

J. I. SMAIL

The Pioneer Radio Firm CAREY'S BUILDINGS.

COLOMBO STREET, CHRISTCHURCH.

# BRITISH

A few comments—extracted from the letters of satisfied clients: "We have now installed loud-speakers in all the wards: Doctors' Matrons' and Nurses' residence (in all eight loud-speakers) and we have to decrease the volume on Australian stations."

"I can tune in Farmer's free of Wellington, and I live within one and a quarter miles of 2YA."

"There are nine different makes of American sets here, and whilst some can equal my set as to getting various stations, none can equal mine when it is a question of wonderful reproduction."

These comments refer to the famous "ELSTREE SIX." When you are told "British sets are not suitable for New Zealand conditions" let us tell you a few more facts about British parts.

HARTLE and GRAY

QUEEN and CUSTOMS STREETS AUCKLAND.

For British parts and British Sets.

# Speeding the Departing Year

## Special Programmes

### CARNIVAL AT AUCKLAND.

From all parts of New Zealand visitors are flocking to Auckland for a week of carnival. Specially attractive programmes are scheduled from 1YA for next week, and in addition there will be extra sessions catering fully for all sporting tastes. The station will be "on the air" at 8 a.m. from Monday to Friday, and special racing broadcasts will allow thousands who are unable to be present, to enjoy the Ellerslie races.

### From all Stations

### NEW YEAR'S EVE.

Broadcasting will make memorable the passing of 1927, and the advent of 1928. Special programmes have been prepared, and the stations will be going strongly when Father Time once more inverts his sand glass. All the glad some noise associated with "ringing out the old" will be put "on the air," and listeners over the seas will hear how New Zealanders welcome in the New Year in New Zealand.



AUCKLAND is the Mecca of thousands of holiday-makers during the festive season, and already the town is thronged with people who have come from far and near to enjoy the week of Carnival which is about to commence. In Auckland from Christmas till New Year there is something for everybody. Sports meetings, theatres, races and trots, are but a few of these attractions, the star items of course being the Auckland Racing Club's meeting at Ellerslie and the Auckland Trotting Club's meeting.

Thousands of people will flock to the racecourse on the four days of racing and trotting next week, but there will be many more thousands who cannot be present. To these the joys of the meeting will be brought near by 1YA which is making very complete broadcasts of all the sporting fixtures.

### DISAPPOINTMENT FOR LISTENERS.

It was the intention of the Broadcasting Company to give a detailed description of the whole of the races, both gallops and trots, but unfortunately, so far, the trotting authorities have not given their consent to the proposal. The company still hopes, however, that lovers of the sport throughout the Dominion will be enabled to enjoy a description of the trots as well as one of the gallops.

Throughout the week of carnival station 1YA will be on the air morning, afternoon and evening, in much the same way as 3YA was during the recent Carnival Week in Christchurch, when receiving sets were so hard at work that batteries could not stand the demands made on them. Those who are staying in Auckland and are not well aware of the varied nature of the entertainment provided in and around the city during the week, will find the broadcasts invaluable.

### STAR ITEMS FOR EVENINGS.

The first session of the day will commence at 8 a.m., and in addition to much valuable information relative to the events of the day, the state of the roads, etc., there will be special entertainment items. The racing broadcasts will, of course, be the piece de resistance for those who cannot personally be present at the sporting gatherings and these will commence promptly at 11 a.m., from which time each day, a very full report of the whole gathering will be broadcast. Listeners in will be able, through the running description of the various races, to visualise the actual performances, and for those who have not actually attended the Ellerslie racecourse, the plan on this page will be of use. With this before them, they will be able to see the exact positions of the horses as described by the announcer, and they too can join in the excitement of a fine finish.

Those who have already heard the very fine racing broadcasts put "on the air," will realise that entertainment of no mean nature will be available throughout the week.

Special programmes have been arranged for the evenings, it being recognised that the occasion warranted something out of the ordinary. A very distinctive feature of the week will be the first appearance of the new quartets who will thereafter be regularly "on the air." These quartets, a description of which is given elsewhere in this issue, will be able to provide most outstanding entertainment. Their appearance next week marks a very definite step forward in the programme features of 1YA.

### "RING OUT THE OLD"

The closing year, which has been so fruitful as far as broadcasting improvement is concerned, will be fittingly farewelled from all four stations, while the glad some welcome of the New Year, with its wealth of hopes, will be rung "over the air." Listeners from one end of the Dominion to the other, and indeed, those who, though far removed from our shores, yet cherish tender memories of their home country, will be able to hear the galaxy of fun which invariably heralds the New Year. This will be a long night at all stations. From 1YA

can have its full fling of pleasure and dance will follow dance so rapidly as to satisfy the hardest of spirits.

### RELAY OF WATCHNIGHT SERVICE.

From station 2YA a diversified programme concluding with a relay of watchnight service from St. Andrew's Presbyterian church has been prepared. In other directions also, the programme will be one that will present a special appeal to listeners. The Renshaw quartet will present a number of items from the well-known musical success "Dorothy," so popular a few years ago. The concerted work of this fine quartet cannot fail to be of interest, especially the item "You Swear to Be Good and True," the music of which is written in one of those haunting waltz refrains which cling so strongly and which invariably make a genuine appeal to all. The principal ballads are "With Such a Dainty Maid," to be sung by Mr. Renshaw, and "Queen of My Heart," that ever fresh ballad, which will be rendered by Mr. Thomas C. Wood.

Sparkling variety items of a nature fitting to the occasion, will be given by Mr. Doug Stark who, in addition to rendering a couple of those typically Lauder sketches which have made the comedian famous, will be heard in other items that will appeal especially to the Caledonian palate.

Other notable items that evening, on the lighter side, will be a humorous monologue by Mr. Walpole, "Radio on the Air We Breathe," and Hawaiian selections by Messrs. Berthold and Bent. For the benefit of those who want to "trip the light fantastic," jazz music will be relayed till 11.15 p.m., at which hour the station will switch over to the watchnight service, which in itself will be a feature presenting a strong appeal to thousands of listeners.

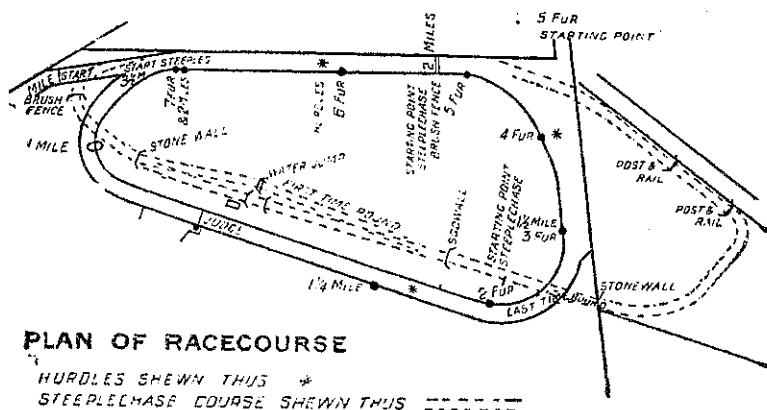
### IN THE CATHEDRAL CITY.

A programme suitable to the occasion will be presented from Christchurch, brightness being the most prominent feature of the evening's entertainment. Miss Lucy Cowan will make a special elocutionary effort for the occasion, and Miss Elaine Moody and party will be heard in dainty Hawaiian melodies. Humour and catchy songs at the piano will be provided by Mr. Jack Lockhart. The instrumental trio will be heard in a variety of bright selections while Mr. E. G. Peak will give a coster sketch with song and patter.

From 11.30 p.m. until well past midnight 3YA's audience will be taken to Cathedral Square, there to listen to the crowd welcoming in the New Year. The chimes of the Anglican Cathedral will be broadcast for the first time.

### AT 4YA.

A very attractive programme has been arranged from 4YA for New Year's Eve, a number of "stars" contributing items that should prove of exceptional interest.



PLAN OF RACECOURSE

HURDLES SHOWN THUS  
STEEPLECHASE COURSE SHOWN THUS

the first portion of the entertainment will consist of a relay of the Municipal Organ Recital by Mr. Maughan Barnett. Later in the evening there will be a programme of dance music, the old year closing with the ringing of chimes and the street noises as the magic hour of midnight draws near, and heralds the approach of another year. Something in the nature of a mystery is included in 1YA's programme that evening, for a humorous turn has been promised from the studio, the nature of which has not yet been divulged. Two dance orchestras, the Click Clack, and Dixieland are being relayed this evening, so there will be no intervals. Youth

Hundreds of thousands of pounds are spent in New Zealand in Christmas gifts.

### MAKE THIS A RADIO CHRISTMAS!

Give the kiddies a wireless set—the most wonderful gift of all the ages.

If you have a multivalve set, buy a crystal set for the youngsters. There are many hours when you are not at home to operate your big set, and the youngsters miss a lot of broadcasting thereby.

Let Santa Claus bring a radio set. A good crystal set, complete, may be purchased for 30s. If you are too far from the city to operate a crystal set buy a one-valve set for the kiddies.

### THE ONE VALVE SET.

A one-valve set with a good aerial will give headphone reception in any portion of New Zealand from New Zealand stations. Owing to the invention of dull-emitter valves you can operate a set solely on dry batteries. This means no recharging of batteries. A one-valve set complete may be purchased for about 28s and upwards. Better still, get a two-valve dry-battery set complete for £11 10s.

### MULTIVALVES AND THEIR USES.

Multivalve receiving sets with all accessories complete can be purchased from about £30 and upwards. These sets, providing you have a good aerial and "earth," will bring in the Australian stations on your loudspeaker. What a wonderful gift for the whole family.

### RADIO, THE MARVEL.

Your listener's license costs only 10s. for the four months up to March 31 next—the end of the Government financial year. You can then renew your license for a whole year at a cost of

## With Dealer and Customer

### Co-operate and Get the Best Results

This new section aims at bringing dealer and customer into closer contact with each other. Written by a keen and successful listener, closely in touch with the dealers, it shows the buyer how to get value for his money, and the dealer how to handle his lines to the best advantage. "Service" is necessarily the keynote of successful radio business.

30s. Country dwellers will find a multivalve receiving set the most enjoyable Christmas gift that money can buy. News of the world, superb bands and orchestras, great instrumentalists and singers, attractive lectures, addresses by notable people, sporting events described while in progress, are all brought right into your far-away home. Radio, the marvel of all time!

### POINTS IN SELLING

The writer saw a big city trader's window the other day with the above slogan written on a dainty little card hidden away in the furthest back corner. His shop was empty of customers.

In contrast to the above another more enterprising trading concern has run a huge calico sign the full length of the window drawing striking attention of the public to the desirable nature of a radio set as a Christmas gift. This shop is always busy; can you wonder at it?

### USEFUL SUGGESTIONS.

Here are just a few pointers drawn by New York "Radio Retailing" from the experience of five previous years in Christmas radio selling. Speed and convenience for the purchaser are the

underlying note in all of them. The gift of a radio set may be the most important and expensive to be made by any one person, but there are a dozen or more other small things to be purchased also. And only a certain amount of time can be devoted to radio by the prospective purchaser. Make it easy for the customer to understand just what he is buying, exactly how much it costs, and help him to decide quickly. The shop that does this will certainly get more than its fair share of the Christmas radio business.

### AVOIDING TECHNICAL TERMS

At Christmas time above all others avoid technical sales discussions. Talk to the customer in terms of what the radio set will bring to him in the way of home entertainment. Tell him that radio is not a gift for a day but for years to come. Vision to him the joys awaiting the family, the endless fund of entertainment year in and year out. Tell him how radio alone will reflect the music and happiness of the whole Yuletide season. Show him how easy it is to manipulate the modern wireless set, so that a little child can tune it.

### SELLING ACCESSORIES

Thousands of loving aunts and uncles will say this year, "Let's give Johnny

something for his radio set." Prepare a list of suitable accessories at various prices, and realise that you will have to suggest to your customers what they should give. Don't look confused when a timid old lady tells you that she wants to spend £2 or £4 on something for her nephew's radio, and make sure that it can be exchanged for something else if he doesn't like it.

### HELPING ALONG BUSINESS

In the United States it has been found an excellent plan to arrange merchandise in price groups so that the Christmas shopper will not be confused with a multitude of prices when he has definitely fixed in his mind the amount which he wishes to spend on a present for a certain friend or relative. Make up a printed list of Christmas suggestions arranged in this same form of price grouping. This list will more than pay for itself in facilitating sales, and it will also very effectively hold the customer if he has to wait for a salesman.

### A NOVEL IDEA

One up-to-date American company enhanced the entire appearance of its store and windows by having a number of its radio sets, consoles as well

as table models, wrapped in white tissue paper and tied with big bows of red ribbon. Neatly printed cards announced that it was prepared to deliver its radio goods similarly attired, if requested to do so. Large white cards, hand lettered, were also available on demand and without charge. These cards were worded "For a Good Boy," "For Mother," and similar Christmas greetings.

### ADEQUATE DISPLAY.

A New York radio company recently stated: "In selling accessories for Christmas we have found that it is a very big help to us indeed to show accessories in our display windows and to have the articles boxed and wrapped very attractively in special holiday fashion. We find that our patrons buy accessories for use as Christmas presents much more readily when they see the gifts arranged very pleasingly and appropriately in Christmas packages."

### MARK YOUR GOODS PLAINLY.

Your windows will be a tremendous help in Christmas selling. Be sure to show every price plainly marked, and make your windows reflect the complete price range of your sets. Suggest that a radio set is a splendid gift in co-operation with other members of the family. Suggest also that the numerous Christmas bonuses that are distributed each year can be used to no better advantage than in the purchase of a radio set. Speed and convenience for your customers is the essence of successful Christmas buying. May it ease for them to buy. Don't let anyone walk out of the shop through being tired of waiting to be attended to.

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