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AND

ELECTRIC HOME JOURNAL

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WS2R

What the New Year holds for RADIO

In this outspoken article the likely features of the 1931 season are critically examined. Some are classed as improvements

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and others are questioned. It is an interview with a gentleman well-known in N.Z. radio circles, who for various reasons wishes to remain unknown.



RIGHT from the onset, let me say I don't know. No one knows; there are some clear indications, but, like the weather, radio is likely to change without taking anyone into its confidence. It has not done so for quite a long while, but there is no foretelling when it is going to do it again.

The year just passed has, more or less, been an uneventful one. It has seen the universal application of the screen-grid valve to the electric set, and this has made a receiver that is as powerful as noise will allow. Here we raise an important point. Can radio progress much further without a sweeping change that will carry in its stride interference of all nature and, of course, static? Manufacturers and engineers are inclined to think not. The modern receiver is sensitive, it will bring in all the noise there is going, it is easy to operate, it has a fairly natural tone, and it can separate stations that are on adjacent frequencies, and unless one takes some care in dialling he is likely to cause distortion through the very simplicity and selectivity of the machine.

SO much for the 1930 instrument. What are they going to do with it to make a 1931 model? There will no doubt be alterations in the design to make it look different—that is one of the essentials of any new models, whether it be motor cars or milking machines. Generally speaking, it seems that there is a great deal of waste space in the modern set, and one of the advances of the new year will be to eliminate much of the waste. This means that the cabinets will be smaller. And probably plainer, for set manufacturers are beginning to realise what furniture manufacturers realised many years ago, that the plainer the article the neater it looks and the more it will be appreciated by the housewife who has to keep it clean. Already there have been some of the new smaller machines on the New Zealand market, and the trade reports that they are taking well. Only a couple of days ago, I was in a wholesale warehouse and could not help remarking that the sets appeared much smaller than they were last time I was there a few months ago. It was then I was told that size was to be one of the trends in 1931.

This idea of smallness can be overdone, as it undoubtedly is with the midget sets. In many, not all, efficiency has been sacrificed in order to preserve smallness. There is a certain amount of space required for components, which, if cramped, must be made less efficient, and this crowding has been carried to extreme in this receiver. Few of the big American manufacturers have brought out these small sets.

In talking about the new sets we must mention the superheterodyne, for according to the reports in the American magazines this is to be a superheterodyne year. Actually the effect this will have upon New Zealand sets is doubtful. Do we want superheterodynes? If so, why? We shall not stop to consider the technical features of the receiver; sufficient to say that it works on an entirely different principle from the usual set, which we chose to call



One of the features of 1931 will be considerable increase in the power or radio broadcast stations. This can be brought about only by an increase in the size of transmitting valves. The one shown in this illustration is the new 200-kilowatt valve to be installed in KDKA. The small valve, third, from the left, is an a.c. screen-grid, while the third from the right is the 250 power valve.

the "t.r.f." or tuned radio frequency. In the super-het. there are only one or two tuned stages—that really means condensers that we have to rotate when a station is desired—whereas in the t.r.f. set there were four or five. If these were not all in line, and it is difficult to keep them so all over the range to be tuned, much of the power of the incoming station or noise cannot be tuned in. With the superheterodyne this difficulty does not occur, and it is consequently a little more sensitive and a great deal more selective. But do we in New Zealand want sets more selective? In America and England, yes; but out here, where there are few stations, no. So there is no point in making our sets more selective, or, for that matter, more sensitive.

But there are other "improvements" that the manufacturers are introducing. One is tone control. In plain language, this provides a means of making your set sound (Concluded on page 2.)

The New Year's Radio Imperfect Reproduction

(Continued from page 1.)

different from the studio presentation or the record. It consists of a device whereby the upper frequencies, those are the things notes of music are made up of, can be cut off. The music is then dull and heavy, with plenty of bass, and without sparkle or interest. "But," I can hear someone asking, "why do the manufacturers put these things on if they only introduce distortion?" For the simple reason that they are asked for, and more than that, are demanded. Someone tried a tone control last year, and the public found that when turned to the bass much of the noise that would otherwise come through the set did not. And so tone controls had to be added by other manufacturers in order to sell their radios. Now many of the sets are coming out with tone controls, while others are coming without them. Like as many other devices, they are excellent if properly used, they can eliminate a great deal of static and power noise, and provide passable reproduction.

Another important advance of the season which is not in the design of the set, but will meet with universal approval, is the American idea of "keeping the set sold." This turned into English means that manufacturers provide means of having experienced technicians to look after the sets and keep them in order once they are installed. This is a very big forward move which all listeners will appreciate. When a set is sold a card is sent by the purchaser to the manufacturer, or, in our case, to his agent, and when the necessity occurs another card from the consumer will bring along the service man.

This, I think, is one of the greatest advances radio has made for a long time. We have constantly advocated some such system, especially for country listeners who have no means of keeping their sets in order and who are more dependent upon them than are any other listeners.

It appears that this system has been in operation in at least U.S.A. for some considerable time, and has had a start here, but it has, with a few exceptions, not been very fully developed.

The Battery Set.

OVERSEAS manufacturers are beginning to realise that there is still a market for the battery set, and that, like the electric set, must be kept sold. Many firms are consequently manufacturing complete lines of receivers from the battery set right up to the a.c. superheterodyne. Some of

Great Public Danger

IN the course of an article on "Quality Reception" in the "Wireless World," Mr. John Harmon makes this interesting comment: "... We may say that unimpaired reproduction (of music) from 50 to 5000 cycles per second gives excellent, well-nigh perfect results. As the upper limit recedes to 4000, treble notes become thin and colourless, like boys' voices accompanied by flutes. As the lower limit rises to 200, low notes, though still of considerable intensity, are, strangely altered, emasculated and reedy. It is estimated that half the wireless sets in use today transmit only between 250 and 3500; their owners are probably satisfied with this performance once their ears have become accustomed to it.

"Therein lies a great public danger. Since speech and music tend increasingly to reach our ears by mechanical channels rather than directly, there is a prospect that toleration of imperfect reproduction may lead to decay in the standard of pronunciation, and lack of appreciation of musical quality. If any reader doubts this statement, let him reckon up the number of minutes each day during which he hears speech and music directly and free from a noisy background, and compare it with the period spent in listening to the telephone, loud-speaker, gramophone, and talkies."

these are finding their way out to New Zealand. Naturally they will not be inexpensive, for their design has meant considerable research on the part of the factory engineers, in some cases more so than the electric sets, as there are certain economies that must be observed. The screen-grid valve will be used with probably the new two-volt American valves, but there is a market in this country for a specially designed battery set. The valves are already here. It remains for some enterprising local manufacturer to design such a set and market it. Of course one might already be in existence, but I haven't heard of it, and I know the market fairly well. Some good ones were manufactured a year or so back, but these manufacturers seem to have all gone "a.c." and the country listener has either to use an old model or one of the American ones that are fairly heavy on batteries. Generally speaking, the outbacks people do not want old models at £5 or less—they want a modern set, and are prepared to pay for it.

A Giant Valve

For New American Transmitter

OF the innovations introduced into the new transmitting station of KDKA, which is being built near Saxonburg, Philadelphia, is the new 200-kilowatt valve, a photograph of which appears on page 1. This valve is not merely an enlarged edition of a smaller one, but is thoroughly engineered as a valve of larger size and of a distinctly novel design. The new valve, called the AW220, is 72 inches in height, has a diameter of eight inches, and weighs 60 pounds.

In its design engineers found one of their greatest problems to be that of cooling the grid. An idea of the problem

An
Elocution Recital
Will be presented
from 2YA, Wellington,
on Tuesday,
January 6, by
J. F. Montague
The noted Auckland
radio entertainer.

which was eventually overcome may be obtained from the statement that approximately five tons of cooling water must be passed through the water jacket each hour it is in operation. This water cools the valve in the same manner as water in a motor-car cools the motor. One hour's operation of the valve would heat enough water to supply the domestic requirements of the average home for several weeks.

While AW-220 valves will only be used to generate high frequency power for radio stations, an appreciation of the power capacity of one of these valves can perhaps best be gained by a comparison with familiar household devices. For example, a similar amount of power of the kind distributed commercially would operate simultaneously four hundred toasters or flat irons. This would also be the equivalent of power required to light one thousand average homes of five to six rooms, or the energy to operate two modern street cars.

Honouring the Dead

RECENTLY an American Legion ceremony was held in Washington, and in order to secure "atmosphere" it was arranged that bugle calls were to be blown at a certain time before the tomb of the Unknown Soldier in Paris. The bugle calls were transmitted by short-wave across the Atlantic, picked up, and relayed all over the States as part of the ceremony.

Faraday's Diary

To be Published Shortly

AMONG the treasures of the learned societies of London none is more remarkable than the Diary of Faraday, which the Royal Institution has had in its keeping for sixty years. It is a most interesting record, not only of the great scientist's experiments, but of his opinions on all manner of things, including love, which he regarded (before his marriage) as "a nuisance to everybody but the parties concerned."

Extracts from the diaries have been known, but now the Royal Institution is preparing to publish them in five or about eight volumes. The first two or three will be ready for the celebration in September next year of Faraday's famous discovery on August 29, 1831, in the laboratory in Albemarle Street (where his apparatus is still preserved), of electro-magnetic induction.

"No other experiment in physical science," says the Royal Institution in announcing the celebration, "has been more fruitful in benefit for mankind." When Faraday made his simple experiment with two coils of wire wound on opposite sides of an iron ring he hit upon a secret which was the beginning of all that has been done since in the utilisation of electricity for power and light.

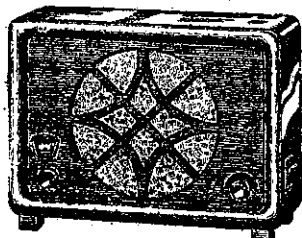
The centenary celebrations will bring to London electrical engineers and delegates of scientific bodies from all over the world. The British Association, which meets next year, is timing its meeting to coincide with the Faraday celebrations.

Topical Notes

(By "Switch.")

BEGINNERS usually have little regard for the efficiency of their "earth," so long as they have a satisfactory aerial. The former is as important as the latter. "Switch" found it necessary recently to explain the position to a Wellington listener who had lately purchased a rather elaborate all-electric receiving set, which, obviously, was not "pulling its weight." His earth wire was fastened to a piece of galvanised pipe driven into very dry clay. The pipe was moved a few feet to a garden bed with deep black soil, and after a couple of buckets of water had been poured around the pipe reception volume was nearly double.

"TEN O'CLOCK" (Pahiatua) writes to "Switch" expressing appreciation of the fine selection of gramophone items put on the air by 2YA, Wellington. He says: "I am omnivorous in my taste for music, and I like the pack well shuffled. Classical music, in homeopathic doses, is always acceptable to many folk, and so long as jazz is tuneful I can find pleasure in listening to it. The electrically-recorded gramophone items have changed the public attitude toward the broadcasting of records, and, like many others, I prefer the records to the living performers."



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Air Travel in the Desert

IHAVE recently completed 6000 miles of travel by aeroplane and flying-boat. This was over one of the most important air routes in the world, namely, that from Egypt to India by way of Palestine, the Arabian desert, Mesopotamia, and Persia; then back again over the same route from India to Egypt and across the Mediterranean by flying-boat from Alexandria to Greece.

What impressed me perhaps most of all in this wonderful argosy was the great part that wireless plays in modern aviation. Indeed, without an efficient wireless service it is difficult to see how this vitally important Imperial route could be maintained.

Desert Dangers.

THE country flown over is for the most part wild, sparsely inhabited; and although weather conditions are generally good, except during the Indian monsoon—that is, for about two months in the year—sudden storms arise at intervals during most of the year, and are particularly dangerous in the desert. For the wind blows up minute particles of dust, bringing the visibility down to lower than that in a thick fog.

In a real desert dust-storm not only is the wind very strong, but it is sometimes impossible to see more than 30 feet ahead. The dust-clouds rise to an immense height, even as high as 7000 feet.

The big three-engined passenger and mail-carrying aeroplanes have a good "ceiling" or power of rising high into the air; but, even so, 7000 feet puts a great strain upon them, especially when the aeroplane is fully loaded.

Treacherous Storms.

BUT there is a far greater difficulty, and that is in finding the aerodromes and landing when a dust-storm is blowing. It may be quite fine sixty miles away, which is less than an hour's flying distance, but local winds make landing dangerous, and but for wireless the aeroplane could fly into danger without warning.

As the usual journeys between the desert aerodromes are some three hours' duration, without wireless it would be impossible for a machine to leave an aerodrome, say, at Basra, at the head of the Persian Gulf, in perfect weather conditions and without being warned, fly into a duststorm and find it impossible to land at Bagdad.

The importance of wireless, therefore, can be readily understood. If a sudden storm arises the aeroplanes in flight can be warned and directed either to go to a safer landing-place or, if the worst comes to the worst, go back and land at their point of departure.

Radio Warnings.

IHAD three experiences of duststorms during my journeys. The first was in flying from Cairo to Gaza, in Southern Palestine. After crossing the Suez Canal we had to fly over the dread Sinai desert.

The weather was perfect when we left Egypt, but the wind increased be-

In the accompanying article (published in "Modern Wireless") Lt.-Commander J. M. Kenworthy, R.N., M.P., vice-president of the Air League of the British Empire, relates several personal experiences which prove the vital importance of radio to aeroplanes flying over desert routes.

tween the Suez Canal and Gaza, and soon blew up clouds of fine sand. We were able to ascertain, by calling the wireless station at Gaza, that the landing ground there was clear and weather conditions fairly good.

Without wireless we dared not have risked this, and would have had to turn back. As it was, by going out to sea we were able to fly round the edge of the storm, the limits of which were fairly visible from the air. There was a stiff wind over the sea, but no dust. Any wind, short of a gale, if unaccompanied by dust, does not worry the modern flying machine.

The second episode was on the farther stages of the same journey, when we were warned by wireless that the Basra aerodrome was experiencing a

duststorm and landing conditions would be bad. We therefore made Bagdad very comfortably, and stayed there the night instead of trying to make Basra.

The third experience was on the way back, when we were held up a whole day at Basra by a terrific storm in which no aeroplane could live and the visibility was reduced to almost zero. This meant a delay of twenty-four hours, spent very comfortably in a rest-house, but in the knowledge that the moment the weather conditions improved—for the desert storms arise and subside with equal suddenness—we could proceed on our journey.

The passenger-carrying aeroplanes can receive and send wireless messages over considerable distances, and all the landing-places have their own wire-

less stations. It is, therefore, possible to choose one's weather; and the safety of flying in that part of Asia has been increased at least a hundred per cent. by wireless telegraphy.

A Forced Landing.

If an unexpected landing is to be made at an aerodrome after dark, owing to head winds or other causes, the aerodrome station can be warned by radio in time for the lights to be put up and lit on the landing ground to facilitate the descent to earth.

There is another danger in air navigation over Asia Minor, and that is of forced landings in the desert through engine troubles or other mishaps. The route from Palestine to Bagdad lies across a huge expanse of almost uninhabited, flat, sandy wastes.

Supposing a machine were forced to land halfway and was not fitted with wireless. It is doubtful if any of the crew or passengers would get out of it alive.

If repairs could not be effected, and she was unable to resume her flight, they would have to make their journey over a trackless, almost waterless desert, without camels, and would be extremely fortunate if they managed to reach a settlement.

But there is still another danger, and that is from the native inhabitants themselves. For these are the Bedouin, who have never been brought under the control of any civilised Government. They live on their herds of camels, inhabiting low, black tents, are very poor, but are well armed with modern rifles and look upon travellers as a legitimate source of revenue.

Law of the Desert.

THE Law of the Desert is the law of the strong right arm. I heard the true story of a small party of missionaries proceeding by motor-car over part of the desert. A tribe of Bedouin swept down, robbed them of everything they had, even stripping them of their clothes and boots, and leaving them to make their way naked and on foot as best they could to the nearest post.

But if an aeroplane, fitted with wireless, has to land in the desert it can report the fact at once to the nearest aerodrome and a relief 'plane is sent immediately to rescue the passengers and mails. This has happened more than once.

Indeed, so perfect is the organisation that the very moment a 'plane leaves one aerodrome to make another across these wild countries, it reports its position every half-hour, and its track is plotted on charts both at its point of departure and its point of arrival.

If there is silence, if the signals do not come through as expected, if the aeroplane is called up by wireless and does not respond, a relief 'plane is sent up immediately to fly along the track and to find out what has happened.

R.A.F. Avengers.

THIS the inhabitants of the desert have learnt to know quite well, and they think twice of molesting aeroplane travellers who may have come (Concluded on page 28.)

"Old English Song"

A Lecture Recital

by



from
2YA

on
Jan. 5.

Mrs. Daisy Basham

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The New Zealand Radio Record

—AND—

Electric Home Journal

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RADIO PUBLISHING COMPANY OF NEW ZEALAND, LTD.,
P.O. Box 1032, WELLINGTON.

WELLINGTON, FRIDAY, JANUARY 2, 1931.

THE RADIO YEAR.

THE year just closed may be regarded as a very satisfactory one from the radio point of view. The number of licensed listeners at December 31, 1929, was 50,484. Figures for the same date of 1930 are not as yet available, but in view of the fact that at the end of November receiving licenses totalled 59,285, it is a perfectly safe prediction to make that the year's final total will considerably exceed the 60,000 mark. This shows a 20 per cent. increase in the number of licensed listeners through the twelve months, a position upon which congratulations may be extended, both to the trade for their active selling campaigns, and to the Radio Broadcasting Company for its maintenance of a relatively high standard of programme service.

THE expansion in the number of listeners may be credited, first of all, to the steady improvement in the quality of receiving sets and the simplification effected in them. The modern A.C. set is definitely now at the fool-proof stage, capable of giving the listener, ignorant of technicalities as good reception as the old-time instrument gave the enthusiast experienced in handling his set. That simplification has been an important sales factor, and combined with the enthusiasm of the trade has led to the expansion indicated. The economic situation, forcing buyers to secure the best value in the entertainment field, has also played a part; while credit must likewise be given to the programme directors and organisers of the four stations maintained by the Radio Broadcasting Company for the efforts made to give listeners the very best selection from available talent. During the year the Dunedin station was remodelled and brought into line, from the power point of view, with the stations at Christchurch and Auckland. This development was not followed by quite the full expansion expected from the southern centre, but nevertheless has been a factor in the total expansion of licenses.

ALTHOUGH advance has been made during the year, perfection has not been reached. It is not in the nature of any radio broadcasting service, we believe, to achieve absolute perfection, for so long as human nature is what it is there will always be those who

will criticise and desire more of what particularly appeals to themselves. Apart from the programme details there are, however, two or three factors upon which definite views have been expressed. The first lies in the demand of the trade for longer hours of transmission, particularly in regard to daylight hours. The genesis of this demand seems to lie in the desire to demonstrate sets. While quite sympathetic with this desire on the part of the traders, we cannot quite see that listeners in general would derive a benefit commensurate with the actual cost. It is at least problematic in our view whether the money involved would not be spent to better advantage in prolonging evening hours of transmission. Another point of moment is the desire for the abandonment of the silent night at each of the stations. To the country listeners, equipped with powerful sets, capable of reaching any station desired, it is perhaps not so material a point as it is to the city listeners who are equipped to receive only their local station. We confess that we would like to see the position reached of the company being able to abandon the silent night, and we sincerely trust that this will be the next advance made in service to listeners.

IN connection with programmes, the year has seen a rather remarkable decline in criticism of gramophone items. Time was when the barbed shafts of critics were directed toward the gramophone items. The position now is different. The technical advances made in recording, and the great range of high-class artists now available on the disc, have led to gramophone items being among the—if not actually first—most popular items on the programme. That popularity, and the desire of listeners to hear the world's best, have logically led on to the development of a scheme for the complete recordings of suitable overseas programmes. Effort has been made in this field by the Radio Broadcasting Company, and there are already in the Dominion samples of overseas recordings. Trial demonstrations have been given in some trade circles, and once satisfaction is achieved in transmission, listeners will be given this new treat.

ON the position now reached by the service, the outlook for the future is bright. The pioneering work of the Radio Broadcasting Company is at last bearing fruit, and the community is generally realising the necessity of every home being equipped with radio. With the financial strength which inevitably accompanies that position, the way is clear for progressive advancement in the future. It is probably a realisation of that position which has stirred the Postmaster-General to his declarations regarding further improvements of the radio broadcasting service. Whatever the future may hold, however—and into that position we do not wish to go at this moment—it should never be forgotten that definite credit is due the Radio Broadcasting Company for its pioneering work, in which it had to conquer many difficulties and demonstrate the possibilities of radio broadcasting.

Receiving Licenses Nearing 60,000

Grand Total Exceeds this Figure

A RETURN from the Post and Telegraph Department shows the number of all classes of licenses at November 30, 1930, as being 60,792. This represents the largest number of licenses that have yet been taken out in New Zealand and clearly shows that with the improvement of the radio set the decrease in listeners in the summer is less pronounced. The table shows the manner in which the licenses are allocated:—

District.	Receiving.	Dealers.	Trans- mitting and receiving.	Experimental and special.	Free.
Auckland	17,851	301	85	2	98
Canterbury ...	9,859	259	51	—	55
Otago	6,572	178	36	1	35
Wellington ...	24,762	489	101	4	53
	59,044	1,227	273	7	241

GRAND TOTAL: 60,792.

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big events.

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More Burgess
Batteries are sold
in New Zealand
than any other.

Why?

Why?

An Unfortunate Evening

Recent Band Broadcast

THE officials of a broadcasting station generally have to contend with difficulties that the listeners know nothing of. An instance occurred recently at 2YA. The band of the First Wellington Regiment had been engaged for the evening, but a combination of circumstances tended to mar its performance.

Owing to the operations of the new Defence Act, the band had been disbanded, but it made every effort to fulfil its engagement at 2YA. Two of the players, however, could not turn up, and two others who were leaders in their section met with a motor-cycle accident, so that instead of arriving at the studio they were taken to the hospital. The conductor of the band was indisposed that evening and had to arrange for the conductor of another band to take his place. This gentleman was himself unwell and collapsed during the first item. However, he was able to carry on till the end of the programme.

The members of the band were greatly grieved that their last public performance should have been marred, but listeners did not know the difficulties they had to contend with, nor how assiduously the band rehearsed between items and in every way endeavoured to present a programme up to standard.

Open-Air Concerts

Free to the Public

DESIROUS of extending its sphere of usefulness, the Broadcasting Company proposes to make available some of its entertainment resources to the general public. With that end in view it intends, according to a statement made by Mr. A. R. Harris, general manager, to give during the summer months a series of weekly open-air concerts. These entertainments will be provided by the city bands—band concerts being best suited for open-air performances—but vocal artists will also contribute.

An attractive feature of these concerts, as far as the public is concerned, will be that no collection will be taken up, the performances being entirely free to the people. The entertainments would normally be given in the studio and would be exclusively for radio listeners, but the company intends to make them available to the public in general.

Arrangements will be made to relay the concerts, and this expense, together with other expenses attached to broadcasting the entertainment, will be borne by the Broadcasting Company. The performances in the band rondas will be produced in the same manner as are studio concerts, and item will follow item with the precision which is characteristic of a broadcast programme.

The first of these open-air broadcast concerts was given in Woolston Park, Christchurch, by the New Brighton Band last Sunday evening, December 28, after church.

Porirua Radio Installation

Opened on Christmas Day

THE radio equipment installed at the Porirua Mental Hospital as a result of the recent public appeal was officially handed over to the hospital authorities at an appropriate ceremony on Christmas Day.

The equipment is a radio-gramophone combination. Two installations are in "Rautu" Villa, one on the men's side and one on the women's side. Attached to the installation in the men's section are 45 headphones and three loudspeakers, while that in the women's division has 45 headphones and seven loudspeakers. Another installation has been put in the nurses' home, this one containing seven loudspeakers and two headphones. In the "H" cottage, for old people, there is a combination set. The villa known as "Valima" has a separate combination set, with 13 headphones and three loudspeakers. In the "Tiromoana" villa for men there is also a combination set with ten headphones and one loudspeaker.

All the sets are constructed so as to carry additional speakers or headphones. The equipment can pick up all New Zealand A and B stations, all A class Australian stations, while American stations have also been heard. The work already completed has cost about £1280, and arrangements are now being made to put an installation in what is known as the lower buildings and the three adjacent villas.

Opening by Minister.

FROM the studio of 2YA in Featherston St. the voice was heard of the Minister in Charge of Mental Hospitals, Hon. A. J. Stallworthy, who officially declared the installation open. The Minister expressed keen appreciation of the efforts of the honorary organiser of the public appeal, Mr. L. O. Hooker, and thanked those who had subscribed and made the installation of the equipment possible. He wished one and all a "Merry Christmas and a Happy New Year."

"I am very glad to be here this Christmas Day and have the opportunity of expressing to you, one and all, my sincere greetings and goodwill, not only for a happy celebration of Christmas Day itself, but for abounding good fortune during the coming year," said the Inspector-General of Mental Hospitals, Dr. T. G. Gray. "I want to convey to Mr. Hooker, the man who did it, the sincere thanks of all those who are interested in the hospital and to congratulate him on the result of his efforts."

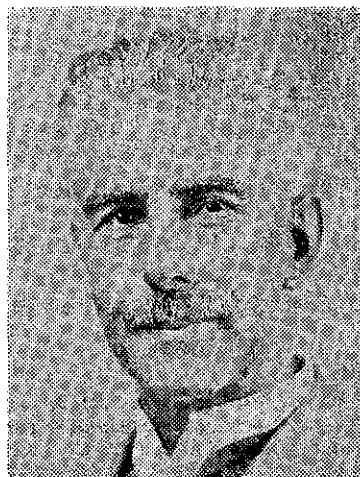
"I may say quite frankly that, in common with many others, I had grave doubts as to whether Mr. Hooker could raise sufficient to have this installation completed by Christmas, and that he has done it is a great tribute to his unselfishness, his determination, his faith in human kindness, and his unquenchable optimism."

A National Service.

"IN these days when pessimism is abroad in the land the man who possesses these qualities and disseminates them to others is doing a national service in raising the morale of the

people, and, in addition to the thanks we give to Mr. Hooker for raising the radio fund, we owe him much for the fine spirit which he radiates around him. It is a great source of comfort in hard times to count our blessings and the hospital has been abundantly blessed in its friends during the past year.

"While thanking Mr. Hooker and those who contributed so handsomely to the radio fund, let us not forget the magnificent gifts from the Rev. Mr. Harding and Mrs. Knight, and that from Messrs. Nimmo and Sons. I take this opportunity of also acknowledging the great labour of love carried



THE HON. A. J. STALLWORTHY.

on by the welfare branch of the Women's National Reserve, who, under the direction of Mrs. Guthrie and Miss Wiltshire, send a splendid hamper to the institution every month. Finally, to Mrs. Fraser and Mrs. McVicar and the other official visitors, we owe a great debt. They are not only official visitors, but warm-hearted friends of the hospital. To all these I say thank you, and to each and everyone here I extend my very real wishes for Christmas and New Year."

Generous Subscribers.

MR. HOOKER said that his work in conjunction with the appeal had been a pleasure. He related how he came to be interested in the work and take up the appeal. One day he called to see a friend in the hospital, and it struck him that a radio installation would not only be a good medicine but bring them into touch with the outside world. Mr. Hooker referred to the generous spirit of the subscribers in Hawke's Bay, Wellington, and Taranaki. He particularly wanted to thank the school children for the way they had responded to the appeal. When the installation was completed it was intended to go in for a small broadcasting station for the use of the hospital. People who came out to give

concerts could then be heard through speakers in the wards without the patients having to squeeze into the one hall to hear the items. He wanted to thank Dr. Gray and his department for the help he had received from them.

Mr. W. G. Carpenter, who frequently speaks "over the air" as "Uncle George," said he believed that the installation would be the means of helping the patients on the road to recovery very considerably. He understood that the installation of the equipment was one of the finest things accomplished in recent years.

In accepting the equipment, the medical superintendent, Dr. J. U. Williams, thanked Mr. Hooker and all those who had contributed. The nurses, patients, staff in general, and himself, had unanimously agreed to call the loud-speaker in the women's day room the "Hooker Speaker," and the one in the men's day room the "Hawera Speaker."

Cheers were then given for Mr. Hooker and Dr. Williams.

The visitors were entertained at afternoon tea.

American Rebroadcast of King's Speech

WRITING to Mr. R. Leslie Jones, Mr. Fred. Easter, Cincinnati, Ohio, under date November 16, said the broadcast of the opening of the Indian Conference was rebroadcast by a nation-wide "hook-up" of U.S.A. stations. The King's Speech and that of the Prime Minister was heard direct from GSSW. The rebroadcast by WLW was particularly good. The voices were very clear indeed.

Bob Duncan, known as the "Oregon Wildcat," caused a commotion over his political talks, and as a result the Federal Radio Commission in America put the station at Portland, Oregon, off the air. The writer goes on to say he noted that the New Zealand Government were to take control of broadcasting in New Zealand, and expressed the opinion that it would be better also if the United States Government controlled broadcasting in U.S.A. There would be a more equal distribution of stations in U.S.A. if Government controlled broadcasting. There would not be so many stations, and the correspondent stated he favoured a license fee for listeners.

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4YA Musical and Dramatic Committee

Future Programmes Discussed

AT the meeting of the 4YA Musical and Dramatic Committee, held on December 11, there were present:—Mr. Max Scherek (Society of Professional Musicians of Otago), Mr. A. Cook (Dunedin Burns Club), Mr. S. Osborne (Dunedin Shakespeare Club), Mr. H. O. McFarlane (Dunedin Orchestral Society), Mr. J. G. Butler (Royal Dunedin Male Choir), Mr. J. Mackenzie (Station Director). Mr. Max Scherek was voted to the chair, in the absence of Mr. Desmoulin.

The committee discussed recent studio concerts and relays, also programme arrangements. Among other things discussed were suggestions made for a "New Zealand Evening," a "Maori Evening" and a "Martin Evening."

World-wide 'Sponsored' Programmes

American Short-wave Scheme

A SCHEME to broadcast American "sponsored" programmes throughout the world is being considered by the Federal Radio Commission. Applications have been received from the General Electric and Westinghouse Companies for the removal of the experimental status of the short-wave auxiliaries of WGY (Schenectady) and KDKA (Pittsburgh) to enable these stations to transmit the ordinary commercial programmes for world consumption.

If the claims are allowed, arrangements will be set on foot whereby these trade propaganda transmissions may be picked up in foreign countries and relayed by local stations.

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Christmas Over the Radio

Midnight Broadcasts

THE Y.A. stations gave excellent service over the Christmas period. Their long hours and the high standard of fare can call for nothing less than heartiest congratulations. On Christmas Eve all were on the air until after midnight with appropriate programmes, and as soon as the clocks chimed twelve at each centre the cheery voices of the announcers were heard in Christmas greetings. Most of them continued well after the midnight hour, and 2YA, which was relaying the beautiful service from Saint Gerard's Church, was on the air till after 12.30 p.m.

The Australian stations, with the exception of the two Melbourne stations, 3LO and 3AR, and 4QG, Brisbane, went off the air at 10.30 p.m. The three mentioned above kept on the air with dance music and, like the New Zealand stations, broadcast the chiming of the clock at midnight. Following that, 3LO at least kept on the air for some time with well selected Christmas carols.

On Christmas Day all New Zealand stations were on the air before midday. 2YA had a Children's Service at 11 a.m., and this, children all over New Zealand must have enjoyed considerably, for it was really delightful.

At 3 p.m. the Minister for Health, the Hon. Stallworthy, in a neat speech, declared the radio installation at Porirua open. He paid tribute to the work of the organiser of the campaign, Mr. Hooker, and said that before long the remaining portions of the installation would be ready for use. He passed glowing comment on the benefit of radio in institutions such as these, where people are confined for the illness that most needs the happy atmosphere created by bright entertainment.

The 2YA announcer conveyed greetings to the inmates, and expressed the hope that they would derive great benefit through their contact with, not only the New Zealand centres, but the great outside world.

Radio Nationalisation Rum-running By Radio

Demand by French Listeners

THE French Railways Radio Club—the largest club of its kind in France—now possess 10,000 members, many of whom were present at the annual festival recently celebrated in Paris.

A striking appeal for speedy State action in placing French broadcasting affairs on a satisfactory footing was made by the President in the course of his address. He declared that French listeners were demanding "a body representing not merely commercial concerns, but the general interests of the nation."

Post office authorities support this view, but the majority of commercial interests in France oppose this policy of radio nationalisation on the grounds that it would obstruct subsequent radio progress.

Fourteen Million Receivers

IT has been recently estimated that the total number of receiving sets in operation in the United States at the present time, exceeds 14,000,000. This shows an increase of approximately 400,000 over a similar estimate made last year.

ARE YOU A NICOTINE SLAVE?

You can answer this. You know Nicotine is killing you slowly and surely. Why not realise your defects and remedy them now? We can give you full advice free. Home Welfare Pty., A.M.P. Bldgs., 36 R. Hunter Street, Wellington.

Transmitting Plant Seized

RECENTLY American Federal agents seized a 250-watt short-wave radio plant which was being operated by rum-runners to keep in touch with the liquor fleet. This raid was the fourth assault on the radio plants of an extensive rum-running organisation which is said to do about £3,000,000 of business a year.

The discovery was made by the use of a new directional device, about which there is considerable secrecy. The radio equipment was located in the bar of an hotel, while in an upstairs room was found a heap of partially charred paper—the remains of a code book, evidently destroyed just prior to the departure. In various other parts of the room were charts of the Atlantic Ocean, bearing crosses and smudges, presumably the locations of ships.

In some way the operators learned of the impending raid, and they all escaped.

Excellent Combination To Play from 3YA Shortly

IT is about two years since the orchestra of the Christchurch Working Men's Club was formed, the event corresponding with the advent of the "talkies," which resulted in the dismissal of so many instrumental musicians.

It was formed under the baton of Mr. A. Heath, who was conductor of the Theatre Royal Orchestra, and who is himself a fine cornet player. The orchestra has a membership of 24, all the soloists being professional players. Among these are: Messrs. Alston (bass), Tankard (violin), Fred Fox (cornet), Tom Amos (flute), and Fred Woolledge (clarinet).

The orchestra is to play for 3YA on Wednesday, January 7, and for this occasion a splendid programme has been arranged.

Children's Sessions

AT 2YA.

Monday, January 5.—Uncle Jeff will take all Radioland to the Zoo to-night. Kipling Lady and Maori Legend Lady have both been invited. Cousin Jeanne will sing a lullaby called "Bed-time at the Zoo."

Tuesday.—Uncle Toby and Jumbo have a special programme for to-night. Cousins Eva and Edna are coming to sing. There will be stories, trips and fun.

Thursday.—June Elvy is bringing her six-year-old pupils, who will recite. Uncle George and Big Brother Jack will welcome them to the studio.

Friday.—Uncle Jim and our Story Book Lady will be with us to-night. Cousin Kathleen has prepared a delightful chorus to be given by some small children.

Saturday.—Two little dialogues called "The Magic Lamp," and "A Place for Everything" will be given to-night. Cousin Eileen will sing Nursery Rhymes, and Spot will help her.

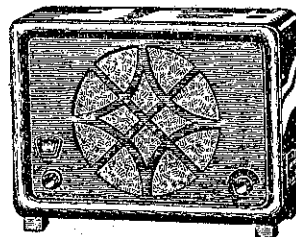
Sunday.—The Rev. J. Hubbard will conduct the children's service this evening, and the choir work will be done by the children's choir from the Cambridge Terrace Congregational Church.

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Breaking into the Amateur Game

The Operator's Exam.

THIS article, in continuation of the series on "Amateur Transmitting," deals with the Amateur Operators' Examination. Before a license to transmit is issued, the applicant must obtain a Government Amateur Operators' Certificate, which is given after the examination has been passed. This is the most important part of getting a station on the air, but there is nothing very difficult about it. For the average listener, with little or no knowledge of the Morse code, there is a certain amount of patience required for the passing of the examination. It usually takes a person with average spare time about two months to prepare for it, but it is an interesting, pleasant occupation, and, as already mentioned, will reveal to the listener another side of radio which before was but a meaningless jumble. Hence in any case it is well worth while to learn the code, for besides being used to a large extent by amateurs, it is the basis of communication between ship, shore and many commercial stations.

Learning Morse.

THE examination is divided into two sections—Morse and a written paper. The Morse part, in which candidates have the greater difficulty, will be dealt with first. In this a speed of ten words per minute, both sending and receiving, is required, each word being assumed to have five letters. This is a comparatively slow speed, but in the actual examination mistakes are not allowed, so it is safer to attain a speed of 13 or 14 words per minute before sitting. The test is given for about three or four minutes, the Morse being sent by a P. and T. officer through headphones, and in plain language, though numerals may be included. It must be copied down in pencil exactly as sent, while the sending required is simply a reversal of this process. Receiving Morse is generally considered by the beginner to be much harder than sending, but as we shall see later the standard of an operator is determined largely by his style of sending, or "fist." It is best, however, to break well into receiving before starting on sending.

Now the first step in learning the code (a diagram of which is shown), is to memorize the corresponding letters and symbols thoroughly. It is essential to do this by learning the symbols as they actually sound in practice—learn R as "dit-darr-dit," not "dot-dash-dot," and understand "dit-darr" as A, etc. This must be practised and the alphabet and figures mastered so that their sounds can be repeated quickly in order. Then have them asked in any order, until each can be given in the "dit-darr" fashion without any hesitation.

After this point it is only a matter of practice to gain speed in receiving, and a start may be made on sending. For this a key and buzzer with a small battery, must be procured. As the key may be used later on in a transmitter, it should be of sound construction, and its spring tension and contacts adjusted for easiest sending. The knob of the key should not be grasped, but just pressed firmly by the first and second

fingers with a wrist action. The fingers must not leave the knob, and the muscles should be loose for steady, regular sending. The difference between a good and a bad sender depends mainly on the even spacing of the dots, dashes, and letters. A dot is simply a tap of the key knob, while the length of the dash is equal to three dots, and the time between parts of the same letter equals one dot.

This spacing should be kept almost invariable, the speed of the morse being varied by the length of the spaces left between letters. The alphabet and numerals should be sounded on the buzzer at a slow even rate, but no speeding should be attempted until more practice has been had in receiving well-sent signals. A learner's "fist" will thus be considerably bettered.

It is a good plan for two persons to learn the code together, so that each may give the other this receiving practice. The morse should be sent slightly faster than it can be received, and the letters, not the dots and dashes, should be written down. Any amount of practice may be obtained by listening to amateurs on the 75-85 metre band, as special slow morse transmissions for beginners are given regularly. At other times a slow but even sender may be chosen to copy.

in legible writing at a little above this speed, no trouble should be had in passing the code examination, even though nervousness is experienced, as is often the case.

The Written Examination.

HAVING dealt with the harder part of the examination, we now come to the second part, the written paper. The requirements here are not highly technical. All that is necessary is a knowledge of simple short-wave transmitters and receivers, elementary electrical principles, and the Government amateur radio regulations. Usually the paper consists of about 15 questions, divided into 4 on the regulations and 11 on the rest. Of these a choice of 10 is given, 3 on the regulations and 7 on the rest. The time allowed is 3 hours, and the pass standard required about 50 per cent. A great deal of information which is necessary for the examination is contained in the "Radio Listener's Guide," and if this has been read thoroughly, especially the glossary, the exam. will be much easier.

A candidate should be able to draw a circuit diagram of the complete transmitter, including the power supply he expects to use. This is a very frequent

ductive coupling feed-back from the plate to the grid, and those using capacitive coupling. The elementary theory of how the valve oscillates should thus be known. Further descriptions of transmitting circuits and parts will be given in the next article.

Typical Questions.

A QUESTION often asked is how the power input to the valve would be measured. The input, which is measured in watts, is simply the voltage on the plate of the valve (corresponding to the voltage of the "B" battery in a receiver) multiplied by the current in amperes drawn by the plate. These would be measured by means of a voltmeter connected across the plate power supply, and a milliammeter in the positive lead to the plate. Thus, if the plate voltage is 200 and the current 20 milliamperes, the input would be (200 x .02) equal 4 watts. In practice, there is no necessity for these meters in a low-powered transmitter, however. The plate dissipation of the valve is the input it will radiate in the form of heat without overheating, while the efficiency of the valve is the amount of radio-frequency output given as a percentage of the input. Candidates may be asked for simple definitions such as these.

Another likely question is one on modulation, such as "Explain with a diagram the Heising method of modulation." In a Morse valve transmitter using pure direct current power supply, the continuous wave sent out is unmodulated, and is simply started and stopped by means of the Morse key. For telephony, however, this wave, now known as the carrier wave, is on the air continuously, and is modulated by voice or music. Thus, its amplitude, or the energy it contains, is varied in accordance with changes in sound waves in the form of variations in the current input or output of the transmitter.

The latter variations are reproduced in the receiver and converted back into sound waves. The commonest method of modulating is the Heising, or constant current, method. With this, besides the valve that generates the carrier wave, there is another one of equal size, the modulator valve, and the plates of these two are fed through an iron-core choke from a common power supply, as shown in Fig. 1. This choke keeps the total plate current and the voltage across both valves invariable. A microphone is connected through a transformer between the grid and filament of the modulator valve, and when spoken into varies the grid voltage of this valve at speech frequency, thus causing changes in the plate current. As the sum of the plate currents drawn by both valves is invariable, the current of the oscillator must become smaller as that of the modulator becomes greater, or greater as the modulator current becomes smaller, with corresponding variations in the input.

Thus as the speech varies the grid voltage and plate current of the modulator, the input to the oscillator is inversely varied, which correspondingly affects its output. Also, as explained, the carrier wave will thus be modulated by the speech. Heising and similar

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Conductor - - MR. A. IREMONGER.

Even though the speed permits of only a letter here and there being written down at first, soon calls and short words will come, and later with practice the missing letters will disappear. Perseverance is the keynote in learning the code. Speed is bound to come with practice.

If now the learner returns to sending, he should have a good idea of spacing, and will probably realise the value of a decent "fist." He should aim at slow, well-spaced sending rather than fast, jerky sending, readability coming before speed. To obtain an idea of relative speeds, clock tests may be made with any 20 words of five letters each, and these sent in just two minutes, the speed being then ten words per minute. If the learner becomes accustomed to copying morse

question, and an easy one, as will be shown in the next article. The circuit of the transmitter is much simpler than that of the average receiver, while every amateur constructor is familiar with the two chief types of power supply—batteries and valve, or chemical rectified alternating current (R.A.C.). The parts used in a transmitter are much the same as those in a receiver, and their use and operation should be known, as such questions as "Explain the use of the radio-frequency choke, and the grid-leak, in a transmitter," are often asked.

In the majority of transmitters there is a single valve which is simply an oscillator. Also, as with regenerative receivers, there are two general types of transmitting circuits—those using in-

forms are known as plate modulation systems, but there is also the grid system, which is, however, not widely used. In this, variations in the bias on the grid of the oscillator tube are caused by speech through a microphone, thus correspondingly fluctuating the plate current and causing modulation.

The percentage of modulation of a transmitter is the percentage that the modulation strength is of the carrier strength, as heard in a receiver. In other words it is the variation in the amplitude of the wave, caused by modulation, as compared with the amplitude of the carrier wave.

It follows that a carrier wave may also be modulated by using an alternating or pulsating direct current power supply to the oscillator valve, since the input is rapidly changed with the alternating voltage, with similar fluctuations in the output. This modulation evolves in a harsh, chopped-up signal, which is hard to read on Morse, and the voltage variation of the input creates much interference by causing the frequency of the wave to vary, and side-band frequencies to be set up. That is why pure direct current power supply is necessary for an oscillator to give a smooth, musical signal of a single frequency, and questions upon this subject are often set in the examination, e.g., "What are the disadvantages of using A.C. power supply to a transmitter?" or "What is the best type of current for supply to a transmitter, and why?"

Measurement of Frequency.

IT is advisable to know something about the frequency measurement, a common question being: "How would you measure the frequency of a transmitter by means of an absorption wavemeter?" The two chief types of wavemeters for this purpose are the heterodyne and the absorption types, the former being explained in the "Listeners' Guide." The absorption wavemeter, shown in Fig. II, consists of a coil tuned by a calibrated variable condenser, with a torch bulb in the circuit. When the meter is placed near the transmitter, the coil absorbs the greatest amount of r.f. energy when the two circuits are in resonance, or tuned to the same wavelength. This energy absorbed causes the bulb to light up, so that if the condenser is adjusted until the bulb lights up most, the wavemeter and transmitter are tuned to the same wavelength, which is shown on the calibrated condenser scale.

A frequent question is: "Describe two meters for the measurement of radio-frequency current." Such meters measure by the heating effect of the r.f. current, and the types are the hot-wire meter, described in the "Guide," and the thermo-couple meter. The

latter (Fig. III) makes use of the principle that when two dissimilar metals are heated an E.M.F. is produced between them. The current to be measured is run through a small resistance AB, which heats a junction, C, of two such dissimilar metals, D and E, and the resultant E.M.F. is taken to an ordinary moving-coil meter which shows a reading dependent on the heat produced by the R.F. current.

Besides such questions as already mentioned, there are usually two or three on the elementary electrical principles, which are in the "Guide," or

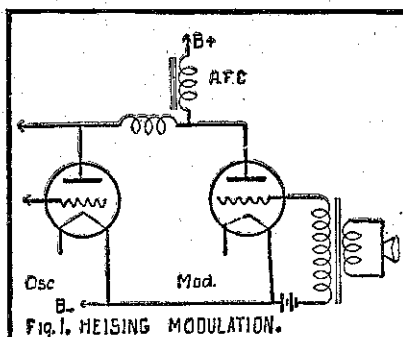


Fig. 1. HEISING MODULATION.

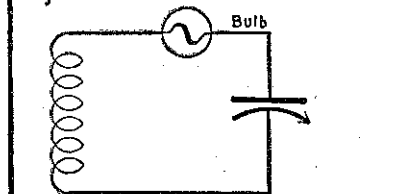


Fig. 2. ABSORPTION WAVEMETER.

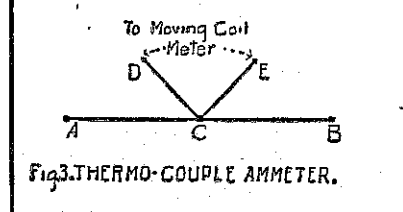


Fig. 3. THERMO-COUPLE AMMETER.

have appeared in the "Record." They may be on Ohm's Law, calculation of resistances and capacities, in series and parallel, voltage drop through resistances, magnetic fields of bar magnets, inductance, and the fundamental theory of valves. They are all quite simple, highly technical answers not being required.

Amateur Radio Regulations.

The only remaining part of the exam. is that on the Amateur Radio Regulations. Though this is important, it is the easiest part, for it is simply a matter of learning the few laws given below, which constitute the chief regulations.

Firstly, there are the wavebands on which amateurs are allowed to transmit. They are as follow:—

Kilocycles.	Metres.
1715 to 2000	= 150 to 175
3500 to 4000	= 75 to 85.7
7000 to 7300	= 41.1 to 42.9
14000 to 14400	= 20.83 to 21.43
28000 to 30000	= 10 to 10.71

Special permission is required to operate on the bands below 80 metres, the latter being the only band in which telephony is allowed, in New Zealand.

An amateur must execute the usual declaration of secrecy, and must not commit to writing any public correspondence he may hear. If he should hear a distress signal (SOS) and has reason to believe it has not been intercepted by a ship or shore station, he must take steps to advise the nearest Government station, or, failing this, a responsible P. and T. officer. Amateurs must be able to recognise the interference warning signal sent by a Government station, AAAAQRN (here following a number indicating minutes) and must close down for the number of minutes indicated. The use of waves other than continuous waves, such as damped waves (spark transmission), is prohibited for amateurs, and all transmitters must be inductively coupled to the antenna.

Power supply to the transmitter must not be alternating current, and the transmitter should be adjusted and tuned at such times as to cause a minimum of interference. A log record, showing the hours during which the station is in operation, and a note of any special signal received, must be kept, while the station must not be used in any way to send or receive messages calculated to cause a loss of revenue to the P. and T. Department. The operator shall not transmit anything of a seditious, profane, obscene, libellous or offensive nature, or any communication of a false or misleading character, in particular a false SOS signal. All stations shall be open to inspection by a radio inspector, and the station license must be displayed in a prominent position.

Examples of questions on these regulations are: "What are the amateur bands in metres and kilocycles, and what are their conditions of use?" or "What are the classes of matter an amateur is not allowed to transmit?" or "If you heard an SOS signal and had reason to believe it had not been intercepted, what steps would you take?"

Finally, the fee for sitting the examination is five shillings, and an application form may be obtained through a post office. Should any further information pertaining to the examination be required it will be supplied on application addressed to the writer at the "Record" office. In the next article there will be a description and discussion of a low-powered transmitter suitable for the beginner.

A Radio-equipped Railway Coach

For Use in Emergencies

THE recent earthquake in Southern Italy caused considerable attention to be drawn to the wireless coach of the Italian State Railways. This is a special eight-wheel coach, which comprises not only a complete telegraph and telephone equipment but also a wireless installation consisting of three transmitters and three receivers.

This coach was specially built and equipped with radio for the purpose of being placed at railway points in or near zones which have been disturbed by events such as earthquakes, inundations, lava eruptions, and so on. At such places it is essential to re-establish telegraphic and telephonic communications, which, as a rule, are interrupted, with a view to maintaining contact with the central authorities.

The wireless equipment has been provided for use in those cases where the telegraph or telephone lines have been destroyed or otherwise put out of working order over a large zone near the railway. The apparatus provided comprises three transmitters and three receivers. One complete station (transmitter and receiver) remains permanently in position in the coach, while the other two form separate flying stations, which can be transported considerable distances and still keep in touch with the coach station.

The fixed transmitter is a 50-watt short-wave set, while the receiver covers a range of wavelengths of from 12 to 100 metres. Both transmitter and receiver utilise the metallic frame of the carriage and permanent way rails as an earth, the aerial being supported on two telescopic lattice masts about 20 feet in height and 40 feet apart. These masts are hinged so that they can be placed horizontally along the roof when the coach is travelling.

The two flying stations are similarly equipped, except that the aerial of each is supported by a tower about 30 feet high. To the top of this is attached one end of the aerial wire, while the other end is usually attached to a tree or convenient high point. The counterpoise, in the form of a wire, is generally stretched out on the ground. The power supply is obtained from light motor-generator sets.

Fortunately, since it has been available the wireless coach has had no call to duty until the recent disaster in the form of an earthquake which befell Southern Italy. The coach was then sent, attached to a first-aid train, to the affected zone, and was placed at a station which formed the junction of four mountain railway lines. There, in conjunction with the two flying stations, which were disposed more to the south, it did excellent work, communicating successfully with the central authorities as far north as Rome, a distance of about 200 miles.

BATTERY RADIO RECEIVER

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Will receive all the usual Overseas Broadcast Stations, and the World's recognized Shortwave Stations at good loudspeaker strength. Complete with Philips Valves and Speaker, Burgess "C" and "B" Batteries and Accumulator, all ready to attach to aerial.

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A New Era in Marine Communication

Wireless Telephony at Sea

WITH the introduction of wireless telephony at sea, marine wireless communication has made its most important advance since Marconi first installed telegraph apparatus on board ship more than thirty years ago.

The use of wireless telegraphy eliminated the isolation of ships at sea by providing a means of immediate communication between ships and from ship to shore, an innovation which has revolutionised the conditions of sea travel during the present century. The wireless telephone does more. It places the marine traveller in direct personal communication with his friends and business associates ashore, or on other vessels suitably equipped, as easily as though he and they were at home or in their offices. It opens a new era in marine communication, as surely as the telephone ashore opened a new era in domestic and business communication. The rapid extension of the present telephone facilities at sea, both in the number of ships fitted with the new radio telephone and the number of countries with which they are linked, is a future certainty.

Within the next few years it is probable that passengers on any of the principal passenger liners will be in a position to "ring up" any telephone subscriber in practically any country in the world, while the ship is steaming on any of the seven seas.

A Convincing Demonstration.

THE remarkable equality of the telephone service already available through the new equipment was de-

monstrated to thousands of wireless listeners in the British Isles recently, when a conversation between a passenger of the White Star liner *Homeric* in mid-Atlantic and Mr. Harold Nicolson, in the B.B.C. studios at Savoy Hill, London, was broadcast. Every word of the Homeric passenger's vivid description of the sea scene before him and of the day's happenings on board was as clearly heard as the questions and comments of Mr. Nicolson speaking into the microphone in London. Particularly noticeable was the clarity of the speech from mid-Atlantic and the absence of "background"—that annoying hum or crackling which sometimes ruins long-distance telephony even by land-line.

The telephone equipment of the *Homeric*, the first liner to be so equipped for commercial purposes, is identical in its main features with the apparatus used by the Marchese Marconi on his famous yacht *Elettra*. In his recent experiments Marconi has spoken from the Mediterranean to Sydney, London, Bombay, Montreal, New York, Buenos Aires and Rio de Janeiro. Thus it may be seen that the installation is capable of a world-wide range. Wireless experts who have heard conversations carried on by its means have been amazed at the clarity and steadiness achieved, and have declared it to be far ahead of

any telephony hitherto carried on from a ship at sea.

Though great interest centres on the use of telephony on such ships as the *Homeric*, telephony at sea is not likely to be restricted to larger passenger vessels. It is already widely used on small vessels on which no skilled operator is carried, the Marconi Company having designed and constructed self-contained transmitting and receiving equipments which require no more experienced manipulation than the ordinary domestic telephone.

Use by Whaling Fleets.

SETS of this type have been used for the past two or three seasons by whaling fleets in the Antarctic. They are normally operated by the harpoon-gunnery and have proved invaluable in the process of hunting, by making it possible for whole fleets to co-operate in the search for whales, and at the same time to keep in touch with the floating factories and the bases ashore.

Prior to the introduction of wireless telephony in this arduous industry, it sometimes happened that one whaling vessel would discover a whole school of whales while other sought in vain. Nowadays a telephone call across the southern seas concentrates all the fleet immediately on the site of the rich hunting area, with the result that record seasons have been attained. By

means of a simple code system, special hunting information may be restricted to the vessels of a particular fleet, while general information or calls for assistance can be broadcast.

Another important use for wireless telephony at sea was recently introduced when the new White Star liner *Britannic* was equipped with radio telephone equipment for the period of her trials, to enable the technical experts and observers on board to keep in touch with the builders' yards, where similar equipment was installed. So valuable did this innovation prove in passing immediate information regarding progress between the ship on trial in the Clyde Estuary and the yards in Belfast, that the builders, as soon as the trials were completed, arranged for similar facilities on board the steamer *Innisfallen*, which they had just completed.

Future Importance.

IT is evident, therefore, that the wireless telephone is destined to play an important part in the future of all departments of marine communication, especially having regard to the general increase in "the international telephone habit" following the development of overseas telephone services. The efficiency of the installations is demonstrated by their proved utility under all conditions of working, and their reliability by the fact that the design of the equipment employed is based

(Concluded on page 10.)



THE 2YA ORCHESTRINA.

Under the baton of Signor A. P. Truda, they will present from 2YA on January 5th instrumental selections in keeping with Mrs. Daisy Basham's lecture-recital on "Old English Song."

791.4052 N532 135079

Radio Among the Boers

Relieves Isolation

RADIO has come as a great boon to the Boer farmers in South Africa, and although programmes broadcast by South African stations are generally inferior to European programmes, they are very much appreciated. Until recently the South African farmer was in the habit of going to bed at 8 o'clock, but nowadays nearly every homestead has its receiving set, and the bedtime hour has been considerably advanced.

The young people have found in radio a new entertainment, and on occasional evenings many of them ride miles on horseback to a rough-and-ready shack where they can dance to the strains of a broadcast band. In these regions, however, the importance of radio is not confined to recreation, for the farmers living in districts where they often receive their newspapers at least three days late, can now keep in regular touch with the news of the day, weather forecasts, and market prices.

The Philips short-wave station PCJ, in Holland, their mother country, is one of the most popular among these listeners.

Loud-speaker in Court

IN many law courts which were built before acoustics were understood it is very difficult for witnesses to be heard clearly. In several South African courts the difficulty has been solved by loudspeaker equipment. The witness speaks into a microphone, and by means of the speakers can be heard clearly over the whole of the court room. Most of the installations have been carried out by Philips Lamps.

(Concluded from page 9.)

upon the results of more than ten years' successful research in marine wireless telephony.

It was, in fact, as long ago as 1920 that the Marconi Company demonstrated the possibilities of ship-to-shore telephony when delegates to the Imperial Press Conference of that year, which was held in Canada, were enabled to speak from the s.s. *Victorian* in mid-Atlantic to England and Canada. This demonstration was followed by a number of further experiments which may be said to have culminated in the perfected apparatus used for the commercial marine telephone services of to-day.

News and Views of the D.X. CLUB

Addresses Wanted

W. FARMER (Tauhoa). KMMJ, M. M. Johnston Coy., Clay Center, Nebraska. For information concerning short-wave aeriels, see our issue dated December 19. Yes, your log is quite a good one. Why not enter for the D.X. Competition?

Stations Identified

T. J. L. T. (Wellington). You heard 2NC, Newcastle, a new Australian B class station. See D.X. Topics for particulars.

Identification Wanted

MELBOURNE station on approximately 220 metres (1360 k.c.) heard on December 20 at approximately 11.40 p.m. Items heard were: (1) "Light Cavalry Overture," (2) fox-trot, title missed, (3) "The Song of the Dawn." The announcer spoke very quickly, but I made call out as 3KL or 3KD. Not sure of either.—R.J.R. (Palmerston North).

D.X. Topics

Short-wave News.

I RECENTLY received verification from W0XF, W2XAF, and W2XAD, and also the schedule of VK3ME. In addition to the regular broadcasts there are irregular schedules of important events. "You may determine these times from the programme schedule which we transmit at 5.30 p.m. EST. each day using both voice and telegraph code on the 2XAF transmitter." Address, "General Electric Co., 1 River Rd., Schenectady, New York." VK3ME Melbourne operates on a wavelength of 31.55m. each Saturday night from 8 p.m. until 9.30 p.m. E.A.T. W0XF Chicago is operated on an experimental license granted by the Fed-

eral Radio Commission. It was constructed to relay the programmes of WENR to foreign countries. The transmitter is located at the site of WENR, which is 23 miles south-west of Chicago. Power output 5 kw., frequency 6020 kc. They are also authorised to use the frequencies of 11,800 and 20,500 kc. Separate transmitters will be built to operate on these frequencies at a later date. Reports as to tone, quality and fading would be appreciated. Address, "Great Lakes Broadcasting Company, 20 North Wacker Drive, Chi-

Cicely Audibert

an accomplished Soprano who has recently returned from Australia, will present the following numbers from 3YA on Tuesday, Jan. 8

"Ombra Leggiera" (Meyerbeer)

"The Dracary Steppe" (Gresch-aninov)

"Robin's Song" (White)

cago, Ill." J.C. (New Plymouth). (Note: The schedules you enclose appeared in last week's issue.—Ed.)

Come On, DXers!

I RECENTLY received verification from KGO, KTM, and KPO. What is wrong with the DX Club? Buck up, DXers, and send in your news. There was only a column last week.—"Squeak" (Christchurch).

Recent American Loggings.

I HAVE logged several more Americans in the last month or so, but they are too numerous to give a complete list. Among them, however, are the New York stations WABC, WBOQ, and WABW. The 100-watt stations heard are KPYO, Texas, and KMJ, KGFJ, and KXO, in California. WORD, Chicago, is now off the air. The Vancouver station CKMO, power 50 watts, is on the air every night of the week excepting Thursday and Sunday, until 9.30 p.m. New Zealand summer time. Frequency 730 k.m. (410 metres). Another Vancouver station, CKMX, on the same frequency, with 100 watts power, broadcasts on Thursday and Sunday nights until 9 p.m. N.Z.S.T. I have not heard the latter. I was listening to the New York stations on the same night as Mr. Blucher. I tuned in five minutes later and reception was per-

fectly clear and no fading until 8.15 p.m. I believe they were testing for synchronisation. — "Kauspanka" (Hawke's Bay).

A New Australian B Class.

ON December 19, a good night for reception here, I picked up the official opening of 2NC, Newcastle, on approximately 241 metres (1245 k.c.). They were relaying to 2FC and 4QG and came through with good volume. Should they be on the air the same night as 2YB there will be trouble, for they are both on almost the same frequency. I also logged the same night on approximately 281 metres (1120 k.c.) a new station under the call sign of 1ZR, Auckland. He gave no information except that he was testing, and closed down at 11.30 p.m. He comes in on 2UW, Sydney's, frequency.—B.W. (Stratford).

Australian Reception.

RECEPTION of the Australian B class stations has been excellent during the last few days. The new station at Moss Vale has been heard recently. Wavelength 248 metres (1210 k.c.), not 210 metres as given in a recent issue. 3GL, 2AY, 2XN, and 6ML were heard on the 17th before 10 p.m. 7LA, Launceston, was also heard on December 19 at 10.20 p.m. on 273 metres (1100 k.c.). The new New Zealand B station 1ZR, Lewis Eady's, Auckland, 275 metres (1090 k.c.), and 2ZU, A. R. C. Claridge, Dannevirke, on 272 metres (1100 k.c.), came in well on December 20, 1ZE being on until after 10.30 p.m.—R.J.R. (Palmerston North).

The New Gisborne Station.

ON the 7th I logged KLO, Ogden, Utah, 1490 k.c. (214.2m.), and KDYL, Salt Lake City, 1290 k.c. (232.4m.), logged on 16th. Judging by reception of 2ZJ, Gisborne, on the 15th he promises to be one of the best B class as far as Masterton is concerned. He was received with plenty of volume and quality was excellent. (C. V. Blucher: Glad I am not forgotten. Kind regards.)—Guy C. Holmes (Masterton).

New New Zealand B Class Stations.

STATION 2ZJ is owned and operated by Mr. Cliff Hands, 217 Gladstone Road, Gisborne. Sunday, noon to 1.30 p.m., occasionally; Monday, Friday, Saturday, 2.30 p.m. to 4.30 p.m.; Tuesday, noon to 1.30 p.m.; Wednesday, noon to 1.30 p.m., 7.30 to 10.30 p.m.; Thursday, silent. Circuit push-pull T.P.T.G.; power 20 watts output; 1154 k.c. (260 metres). There is also a new station on the air, 1ZR, owned and operated by Lewis Eady and son, 190 Queen Street, Auckland. He is operating on a wavelength of 265m. (1160 k.c.), approximately.—"Shunter" (Mercer).

Power of KTM.

"KIA ORA" (Frankton Junction): "Yankee" (N.P.) is correct in his statement concerning the power of KTM. This station broadcasts with a power of 500 watts on a frequency

VALUE ! VALUE !

Now we offer the "COURIER" All-Electric 3-Valve (including rectifier) Receiver, with built-in Wave Trap and Pick-up Jacks.

COMPLETE WITH BABY GRAND SPEAKER
ONLY £14 COMPLETE

G. G. MACQUARRIE LTD.

120 WILLIS STREET, WELLINGTON

Mullard
THE MASTER VALVE

The only Valve with the wonderful P.M. Filament. Gives longer life — more power — greater volume.

of 780 k.c. (384 metres). Pickwick Broadcasting Corp., Los Angeles, California.—"Cabbage" (Gisborne).

Recent Loggings.

ON 18th I logged the new Australian A station, 2NC, Newcastle. Considering conditions are not good for Australian reception 2NC came in with good volume (R9), and promises to be an excellent station for winter reception. Fading was bad in the early part of their programme, but later conditions improved, when some fine items were heard, played by the Newcastle Steelworks Band and Newcastle Symphony Orchestra. 2FC and 3AR were relaying the concert, and later 2NC relayed 2FC's dance music.

This is probably the station "Jacon-seck" (Christchurch) heard, as dial positions correspond. I also logged 2AY, Albury, N.S.W., the same night. Are the Australian stations as listed in the "Radio Record" recently rated on input or output?

On December 10 at 11.45 p.m. I logged an American station giving call WTAM. On looking up Eastern American time I was surprised to see that it was 6.45 a.m. there. I held them until 12.15 a.m. (when they faded out), just long enough to secure enough items for verification. I again logged them on the 16th at 11.30 p.m., when the announcer stated that they were commencing their day's programme.

I recently received a card from 2ZJ. My report was the first of two hundred which he had received up to December 11. Transmission hours are as "Dynamic" (Lower Hutt) states, with the exception of Sunday and Monday, when they are 12 to 1.30 p.m. (occasionally) and 2.30 p.m. to 4.30 p.m. respectively. 2ZJ comes in at tremendous volume here, being my best New Zealand B station. What's the matter with D.X.-ers! Are you all too busy preparing your D.X. cup logs to send in news to the page (beg pardon!) column?—"Jaka" (Wellington).

Indistinct Call Signs.

I PICKED up 1ZR and 2NC a few nights ago, and I logged a new station, 3KZ, Melbourne, in 220m. (1360 k.c.). Some of the items played in rotation from 12.35 a.m. were: "Down the River of Golden Dreams," "Till We Meet Again" ((band item), and "The Toymaker's Dream." All the items came through at good strength, but the call letters were indistinct, and there is a slight chance that I may be wrong in the KZ. When will some of the announcers put a little more emphasis on the call letters? I am sure listeners would greatly appreciate this. Some, I admit, are very good, one in particular being 1Z, Auckland. 2NC, Newcastle, can be picked up any night now, and promises to be one of the best Australian B stations, but it is a pity that this is only a relay station. So far I have found them relaying 2BL, 4QG and 2FC.

I notice 2ZD, Masterton, coming through with good volume lately—quite an improvement—although it is greatly interfered with by 1ZQ, Auckland, who is back on the air again. I also picked up a new station on December 20 and December 22. It was either a Japanese or Chinese on approx. 490m. (610 k.c.). It appeared to be more like a Chinese, and may be found about one degree above 3AR. Has anyone else picked up this station?

It is a pity some of our N.Z. B stations who are broadcasting in frequencies in close proximity to each other, do not endeavour to come on the air on

different nights. I take it they come on the air to be listened to, and anyone enjoying a light programme likes to tune-in to a good B station, on Wednesday nights. In particular, there is just a mass of stations between 1050 and 1850 k.c. I notice the DX Page is slipping badly just now, but I admit there is not the range now that there has been. On December 23 I logged 2AY, Albury, operating on 227m. (1320 k.c.). This is another new station just come on the air, and will be found between 2ZL and 2ZH.—B.W. (Stratford).

2H.D. Comes in Well.

ON December 19, 20 and 21, I received for the first time 2H.D., Newcastle, with wonderful volume, approximately 100 per cent. in advance of 2B.L. and 2F.C. My latest "Radio Handbook" lists this station at 100 watts, operating on a wave-length of 288 metres, and strange to say, I received them on about 242 metres. Can anyone account for such reception, and the change of wavelength? S.B. (Wellington).

Particulars of 2NC.

STATION 2NC, Newcastle, is the first of a series of Australian relay stations to come on the air. It was opened on December 19, and its inaugural programme was relayed by 2FC, Sydney, and 3LO, Melbourne.

Christmas Greetings to DXers.

I LOGGED two more stations on the 20th inst., viz., 1ZR, Auckland, 275 metres (1090 k.c.) and KTHS Hot

Springs, Arkansas 1040 k.c. (288.3 metres). The former station operates on a power of 100 watts, and the 20th instant was the opening night. KTHS came through at great strength, quite fair speaker volume.

VK3ME's Schedule

WE have been notified to the effect that short-wave station VK3ME, Melbourne, will be on the air each Saturday night from 10 p.m. to 11.30 p.m. (N.Z.S.T.) on a wavelength of 31.55 metres.

Later in the same evening I happened on a station on 240 metres rebroadcasting 2BL, Sydney, with great success, reception being a lot better than from 2BL itself. I would be interested to learn the identity of this station. (2NC, Newcastle. See D.X. Topics.—Ed.) May I take this opportunity to wish all fellow "DXERS" the compliments of the season, and the best of loggings in 1931.—Guy C. Holmes (Masterton).

D-Xers!

YOUR competition closes on January 1st, and all entries must reach this office by that date. In the case of lack of support the right is reserved to withhold any award.

Ultra-short Waves

Aid to Navigation

WAVES as low as 8 metres are conducted by the Heaviside layer, and can be received at places thousands of miles away, but all long-distance reception abruptly ceases below 8 metres. It is also found that the wireless waves no longer come back from space, but spread in a similar way to those of light.

A German experimenter, Werner Ludenlo, has set himself the task of investigating extremely short waves of less than a metre in length, and experimenting in their transmission to distances of 10 kilometres and more.

A transmitter of very high radiating power, and a highly sensitive receiver, were specially designed for the experiment. Reflectors of dimensions depending upon the wavelength were used both at the transmitting and receiving ends.

Radiation through space alone seems to be responsible for the spreading of these very short waves. Trees, houses, and hills, located on a straight line between the transmitter and receiver, are perfect absorbers.

No atmospheric disturbance due to thunderstorms or fading has been noted, but the beams were found to be absorbed in bright sunlight to some extent, particularly above water or snow. Dense fog, rain, and snowstorms are traversed by the beams without any reduction in intensity.

Inasmuch as atmospheric influences have no effect upon these waves, they are admirably suited for navigation purposes, both in mid-air and on the ocean. They would enable a plane or ship safely to steer its course through even the densest fog.

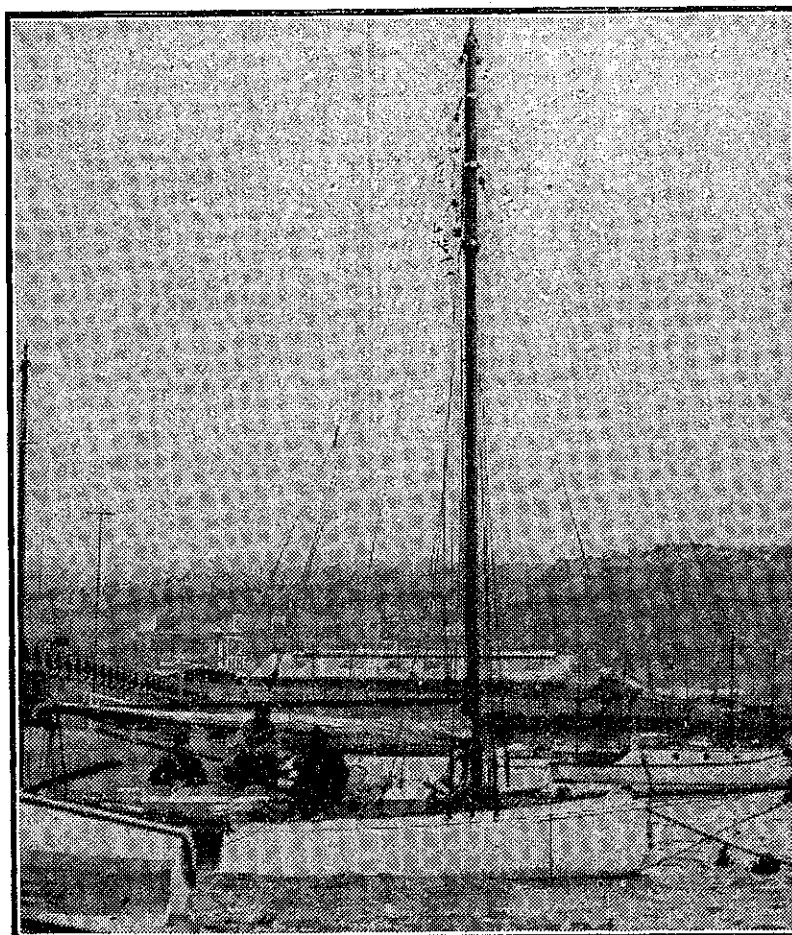
Both marine and aerial navigation will thus be able to fight the worst foe of safety, eliminating the most frequent cause of accidents.

Of Topical Interest

THE extended daytime sessions of the "YA" stations has proved most useful to the radio trade for demonstration purposes. A Wellington trader informed "Switch" that it was "just the thing" for the Christmas purchasing period, and it had proved most satisfactory. Country visitors, he reported, had bought well, despite the financial stringency. Of many scores who had been in to inspect sets, not one had inquired for a battery-operated model.

IT is the little things that count, even in radio salesmanship. A beginner who had a costly a.c. set home on trial from a Wellington company telephoned "Switch" for the list of the principal Australian stations and their wavelengths in kilocycles. A thoughtful salesman would see to it that a prospective buyer was supplied with the necessary list of stations. This neglect creates an unfavourable impression.

KNOW the time all over the world with a
DX Clock.
9d. Each, Posted.
"Radio Record," Box 1032, Wellington.



The yacht "Windward," which, with a crew of four, sailed from Wellington for the Chatham Islands on Christmas Day. She carries a special ship's receiver, tuning from 10—2000 metres, for the purpose of obtaining weather reports and time signals. The set was loaned by Philips Lamps, N.Z. Ltd. —Photo, courtesy "The Dominion."

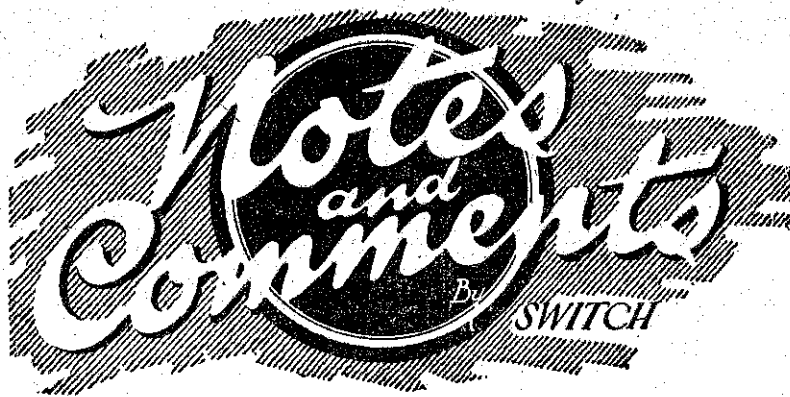
THE new Australian station, 2NC, Newcastle, has at last come on the air, and is performing well. The tone is rich and natural, and the volume exceeds that of either 3LO or 3AR. The two Melbourne stations have, however, not been up to their usual strength for some weeks past. The Newcastle station is, unfortunately, on a frequency very close to 2YB, New Plymouth. The items which come in best from 2NC, Newcastle, are relayed from either 2BL or 2FC, Sydney.

A STATION which "Switch" has found to be unsatisfactory of late is 4QG, Brisbane. Possibly the fact that 4QG is generally much distorted and also fades badly is due to seasonal effects. The season has been unusually late, and this may account for some of the recent vagaries in broadcast reception. Although static has been rather intense during the past week real storms of static have not occurred for some months.

TWICE recently the writer's attention has been drawn to the slipshod method of installing radio sets employed by some so-called professionals. The sets, instead of being placed close to where the lead-in entered the room, were located at the farthest end. The lead-in was, therefore, taken some distance along the wall of the room to the set, with resultant loss in signal strength. The owners of the sets found that by moving their outfits closer to the lead-in tube they received the Australian stations with noticeable increase in volume.

DURING the community singing relayed by 2FC, Sydney, the other evening a Scotch comedian remarked: "Have you heard about the Scotchman who put up an aerial? Used barbed wire—to prevent the sparrows from listening-in."

THE question of electrical interference with broadcast listening should not be lost sight of during the coming year by broadcast listening clubs and leagues. In Australia an agitation is under way to request the municipal councils to make an organised effort against interference caused by leakages from electrical mains. It is computed that in New South Wales alone the electric supply authorities receive not less than £20,000 per annum from the use of electricity for broadcast receiving sets. The figures for New Zealand must also be very high, and it is time the Dominion



power boards took a greater interest in their broadcast listening consumers.

A WIRELESS beginner showed "Switch" a second-hand accumulator which he had purchased cheaply for use as an "A" battery. He found that his valves flickered although the battery connections were firmly fastened. An examination disclosed that the battery plates were heavily sulphated, as the former owner had allowed it to stand for over four months without recharging it. Before batteries are put aside they should be well charged, and recharged each month, as there is always a certain amount of current leakage.

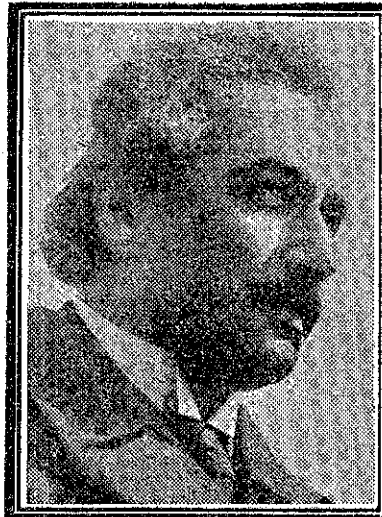
"CAM" (Napier) writes: "What is an 'absolute unit' of electric current?" The absolute unit of electric current is that current which, flowing in a circular arc one centimetre long and of one centimetre radius, produces a magnetic field of unit strength at the centre of that arc. It is ten times as large as the practical unit, the ampere. Absolute units are scientific and in practice are replaced by more convenient units as the ampere, ohm, volt, etc., familiar to many radio amateurs.

ALL electric receiving sets are now operated on some of the liners which run to New Zealand. The chief steward of one of the mail steamers has a very fine A.C. broadcast receiver which operates from the ship's electric lighting mains, but a transformer is used to adapt the voltage to the requirements of the receiving set.

"TOMAHAWK" (Mount Victoria) voices a protest which, no doubt, finds an echo among many listeners

in his area. "I would like to locate the idiots whose howling sets make listening-in to outside stations almost impossible. Everyone knows that 3YA, Christchurch, is almost too loud to use full volume with an ordinary multi-valve set, yet some individuals contrive to shriek and howl continuously with their miserable little sets until I feel like using a tomahawk on some neighbouring masts."

"THEORY" (Kilbirnie) asks: "Is it possible to run two aerials stretched out in one straight line without interference between the sets at each end? I will explain the position. A friend has a mast 220 feet away from my mast,



PROFESSOR ALBERT EINSTEIN

One of the leading scientists of the day. His recently expressed views on the apathy of the general public toward the scientific marvels of the present age appeared in last week's issue.

and we are thinking of joining two aerials mid-distance between the two masts, using five or six insulators between the two aerials. Would the process of tuning one set interfere with the other?" The plan is a good one, and no disadvantages would arise from it. It would be necessary to have the permission of neighbours before suspending an aerial over their property.

THE Australian stations have shown a further pronounced falling-off in volume during the past week, due to

the lengthening hours of daylight. Listeners should not blame their sets if they have to wait till about 11 p.m. to receive the Australian programmes with a fair measure of satisfaction. Even then the Melbourne stations are submerged some nights by static until nearly midnight.

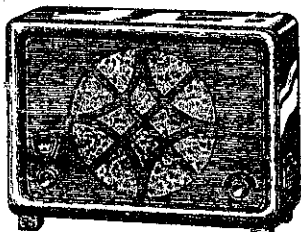
INSTANCES are not lacking in which listeners criticise the quality of broadcasting when their own equipment is not capable of giving true reproduction. A few days ago a listener telephoned a certain New Zealand broadcast station to settle an argument as to whether it was the regular announcer who was speaking at the moment or a substitute. As there was not the slightest resemblance between the voices of the two gentlemen referred to, it seems that the listener's equipment fell far short of what it should be.

DURING the past week the various Japanese stations have been received loudly in Wellington from about 11 p.m. onward. The usual lengthy intervals mislead some listeners, who, after a few desultory attempts to pick up these stations, generally switch over to some of the Australians. Rather more music than usual has been broadcast from the Japanese stations lately, and those who have not heard the weird native compositions from the land of the Mikado will find them an interesting novelty.

A GLARING case of poor salesmanship was recently brought under "Switch's" notice. An a.c. set was supplied to a customer in Wellington who found that, despite the professed capabilities of the outfit, it failed utterly to come up to standard. The salesman was summoned to test the outfit, and he found that the condensers were out of alignment. This was easily rectified, but the set should have been tried out on delivery and adjusted before it had created a bad impression on the purchaser's visitors.

MANY listeners have enthusiastically praised the concert given by the Wellington Symphony Orchestra in aid of the Mayor's fund for unemployment relief, as the best orchestral concert yet relayed by 2YA, Wellington. The programme, although it comprised "greatest" music, was of a character which possessed a more popular appeal than any previous programme by Mr. Leon de Mauny's superb combination. The relay was flawless and the balance of the orchestra was well reproduced.

A NEW venue for community singing in Sydney, relayed by 2FC, Sydney, is the Chatswood Town Hall. Mr. Charles Lawrence, whom "Switch" regards as the most capable conductor of community singing he has yet heard, is as much appreciated at Chatsworth as at Ashfield. Mr. Lawrence evokes roars of laughter at both halls. "Switch" heard community singing relayed by 4QG, Brisbane, recently, and it was a tame affair compared with the Sydney fixtures.



Complete from Licensed Radio Dealers

Factory Representatives: Scott & Holladay, Civic Chambers, Wellington.

HAVE YOU tried a BLUE SPOT RADIO the Price is £15

Short-wave News

LSX Buenos Aires.

THE mystery of the last letter in the call of the Buenos Aires station has been solved by a letter recently received from them by Mr. R. T. Stanton (Christchurch). The chief particulars are: "The transmitter LSX is situated at Monte Grand, near Buenos Aires. The wavelength is 28.98 metres, power in the antenna 20 k.w. Transmits daily from 21 to 23 hours, Argentine time. All transmissions end with march "San Lorenzo."

Address: Transradio Internacional—Compania Radio—Telegrafica Argentina, S.A. San Martin 329, Buenos Aires. LSX is not a regular broadcasting station, the owners are making tests for a new telephone service.

HRB, Honduras.

MR. Stanton also received a verification from HRB. This station is owned and operated by the Tropical Radio Telegraph Co. and operates on 48.62 metres. They broadcast on Tuesdays, Thursdays, Saturdays and Mondays from 2.15 p.m. to 5 p.m. N.Z. summer time, but in the near future, will be on the air daily. Their power is 2½ k.w.

3RO, Rome.

WE recently reported that this popular short-wave station had moved from 25.4 metres to 80 metres to suit listeners who received the programmes better on the higher wavelength.

FOR SALE OR EXCHANGE

The rate for small advertisements under this heading is 1/6 cash for 20 words, and twopence for every other word thereafter.

TO FLAUTISTS.

FOR SALE.—Concert Flute, Radcliff model; maker, Rudall Carte and Co., London. Sterling silver keys and silver-lined head joint. Best offer, must sell. Apply to Chester Burt's Music Store, Pahiatua.

FATNESS spoils one's appearance. Take Youth-O-Form. 20lb. reduction in 6 weeks. 6/6 posted. A. C. Timms, Chemist, Pahiatua.

£22 EAGLE Midget Electric Radio, Five Valves, Triple Screen-Grid, Dynamic. Ask for approval offer. R. H. Co., 553 Colombo St., Christchurch.

"A. E. C." ELIMINATORS, with Westinghouse Rectifiers, make Battery Radio superior to most A.C. Radios. Quotations gladly given. Johns, Ltd., Chancery Street, Auckland.

BOY! Be Slim! Take Youth-O-Form Capsules. 20lb. reduction in 6 weeks. Absolutely harmless. 6/6 posted. A. C. Timms, Chemist, Pahiatua.

COMBINATION Gramophone and Local Station Radio Receiver in beautiful cabinet—Brand new. Price, £80. Further particulars "Combination," P.O. Box 1032, Wellington.

PERSONAL! How did Gladys keep down her fat? With Youth-O-Form, of course. 6/6 posted. A. C. Timms, Chemist, Pahiatua.

64 Stations on Metrodyne Screen-Grid "Commander"—Americans, Japs, China, Hawaii. List available. From £35. R. H. Co., 553 Colombo St., Christchurch.

£30 up rich-toned Metrodyne "Sterling"—Screen-Grid 8, 10in. Dynamic—Distance and volume second only to "Commander," R. H. Co., Christchurch.



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

They have apparently decided to change again, as their programmes have been well received the last few mornings on 25.4 metres.

XDA, Mexico City.

STATION XDA broadcasts the latest news received from all over the world each day from 7.30 a.m. to 8 a.m. (N.Z. time) in English and Spanish.

W9XAA—International Programmes.

SHORT-WAVE station, W9XAA, 49.34 metres, will broadcast an international programme on the first Saturday of each month from 10 p.m., lasting eight hours, announcements being made in several languages.

N.Z. listeners should tune in on Sundays from 3 p.m. till 11 p.m.

Log for Week Ending
December 26.

RUI5, Siberia, 70 metres.—Only heard on Saturday, Tuesday and Thursday evenings when volume was good, but static always there.

50 Metres (about).—Saturday at midnight a foreigner was heard at R9. Static was too bad to get a call.

49.9 Metres (about).—Nearly every morning, best about 6 a.m., too weak to identify.

W9XF, Chicago, 49.83 Metres.—Good volume each evening till 7 p.m.

W3XAL Boundbrook, New Jersey, 49.18 Metres.—The best American station at present for volume and quality, closing each evening at 6 p.m.

Radio Saigon, Indo-China, 49 Metres.—On Saturday at 11.45 p.m. this station was easy R9 with one stage of audio. Their modulation was excellent. Only native music was heard at this time. KIXR was also good volume at this time and careful tuning was necessary to separate the two stations.

KIXR, Manila, 49.86 Metres.—Saturday, Wednesdays and Thursdays from 10 p.m., quite good each evening.

W8XX, Pittsburgh, 49.86 Metres.—Up to R7 at 5 p.m. on Sunday and Thursday, with Christmas messages to residents of the Far North.

HRB, Tegucigalpa, Honduras, 48.62 Metres.—Sunday 4.40 from R3, a strong ripple spoiling reception.

46.2 Metres (about).—Friday, 5.30 a.m., foreign talk at R7. Static very bad.

Moscow 45.5 Metres (about).—Each morning, best up till 6.30 a.m.

43.2 Metres (about).—Friday at 5.30 a.m., all foreign talk at R7. Static bad.

VK3ME, Melbourne, 31.55 Metres.—Saturday evening, reception perfect at R9 with one audio.

W2XAF, Schenectady, 31.48 Metres.—Saturday, Sunday and Thursday afternoon and Monday evening. Reception was weak except on Sunday when they reached R9 by 3.30 p.m.

Zeesen, Germany, 31.38 Metres.—This station was only heard on Tuesday and Friday mornings, and then at poor volume.

WIXAZ, Springfield, Mass., 31.35 Metres.—Weak on Saturday, but up to R8 by 4 p.m. on Sunday. They closed down at 4.30 p.m.

PCJ, Eindhoven, Holland, 31.28 Metres.—Saturday R4 at 6.20 a.m., a strong morse station spoils reception. During the afternoon they increase to R8-9 by 6 p.m., signing off at 6.15 p.m.

31 Metres (about).—At 10.45 p.m. on Saturday, Chinese or similar music was heard at R8. A call was not heard.

NRH, Heredia, Costa Rica, 30.5 Metres.—Saturday, Sunday and Friday till about 4 p.m. On Saturday this 7½ watt station was heard at its best, reaching R8 by 4 p.m.

LSX, Buenos Aires, 28.98 Metres.—Not near so strong now as a few weeks ago. Sunday was best, being R7 when closing at 2 p.m.

G5SW, Chelmsford, 25.53 Metres.—Volume fair most mornings but rapid fade spoils reception. They opened at 6.30 a.m. on Friday morning (Christmas evening at home). After the Greenwich Time Signal, a religious service was transmitted. Volume was fair—about R8, but rapid fade made it impossible to understand the talk.

3RO, Rome, 25.4 Metres.—Heard on Tuesday morning for the first time for several weeks, being R8 at 6 a.m. They have been heard each morning since, but not at such good volume as before they went up to 80 metres.

W8XX, Pittsburgh, 25.25 Metres.—Each morning, but seldom above R4. On Saturday and Friday they reached R8 by 7.30 a.m.

FTN, Paris, 24.46 Metres.—Quite good after 10 p.m. on duplex with Rabat.

W2XAD, Schenectady, 19.5 Metres.—Saturday, Tuesday, Wednesday and Friday mornings. Volume remains fairly steady at about R4 from 6 a.m. till 7.30 a.m.

Rabat, Morocco, 24 Metres.—Duplex with FTN.

XDA, Mexico City, 20.5 Metres.—Saturday and Tuesday at 7.45 a.m., R5.

KWG, Bolinas, California, 19.4 Metres (about).—This new station was tuned in at 6.15 a.m. on Monday. They put on records and called, "Hullo, KWG, Bolinas, California, testing." They called another station but did not get the call as their wave was not steady. Volume was R9. They closed at 6.30 a.m.

PLF, Java, 16.8 Metres; PCK, Kootwijk, Holland, 16.3 Metres and PLE, Java, 15.93 Metres, were heard on Saturday, Monday and Wednesdays at good volume and clarity after 9 p.m.

FTM, St. Assise, Paris, 15.5 Metres.—Tuned in at 11.10 p.m. on Saturday when music was received at R8. Later, "Hullo, Buenos Aires, ici Paree" was heard, followed by duplex telephony.

Bichromate and Daniell
Battery Material

THE Post and Telegraph Department advises that they have the following material for primary batteries for sale:—

Bichromate.

A2—Carbons, mounted, Wgton. and Ch.Ch., 6d. each.

A3.—Pots, porous, uncharged, Wgton. and Ch.Ch., 6d. each.

A4.—Zincs, Wgton., Ak., Chch., 9d. each.

Daniell.

A6.—Jars, glass, Wgton, Chch., 3d. each.

A7.—Rivets, copper, for joining Daniell elements, Wgton., Ak., Chch., 1d. oz.

A8.—Straps, copper, terminal, for joining Daniell elements, Wgton., 1/- each.

A10.—Zinc and copper elements combined, Wgton., Chch., 2/6 each.

A11.—Zincs, Wgton., Chch., 6d. each.

Prices are ex store and packing and forwarding charges are extra. Applications for the purchase of the material should be made to the Chief Postmasters, Auckland and Christchurch, or to the Stores Manager, Post and Telegraph Department, Wellington.

A Boon and Companion it will prove to be throughout the coming Year.

MACK'S FAMOUS
ADD-A-PHONE

Its small size permits you to carry it with you on your holidays

WHEREVER YOU MAY GO

And always prove

AN EFFICIENT LITTLE SET
WITH A WORLD-WIDE
RADIUS

For Reception.

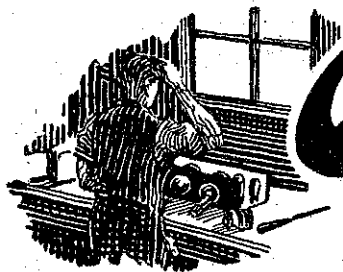
Yes Sir!

It's New Zealand-made—that makes you.

So Wire, Write, Ring or Call

MACK'S RADIO
SERVICE,

76-77 Kent Terrace, Wellington.
Phone 23-443.



Questions and Answers



E.B.C. (Auckland): Will you design coils for the P.C.J. Four using .0001 condensers.

A.: Such specifications would take some time to work out. We will be publishing a very complete table in the near future.

N.Z.'S OWN RADIO BOOKSHOP

The **TE ARO BOOK DEPOT**, Wellington.

At Last We Have It.—"Wireless, the Modern Magic Carpet," by Ralph Stranger, 4/9 posted. Simple language anyone can follow.

"Handy's Handbook," 7th edition, 5/3 posted.

"Theory of Radio Communication," by Filgate, 12/-.

"Principles of Radio Communication," by Morecroft, 41/6.

"Direction Finding," by Keen, 27/-.

"Radio Data Charts," by Beatty, 7/9.

"Seeing by Wireless" (Television), by Ralph Stranger, 1/6.

"Collins' Wireless Diary, 1931," 4/- posted (Amateurs and Broadcasters—150 pages useful information).

"Radio Trouble Finder," 1/10.

(Published by "Radio News" Co.)

"Radio Amateur Call Book," Sept, 1930, 5/3.

"Projection Engineering"—a monthly, 21/- per annum.

"Radio Engineering," (a monthly), 21/- per annum.

"Elements of Radio Communication," by Morecroft, 19/-.

"Thermionic Vacuum Tube," by Van der Bijl, 26/-.

"Radio Receiving Tubes," by Moyer and Westrel, 14/-.

"How Radio Receivers Work," by Roberts, 8/-.

Also all leading English, American and Australian wireless magazines.

Mr. F. W. Sellens' list of Shortwave Broadcasting Stations, 7d.

Last year's "N.Z. Listeners' Guide" still selling well, 2/9 posted.

"Modern Wireless," 1/7.

"All About the All-Electric," 1/7.

"N.Z. Radio Handbook Annual, 1930," 2/9 (contains list of the World's broadcasting stations).

Blue prints and complete instructions on following—1/9 each:—

7-Valve Super-Het.

6-Valve Neutrodyne,

5-Valve Neutrodyne,

Batteryless Neutrodyne,

Selective Crystal Set, 2-stage Audio

Simple Wave Trap and Clarifier,

14-foot Step-plane,

10-foot Outboard Speedster,

16-foot Sailing Canoe.

At 2/6 each,

Cockaday Receiver,

5-Valve Cockaday Receiver with

P.P. Amplification,

Tropadyne Superadio,

"Radiation Three."

At 5/- each,

"Building 16ft. Sailing Canoe."

Money refunded if unsuitable and returned in good condition. New stocks by every overseas mail. Write us.

TE ARO BOOK DEPOT

64 Courtenay Place, Wellington.

G.S. (Westport): I have an American set using 5 201A's and a 112 in the last stage. Could I use a 5 221's and a 171 in the last stage?

A.: The 221's would be a good proposition though their price has recently gone up considerably, and it may not be worth the extra outlay. The 171 would probably be a disadvantage in that it would drop volume without adequately compensating in tone. If you use a power valve of the B605 type you would get the best results.

CARLO (Palmerston North): I cannot get the results that I should do, although I have a good aerial and earth system. Would it be an improvement to use 7/029 instead of 7/22 wire?

A.: The two are the one and same wire. 029 being the diameter of the .22 gauge wire. If you cannot get the stations in well we should advise having the screen grid valves tested or borrowing a new screen grid valve and trying it in all the sockets and see if there is any difference. From your specifications there is nothing wrong with either the aerial or the earth system.

C.A.H. (Napier): Would a five-valve screen grid B.D. be sufficient to work a dynamic speaker?

A.: That depends upon the plate voltage used in the last stage. You would need 135 or preferably 150 for satisfactory results.

2. Would an inductor dynamic speaker be better?

A.: Yes, especially if you are in a locality where electric power is not available the inductor dynamic would be preferable.

LOFTY (Christchurch): I cannot buck the hum out of my L.W.

A.: This seems like trouble in the grid bias chain. See that the grid leak resistances are all the correct value and that in no case is there an open circuit. Carefully inspect your valve holders to see that they are making proper contact and watch the points where the resistances join the aluminium sub-panel.

2. I put the power pack and the condensers underneath the sub-panel. Would this cause a hum?—No.

3. I found volume was better when the pick-up is inserted in the cathode.

A.: Our experience was the opposite; it was better when the grid return was broken.

4. I had to put a condenser and grid leak in the earth lead to get any volume.

A.: Probably one of your resistances is shorting out and you cannot operate the earth potential as you should do.

RAPATA (Auckland): Can you elaborate upon the sketch of the valve tester given in the Radio Guide?

Use Our Booking Offices in Advance

S-O-S

TRAVEL IN COMFORT BY
CAR

WELLINGTON — PALMERSTON
NEW PLYMOUTH

A.: Yes. Further particulars have been prepared and if there is not space in this issue they will appear in the next.

QDSOX (Pio Pio): Would a screen grid circuit with the new Osram P425 in the last stage be a good one for all-wave work?

A.: It should do for the valve combination is good.

2. Would it be superior to the H.R. for broadcast?

A.: To the H.R. using a triode valve as R.F., yes.

3. Do you know of a better set?

A.: We cannot compare it with any other set of its type until we have seen a circuit. You should be interested in the new B.D. which will be in either the "R.R." or the 1931 "Guide."

D.S. (Market Cross): Which is the better of two amplifiers, one using a 112 followed by one 171A and two 245's, or (b) three stages transformer coupled using two LS5's and four LS5A's.

A.: "A" would be the better, but neither are particularly good. Quite a good amplifier for a dance hall would be one 221 coupled to two 221's in pushpull in turn transformer coupled to two LS5A's, providing good transformers were used and high voltage this outfit would give splendid quality. The 50-watt type of L.w. amplifier would also suit your purpose if you have a.c. available. It was described in the May issue of "Radio News."

WIRELESS (Invercargill):—Where would I put the tapping in the aerial coil of a one-valve receiver?

A.: The particular points are not very important so long as there are, say, five of them evenly distributed through the coil. You could then tap on to the one that suits your purpose best.

THELBARN (Auckland):—I have had a great deal of trouble with my factory-built B.D. set, and now the s.g. valve will not work properly.

A.: As your set has been in the hands of a dealer several times, we really cannot do anything to help you. Probably it would be better to take it or send it to a B.D. specialist.

2. Will the Loftin Four give plenty of volume and quality, and will it excel a good push-pull amplifier employing 245 valves?

A.: The Loftin White should be the better. It will give a greater pickup, and has certainly a better tone.

3. Will my set work a pickup satisfactorily?

A. J. PARK & SON

Patent Attorneys

Routh's Buildings,

Featherston Street,

WELLINGTON

A.: You really need push-pull to get satisfaction from gramophone reproductions.

Useful Tips

THREADED brass rods should not be held directly in the metal jaws of a vice, but should be placed between two pieces of soft wood which can with safety be gripped by the vice.

WHEN the axes of two coils are in line the coupling between them is at a maximum, but when the axes are at right angles it is at a minimum.

DO not allow your set to reproduce voices at the same volume as band music, etc., for the volume of sounds are so disproportionate in the two cases that speech is bound to sound unnatural even if the set is not distorting.

The good New Year will reduce prices of Radio and most electric products. You will like advice and ready service. Both are given whether you select at my shop or send your orders by mail. Every thing electrical stocked at the lowest ruling prices.

BOB HORROBIN

Flashlight Corner, 2 Courtenay Pl.
WELLINGTON.

Quick Repairs. Phone 22-357.

CORRESPONDENTS must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington). Questions arriving without it are likely to go astray or be delayed.

Name of set

Number of Vales

Name

Address

.....

.....

Nom de plume

To be kept in subsequent inquiries.

Date

Please Note:—

- (1) Be specific and brief, tabulating, if possible.
- (2) Write legibly, and on one side of the paper.
- (3) We do not design circuits, but accept suggestions for feature articles.

Solving trouble, as different from advice, is difficult by correspondence and while letters are given every consideration, answers are not necessarily correct—they are only our opinion based on the matter supplied, which may be quite inadequate. Intricate and involved specifications cannot be supplied without a specialist's fee.

Laboratory Jottings

Paillard Pick-up

ABEL, SMEETONS, Ltd., Auckland, have sent us for test a Paillard Pick-up and its performance has been well up to standard. It is a very neat job and is finished in black. The pick-up head is arranged on a free hinge and the rest of the arm is quite rigid, as far as vertical motion is concerned.

A small but important feature of this movable head is that it can be raised right back on the stationary part and will not fall over on to the record at the slightest movement. Although of ample size, the head is not unduly heavy and tracks well on records. Everything on the instrument is solid and well finished. The volume control is cutely housed in the swivel and is adjusted by thumb. Our tests show that while it covers a range of frequencies from below 40 to 8,000 it is especially good on the bass. We do not mean by this that it over emphasises the bass, for it does not, but it gives a slightly better output at low frequencies than at high. We found that while our standard pick-up gave a third of the output of the Paillard at 43 cycles, it was four times as great at 6,000. At the middle frequencies, we found the output was slightly greater than our own. Generally speaking it could be said that the pick-up gives good loud signals over quite a wide range. It begins dropping off at 5,000.

A perfect pick-up would respond equally to frequencies from 25 to 10,000 but in practice even response from 50 to 5,000 is considered good.

Most of the frequencies can be brought through with perfect clearness and instruments can be quite well picked out.

Our tests have shown us that the Paillard is a first class instrument and that it is not unduly hard on records.

Exploring the Universe

New Use for Beam Radio

RADIO waves of the beam type may be utilised in the near future to explore the outer reaches of space and thus solve some of the secrets of the universe.

Senator Marconi in a recent address in Italy expressed the belief that beam waves travel far beyond the layer of air surrounding the earth, thus differing from the two kinds of radio waves that are purely terrestrial. These are, firstly, the ground wave that follows the surface of the earth, and, secondly, the sky wave, which is reflected from the "heavyside layer" of ionized air some 100 miles above the earth.

Just how far beam waves would travel in space is at present purely conjectural, but some estimates vary from 25 to 48 millions of miles. This is a comparatively short range, when judged by distances separating heavenly bodies, but it would reach many planets that are near neighbours of the earth.

Tasting and Seeing Radio

Novel Method of Communication

THE use of visible indicators for reading incoming signals dates back to the early days of ordinary telegraphy when Morse impulses sent over a line were first recorded by a vibrating needle. The change-over from sight to sound came with the introduction of the telephone and its greater sensitivity.

In wireless signalling, owing to the relatively small amount of energy picked up by the receiving aerial, there



SAM DUNCAN

A very popular Wellington tenor. He will appear in vocal solos and duets from 2YA on January 10.

—Andrew, photo.

would at first sight seem to be no possible alternative to the use of headphones. In these days of broadcasting, the valve amplifier and the loudspeaker, the term "listener" has, in fact, stuck fast.

At the same time there are certain circumstances in which the ear cannot function efficiently, so that the use of headphones becomes unsatisfactory. For instance, in an aeroplane the noise of the engines is sufficient to deaden any wireless signal.

In practice this difficulty is overcome by wearing a sound-proof helmet with the earphones snugly encased inside. Although effective in allowing wireless signals to be received, the use of a sound-proof helmet has certain decided drawbacks. For one thing it cuts out all other external sounds, a fact which is not altogether desirable when the helmet is worn by a pilot who is in sole charge of the machine. Also the headgear is cumbersome and cannot easily be discarded in case of sudden emergency.

As an alternative, it has been suggested that, for aircraft work, wireless messages should be received by taste instead of by ear. This may at first sight appear rather far-fetched, but the proposal has been thoroughly tried out, and as the result of a series of tests was favourably reported on by Professor Goldsmith, of the Radio Cor-

poration of America. He found that it was perfectly feasible to substitute the tongue for the ear, and to detect incoming signals by taste. The sensitivity was considerably less, but this could be made good by suitable amplification.

It is a well-known fact that a peculiar and characteristic taste is experienced if two wires at slightly different potentials are applied, to the tongue. To a minor extent the sensation is felt when strips of two different metals, such as copper and zinc, or a copper and silver coin, are placed together and applied lightly to the tip of the tongue. The combination, when moistened, forms a miniature voltaic cell, and the resulting E.M.F. is "tasted."

This effect was utilised in the aeroplane tests mentioned above. The incoming signals are fed to two electrodes, preferably made of strips of silver so as to prevent the formation of injurious salts. The electrodes—separated by a thin sheet of insulating material and fastened together—are held lightly in the mouth, with the tip of the tongue pressing gently on the end, so as to bridge over the insulating strip between one silver electrode and the other.

The incoming signals could not only be definitely detected by their taste, but they also gave rise to a curious effect on the sight. At first the operator thought that a lamp nearby "flickered" each time a signal was received.

Treating Sulphated Accumulators

A LONDON radio writer says: "What is to be done when the battery is 'sulphated'?" First, take action before the evil has gone beyond hope of redemption, that is, preferably, at the first signs of sulphate. I doubt whether anything could save a cell which has begun to bulge. I have, however, been successful in rescuing a badly-sulphated cell by the somewhat drastic method of washing the plates repeatedly in cold water, which removed a lot of the outside sulphate. When no more could be removed by these physical means, washing and gentle shaking, I filled up with electrolyte and gave the cell a long charge. He never recovered his beauty, but he certainly regained a lot of capacity."

Do not make marks on the back of the panel with a lead pencil, as the pencil mark affords a high resistance conductive path on the ebonite surface, and impairs its insulation.

It was subsequently found that a definite "flash" accompanied each signal, which could be "seen" even when the eyes were tightly closed.

RADIO DIRECTORY

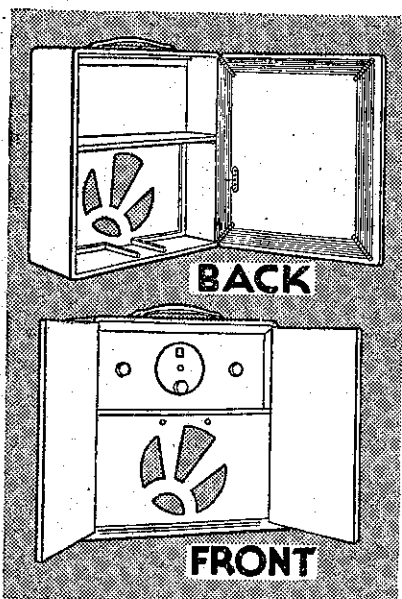
What to Buy and Where

CITIES

- | | |
|--|------------------------------------|
| ACE and HAMMARLUND SETS, | Johns, Ltd. |
| WESTINGHOUSE Rectifiers | Chancery Street, Auckland. |
| BROWNING DRAKE SPECIALISTS | F. J. W. Fear & Co. |
| | 63 Willis Street, Wellington. |
| BURGESS RADIO BATTERIES, | All Radio Dealers. |
| KING RADIO RECEIVERS | F. J. W. Fear & Co., |
| | 63 Willis Street, Wellington. |
| LOFTIN-WHITE AMPLIFIERS | Stewart Hardware Ltd., |
| | Courtenay Place, Wellington. |
| MAJESTIC RADIO RECEIVERS | Kirkcaldie & Stains, |
| | Wellington Agents, Lambton Quay. |
| MULLARD VALVES | All Radio Dealers. |
| PILOT 1930 PARTS—PILOT SUPER WASP KITS, GILFILLAN, KELLOGG and AT-WATER KENT SETS | Harrington's, N.Z., Ltd., |
| | 138-140 Queen St., Auckland. |
| | 40-42 Willis St., Wellington. |
| RADIOLA RECEIVERS and Expert Radiola Service. | Farmers' Trading Co., Ltd., |
| | Hobson Street, Auckland. |
| STEINITE RADIO | G. G. Macquarrie, Ltd., |
| | 120 Willis St., Wellington. |

COUNTRY TOWNS

- | | |
|-------------------------------------|--------------------------------|
| MAJESTIC | Radio House, Hamilton. |
| | G. S. Anchor. Manager. |
| PHILIPS VALVES AND APPARATUS | All Good Radio Dealers. |



BACK

FRONT

was furthermore found that with the limited space available much more success was obtained by amplifying at low frequency than by employing one of the valves as a radio-frequency amplifier, even though a screen-grid valve was employed. The fact that maximum amplification was desired prompted the use of two transformer-coupled stages in preference to resistance-capacity coupling, instability being prevented by certain precautionary measures which will be described later.

Having reduced the receiver itself to the smallest possible proportions, it was next sought to reduce the bulk and weight of its appurtenances. Here, of course, we encountered a difficulty which is usually regarded as insurmountable. A three-valver takes a fair amount of current. The set is sure to receive regular use at home as well as abroad. Therefore the batteries must be of considerable capacity if they are to last any time at all. And large-capacity batteries are very heavy. Well, that does look like a bit of a hurdle, doesn't it?

The solution is to equip the set with the very smallest size of batteries and reserve them purely for portable use. An ingenious and novel piece of design permits the plugging-in of a small mains unit when the receiver is used in the home circle, the battery being automatically disconnected when this is done. That disposes of any difficulty as regards the weight of super "B" batteries.

NOW as to the "A" battery or accumulator. There is no doubt that a two-volt accumulator is much better than dry cells for filament supply, but it must be a small one or weight will be increased too much. Small accumulators must be charged fairly frequently, so that a home charger would be a great convenience. Very well, we will incorporate a charger in the mains unit which is to supply the "B" current. It can be done very easily; and by using the same system of plugging-in the charger as is used for the "B" eliminator, the process of charging is freed from any vestige of inconvenience.

Although a great deal has been done in the cause of weight reduction, performance has definitely not been sacrificed. The frame circuit employed is a particularly efficient version of the Hartley circuit, and this is backed up by an extremely powerful audio amplifier. Almost any amplifier employing two transformers will give considerable "lift," but in this set the system of filters in the plate leads ensure that each stage is operating under ideal conditions, so that the overall magnification is something exceptional.

The filter circuits comprise: (1) A combination of series resistance and

by-pass condenser in the plate lead to the detector valve, (2) an output filter for the loudspeaker, and (3) an arrangement of radio-frequency choke and by-pass condenser in the plate lead to the output valve. The last is intended to prevent any radio-frequency component which may be present in the plate circuit of the last valve from feeding back via the loudspeaker to the frame aerial and causing instability. The net result of the three filters is that the receiver as a whole is quite stable and perfectly easy to operate, notwithstanding that it has two transformer-coupled amplifiers and will normally be operated without any earth connection.

The quality of reproduction is of quite a high standard and more than

A light receiver for home or holiday use

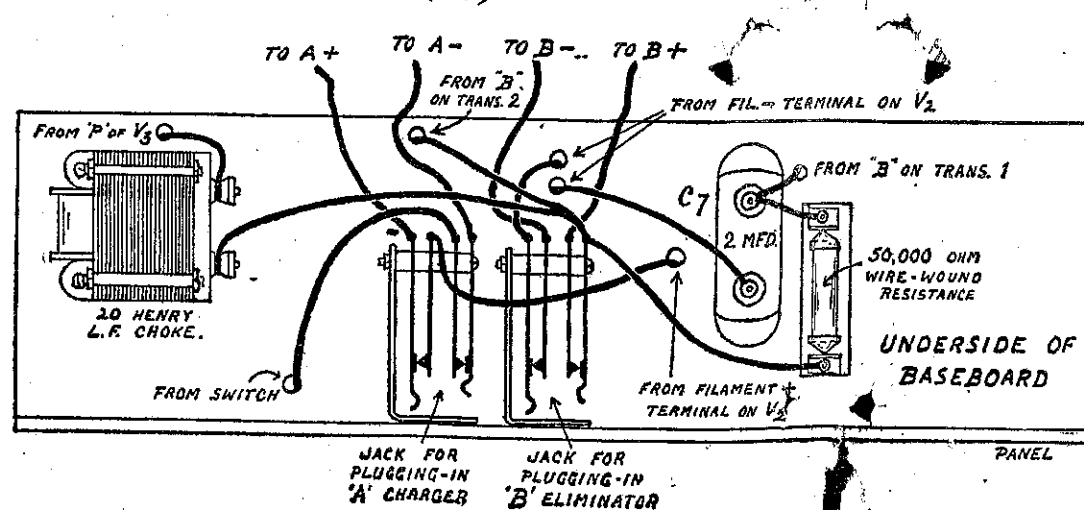
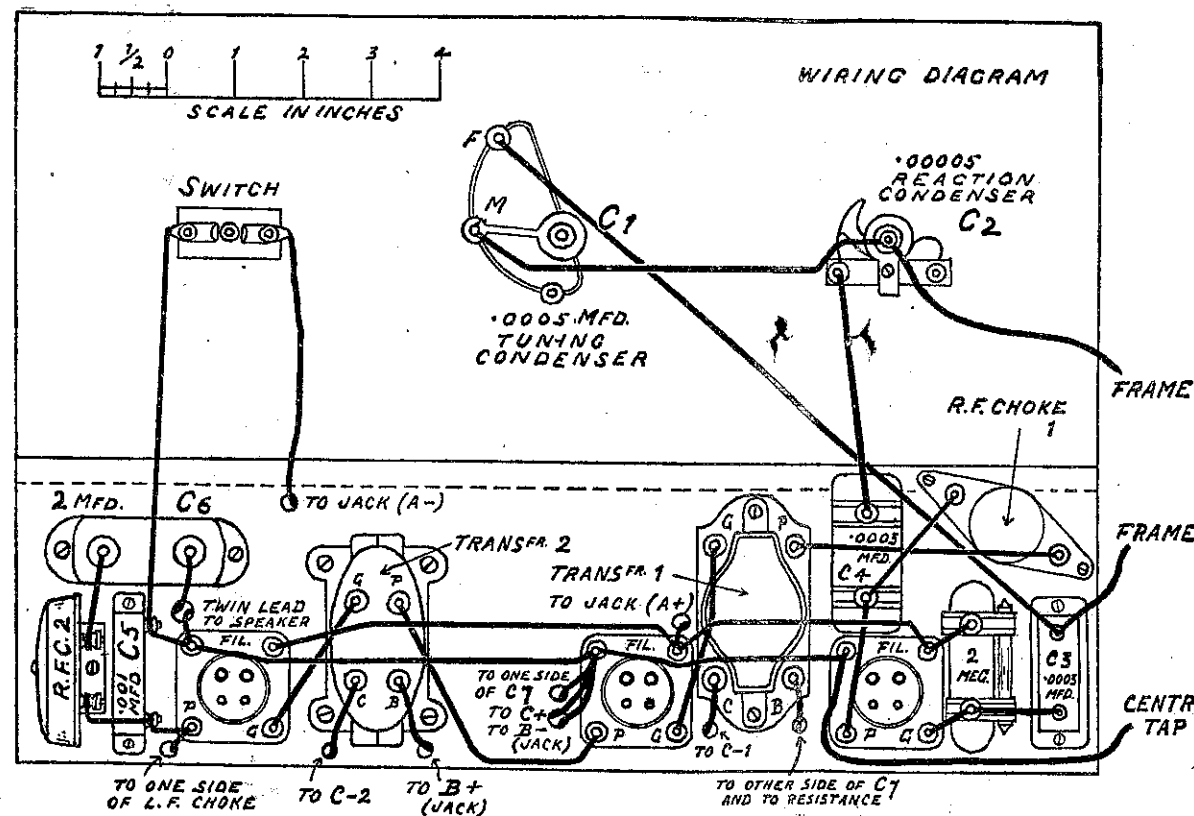
By "Cathode"

justifies our making the receiver suitable for use in the home.

The Carrying Case.

The overall dimensions of the cabinet or carrying case are: Height, 18½ inches; width, 16½ inches; and depth, 6½ inches. The top bottom and sides of the case should be made of half-inch stock, and as this portion of the construction carries practically the

whole of the weight it is advisable dovetail the corners. If this operation is beyond the constructor, equivalent strength may be secured by reinforcing the corners with thin sheet aluminium or brass well screwed to the wood; strips of the same metals may be tacked right round the case, leaving the end separated an inch or so so as not to impair the efficiency of the frame aerial by coupling to it.



PORTABLE RADIO SETS

for

Holidays and Camping

5-Valve Sets, complete . . . £16/12/6

Transportable Models £21/5/-

Unspillable Accumulators, B Batteries, etc.

A. E. STRANGE

Telephone 36-774

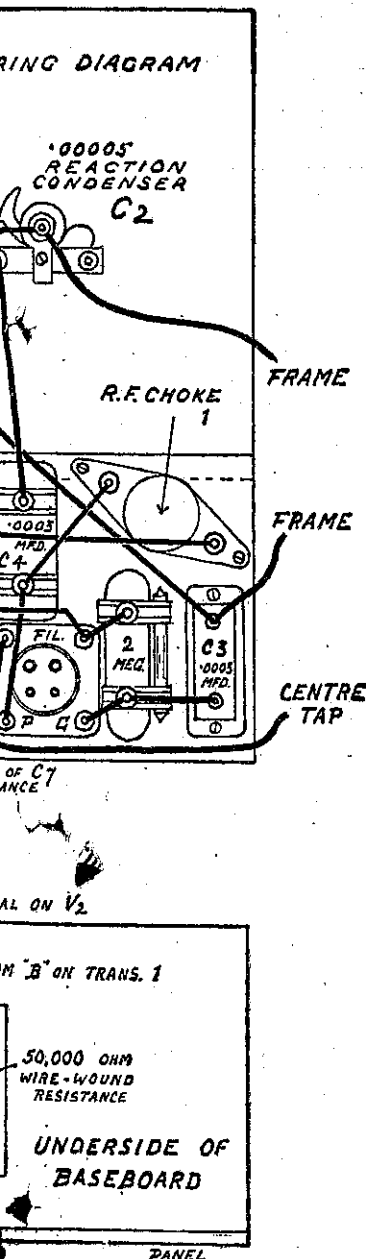
404 WORCESTER ST., CHRISTCHURCH.

"Country" Portable

home or holiday use

mode"

whole of the weight it is advisable to overtail the corners. If this operation beyond the constructor, equivalent strength may be secured by reinforcing the corners with thin sheet aluminium or brass well screwed to the wood; or strips of the same metals may be taken right round the case, leaving the ends separated an inch or so so as not to impair the efficiency of the frame aerial coupling to it.



The front of the case is occupied by the control panel and by the fretted timber which carries the speaker chassis. The speaker chassis should be of a fairly small and light type so that it will do no harm to use three-ply to support it. Every little bit of weight that can be saved will help in making the set convenient to carry. If doors are used to cover the panel and speaker fret as in the illustration of Fig. 2, these should be as lightly constructed as possible too.

The back of the cabinet may also be made of three-ply, and is detachable as a whole. The frame aerial is carried on it, being wound on four strips of ebonite mounted diagonally at the corners. Each strip must have fourteen sloping sawcuts, spaced one-eighth of an inch, made across it part way through, the aerial wire being wound in these cuts. As may be guessed, the frame winding consists of fourteen turns, 26 s.w.g. wire with a double silk covering being suitable. The winding is tapped at the seventh turn; the tapping and the two ends are taken to a miniature terminal strip mounted alongside the winding, the tapping to the centre terminal and the two ends of the winding to the two outer terminals. Flex leads are then taken from these terminals to the proper points in the receiver, the leads being left long enough to permit of the back being opened to provide access to the receiver and batteries.

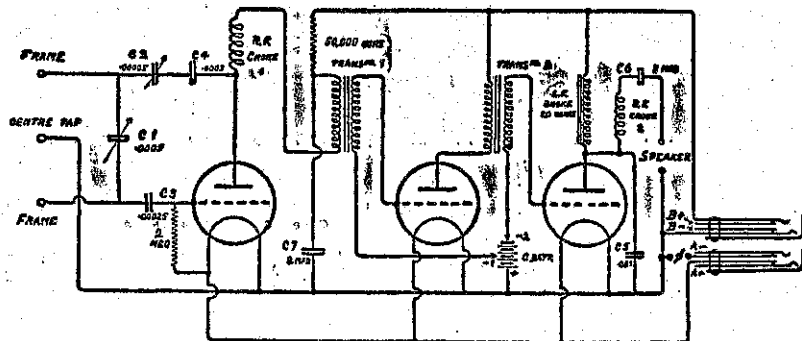
The strips on which the baseboard rests should be a little over seven inches down from the top of the cabinet. The precise method of constructing the cabinet is a matter in which every individual constructor will wish to be governed to some extent by his own ideas, but the general layout indicated in Fig. 2 should not be departed from too completely.

The General Layout.

THE construction of the receiver itself is very simple indeed; moreover, we have been careful to draw very complete diagrams so as to eliminate any possibility of a mistake. The fact that some of the components are mounted underneath the baseboard has made it necessary to include an extra drawing of the underside of the board, but there should be no difficulty at all in following this. The two jacks for plugging in the "B" eliminator and "A" charger were in the original model screwed direct to the baseboard. Some types of jack do not permit of this being done, and where this is the case the width of the panel must be increased so that it will project below the baseboard sufficiently to mount the jacks. Where this is not done, the panel which carries the speaker chassis must be drilled to permit the insertion of plugs into the jacks which otherwise, of course, are inaccessible. The jacks are shown mounted sideways in Fig. 4, but this is only for the sake of clearness in showing the connections to them; actually they are mounted vertically.

The Components.

THE choice of components is a matter for serious consideration in



any portable set, as it is necessary to strike a nice balance between small dimensions and efficiency. For instance, many variable condensers of very high efficiency and mechanical excellence are also on the heavy side. Fortunately, it is not difficult to find

formers are exactly similar. The use of low ratio transformers is recommended, as these usually result in improved tone quality, while the sensitivity of the receiver is such that the loss of a little amplification is not serious.

It will be noticed that certain of the components are fairly closely spaced. It is just possible that if different components to those used in the original are employed, some slight readjustment may be necessary. However, an effort has been made to provide room for most alternative components, so that it is very unlikely that anything of this kind will be called for, especially if very bulky apparatus is avoided.

For the same reason as in the case of the transformers, it is advisable to use two different makes of radio frequency chokes. If home-made chokes are employed, use two which have a widely differing number of turns rather than two of identical construction. There is not very much space available for the second r.f. choke, so that this must necessarily be of a compact type.

In next week's article the remaining components will be discussed, and general hints given on construction and operation.

components which, while being light, are also well made and efficient.

Many transformers of small dimensions, but having excellent characteristics, are now available. If possible, it is advisable to use two transformers of different makes, as stability is apt to be affected where the two trans-

UNLIKE howls due to too much reaction, etc., the audio frequency howl is distinguished by the fact that it does not vary with the tuning or reaction adjustments.

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FEATURE PEEPS

... at ...

FUTURE PROGRAMMES

SUNDAY

From 1YA

THE Auckland Station will relay from St. Matthew's Church the service which is to be conducted by Canon C. H. Grant Cowan. The organist and choirmaster will be Mr. J. H. Philpott. This will be followed by a relay from the Auckland Town Hall of a concert to be given by the Municipal Band, under the direction of Mr. Hal McLennan.

Wellington Notes

THE service to be broadcast will be relayed from St. Andrew's Presbyterian Church. The preacher will be the Rev. R. J. Howie, and the organist and choirmaster Mr. Frank Thomas. The studio concert to follow will be given by the Royal Naval Volunteer Reserve Band, and assisting artists.

From Christchurch

THE Rev. M. A. Rugby Pratt will be the preacher at St. Albans Methodist Church on Sunday evening, when the service will be broadcast. Miss Clarice Bell, L.A.B., will be the organist. The after-church concert will be mainly vocal.

From 4YA

THE service in Knox Presbyterian Church, Dunedin will be broadcast. The Rev. D. C. Herron, M.A., M.C., will be the preacher. The 3YA concert will be afterwards relayed.



MOLLY ATKINSON
An Auckland mezzo-soprano, who will appear next from 1YA on January 6.

—Andrew, photo.

MONDAY

Wellington Notes

MR. H. C. South will give another of his talks on "Books—Grave and Gav."

The major portion of the concert session will be taken by Mrs. Daisy Basham (well known performer at 1YA), assisted by the Ariel Singers, in a lecture-recital entitled "Old English Song." The numbers chosen have been carefully selected from old English melodies well known to all. In keeping with the lecturette, the Orchestrina, under Signor A. P. Truda, has selected an excellent programme of instrumental music including selections from "Lilac Time," "Master Melodies" from "Famous Light Operas" and "Molloy Songs." An intermezzo, Frim's "Gioviana," will also be played. The evening will conclude from 10 till 11 p.m. with dance music of electric recordings.

From Christchurch

A DIALOGUE by Messrs. E. E. Wiltshire and F. C. Fairclough on "The Story of the Garden," being elementary botany as applied to garden plants, will be broadcast.

With "Old Glory," the Christchurch Municipal Band, under Conductor J. Noble, will open the evening's programme. Other numbers will be a selection "Knight Errant," a group of community songs, the hymn "Nearer My God to Thee," the fantasia "Normanhurst," a foxtrot, and the march "Old Nobility." A popular vocal programme will supplement the band items.

4YA Notes

THE Kenz Orpheans, playing popular melodies, will supply the basis of the programmes and set the tune for an evening of much variety.

TUESDAY

From 1YA

AT 3.15 p.m. Mrs. Les Crane will continue her talks on the "Beauty of Mind and Body in Relation to Diet."

The Orchestral Octet, under the direction of Mr. Harold Baxter, has firmly established itself in the esteem of listeners, and they are playing several very fine numbers this evening, including the selection "The Vagabond King" and "Faust Ballet Music."

Miss Lalla Hemus will give a 'cello solo entitled "Slumber Song," with orchestral accompaniment. Mr. Cyril Towsey, pianist, will play one of Grieg's masterpieces, the "Holberg Suite." Mr. A. B. Chappell, M.A., will give a further Topical Talk.

Wellington Items.

A LECTURETTE "For the Man on the Land," will be given at 7.40 by a representative of the Agricultural Department.

The Salon Orchestra, under Mr. M. T. Dixon, will open the evening's programme with the overture "Glory of



L. T. J. RYAN

A Christchurch humorist, who will next appear from 3YA on January 9.
—Steffano Webb Photo.

Russia." During the evening other numbers will be "Song Without Words," the "Jevington Suite," Godard's "Jocelyn," and Borch's "Bonheur de Printemps." Mr. J. F. Montague, of Auckland, will be heard in elocutionary numbers, humorous and classical.

Mr. Billy Hart will present songs at the piano, including "Old New England Moon," "An' Furthermore," and the latest popular hit.

From 4YA.

MR. James Dixon, conductor of the St. Kilda Band, has arranged a very attractive programme for his men for this evening. As a cornet solo "The Lost Chord" will be played. Gramophone recordings will introduce accordion, organ and Hawaiian items.

WEDNESDAY

Auckland Notes

THE Auckland Artillery Band, Auckland's sole representative at the Band Contest to be held at Wellington in February, will provide a programme this evening. This band is a young combination, conducted by Mr. Wynne Smith.

THE WEEK

"Old English Song"
2YA, Monday

Orchestral Octet
1YA, Tuesday

St. Kilda Band
4YA, Tuesday

Auckland Artillery
Band
1YA, Wednesday

Elocutionary Recital
3YA, Thursday

Orchestrina Selections
2YA, Friday

Savoy Male Quartet
1YA, Saturday

Amongst their numbers will be a selection "Wagner's Works" and the overture "Tancredi." A cornet duet, "Besses o' the Barn," will be played by Bandsmen K. Smith and W. Mackay. The New Clarion Quartet, consisting of four of Auckland's leading singers, Miss L. Wood, Miss B. Smith, Mr. L. Harvey, and Mr. D. Black, will provide many solos, duets, and quartets.

The efforts of this combination are always of a high standard and are much appreciated.

From Christchurch

FEATURED on the programme will be the orchestra of the Working Men's Club, under Mr. A. Heath, who was conductor of the orchestra at the Theatre Royal before the advent of the talkies. This orchestra is a very fine combination.

The items to be played will be: "Entry of the Gladiators," Franke's "Concert Overture," Rossini's "William Tell," "In a Monastery Garden" (by Ketelbey), and Blankenburg's "The Gladiator's Farewell." Mr. Fred Fox, cornetist, will play "Souvenir de Suisse," while a flute and clarinet duet, "Lo! Here the Gentle Lark," will be played by Messrs. T. Amos and F. L. Wolege.

From 4YA

"SWEETS or No Sweets" will be the subject discussed by the Home Science Extension Department of Otago University at 3.15. At 7.15 Mr. L. W. McCaskill will review the December issue of the Journal of Agriculture. Both talks are under the auspices of the 4YA Primary Productions Committee.

The evening programme will be of an operatic-classical nature and will be followed by a session of dance music. A trio consisting of Misses

Holmes, Moffatt, and Judd will supply the instrumental numbers. Mr. A. Gorrie will give a recital "Ten Minutes with Keats."

THURSDAY

From 1YA

THE afternoon home science talk from 1YA, 2YA, and 3YA will be on "Sandwiches and Sandwich Fillings."

Mrs. M. Robertson will be making her first appearance at 1YA this evening. This lady possesses a very fine contralto voice will find full scope in the ballads which she has selected.

Two humorous sketches will be given by Miss Maisie Carte-Lloyd and Mr. Alan McSkimming, while Mr. Claude Suisted, already very popular as a baritone singer in Auckland, will contribute several songs.

The Orchestral Octet, under Mr. Harold Baxter's direction, will provide instrumental music for the evening, and of particular interest in their programme will be a selection from Delibes' "Coppelia" and a "Mikado" selection. The programme will conclude with a gramophone lecture-recital by Mr. Kal Atkinson, entitled "In Lighter Vein."

From Wellington

A CONCERT will be given in the studio by the Wellington Boys' Institute Band, under Mr. A. Iremonger. This combination is always popular with 2YA listeners.

Included in the programme will be two new numbers hitherto not heard in New Zealand, a Japanese poem, "Ke-Sa-Ko," and the march "Joyce's 71st N.Y. Regiment."

3YA Notes

AT 7.30 Mr. A. Leslie, M.R.C.V.S., of Lincoln College, will talk to farmers on "The Maintenance of Health in Sheep."

Mr. J. F. Montague, of Auckland, who has been engaged by the Broadcasting Company to tour the New Zealand stations, will give an elocutionary recital from his vast repertoire.



LUCY FULLWOOD

An accomplished soprano from 3YA. She will next sing from that station on January 9.

—Steffano Webb Photo.

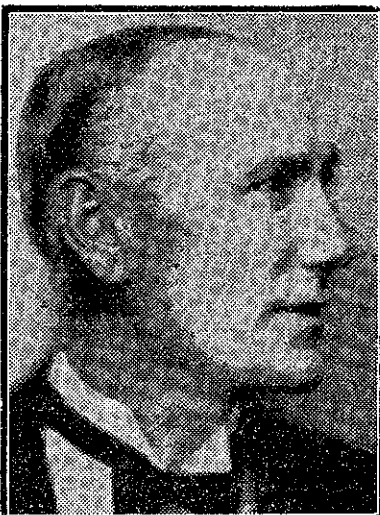
Miss Cicely Audibert, soprano, will sing three songs—Meyerbeer's "Ombra Leggera," "The Dreary Steppe," and "Robin's Song." Mr. F. C. Penfold, baritone, will sing "O Flower Divine" and the Prologue from "I Pagliacci." Instrumental items will be given by Miss Ellis Gilders (pianiste), Miss Thelma Cusack (Violiniste), and a trio consisting of Misses Cusack and Chapman and Mr. Fred Page. From 9.30 till 11 p.m. dance music will be provided by the Bailey-Marston Dance Orchestra.

FRIDAY

From Auckland

A VERY fine programme indeed has been arranged. Mr. A. G. McPhail, the possessor of a splendid baritone voice, is singing a group of songs which should appeal to listeners.

The versatile Snappy Three will include some of the latest hits in their numbers, while Miss Kathleen Morrison, mezzo-soprano, who



ALAN McSKIMMING

Who, together, will present two sketches from 1YA on Thursday, January 8.

—S. P. Andrew, photo.

has already been heard from 1YA, will sing several ballads.

That popular combination, the Salon Trio, will render several numbers, including instrumental trios, piano solos, vocal solos with violin obligato, cello solos and violin solos. These young ladies are established favourites and their numbers are always given with finish and enthusiasm. Clarinet solos will be given by Mr. S. C. Lewis, one of Auckland's leading instrumentalists, and that clever young elocutionist Miss Rhona Speed will also give items.

Wellington Notes

THE Orchestrina, under Signor A. P. Truda, will open the programme with the "Potted Overture" by Engleman, and during the evening will play a number of well-known selections, including "Robin Hood," "The Leek," "Christmas Bells," "One Alone," and "Tout Paris."

Mr. Lawrence Searle will be heard in humorous elocutionary items, "The Art of Kissing" and "The Cow." The vocalists for the evening will be Miss Myra Sawyer and Mr. William Boardman in solos and duets, Mr. Stewart

Nelson (tenor), and Miss Muriel Johns in a number of up-to-date popular songs at the piano. The evening programme will conclude with a dance session of electrical recordings from 10 to 11 p.m.

From Christchurch

The fortnightly chat on "Radio Service" will be given by Messrs. D. Cosgrove and W. Melbourne.

The vocal programme will be a very popular one. The quartets are old favourites: "Hail, Caledonia," "John Peel," "On the Banks of Allan Water," and "In This Hour of Softened Splendour." Among the solos will be: "When Other Lips," "Because," "Early in the Morning," "Friend o' Mine," "The Garden of Your Heart," and "In An Old-Fashioned Town."

The singers will be the Valencia Quartet—Miss Lucy Fullwood, Miss Jean Johnson, Mr. T. G. Rogers, and



BILLY HART

Whose songs at the piano from 2YA on January 6 are sure to appeal to listeners.

—S. P. Andrew, photo

Dunedin Notes

THERE will be much variety in this evening's programme. A novelty turn will be provided by Mr. H. Dalziel on the marimbaphone. Items by the Studio Quintet will include selections from "The Quaker Girl" and "The Rebel Maid."

SATURDAY

Auckland Notes

AT 8 p.m. this evening listeners will be entertained by a relay from the Auckland Town Hall of a Municipal Band Concert. The band will play under the conductorship of Mr. George Buckley. At 10 p.m. a programme of dance music will be presented until the station closes down at 11 p.m.

From Wellington

A BRIGHT and varied programme has been arranged for the evening session. The popular Melodie Four will contribute a number of quartets, duets and solos, and Miss Anne Davies will be heard in soprano solos, including "Mifanwy" ("Morning") and "Bird Songs at Eventide."

(Concluded on page 28.)

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CHRISTCHURCH

Full Programmes for Next

[Copyright.—These programmes are copyright, but individual daily programmes may be published on day of performance.]

Sunday, January 4

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, JANUARY 4, 1931.

- 3.0 : Afternoon session—Selected gramophone recordings.
 3.30: Literary selection.
 6.0 : Children's song service, conducted by "Uncle Bert."
 6.55: Relay of divine service from St. Matthew's Church. Preacher, Canon C. H. Grant-Cowan. Organist and Choirmaster, Mr. J. H. Philpott.
 8.30: (approx.) Relay from Albert Park of a concert by the Auckland Municipal Band, under the conductorship of Mr. Hal. McLennan.
 9.30: (approx.) God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JANUARY 4.

- 3.0 to 4.30: Selected gramophone items.
 6.0 : Children's song service, conducted by Uncle George, assisted by the Children's Choir from the Kelburn Presbyterian Church.
 7.0 : Relay of evening service from St. Andrew's Presbyterian Church. Preacher, Rev. R. J. Howie, B.A. Organist and Choirmaster, Mr. R. Black.
 8.15: (approx.) Studio concert by the Band of the Wellington Division of the Royal Naval Volunteer Reserve (by permission of the commanding officer) and 2YA artists.
 March—Band (Conductor, Petty Officer H. Baker), "Galvini."
 Selection—Band, "Giraldia" (Adam).
 Soprano—Miss Ella Fair, (a) "The Asra" (Rubinstein); (b) "Spring Song" (Rubinstein).
 'Cello—Beatrice Harrison, "The Broken Melody" (Van Biene).
 Baritone—Mr. Claude Moss, "In a Monastery Garden" (Ketelbey).
 Waltz—Band, "Love and Laughter" (Pecorini).
 Tenor—Mr. Chas. P. Edwards, (a) "Be Brave and Smile" (Pepper); (b) "To Sing Awhile" (Drummond).
 March—Band, "New Colonial" (Hall).
 Weather report and station notices.
 Soprano—Miss Ella Fair, (a) "At Twilight" (Nevin); (b) "Just for To-day" (Partridge).
 Instrumental—Virtuoso String Quartet, "Mignon Gavotte" (Thomas).
 Selection—Band, "Fra Diavolo" (Rimmer).
 Baritone—Mr. Claude Moss, (a) "Coronach" (Barratt); (b) "The Arrow and the Song" (Balfe).
 Selection—Jack Hylton's Orchestra, "Melodious Memories" (Finck).
 Tenor—Mr. Chas. P. Edwards, "I Love the Moon" (Rubens).
 Euphonium—Bandmaster Baker, "Land of Hope and Glory" (Elgar).
 Choral—Lay Vicars of Westminster Abbey, (a) "The Little Sandman" (West); (b) "Stars of the Summer Night" (Cruikshank).
 March—Band, "Our Director" (Bigelow).
 God save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, JANUARY 4.

- 3.0 : Afternoon session—Gramophone recital.
 5.30: Children's song service.
 6.15: Chimes from studio.
 6.30: Relay of evening service from St. Albans Methodist Church, Rugby Street. Preacher, Rev. M. A. Rugby Pratt. Organist, Miss Clarice Bell, L.A.B. Choir Conductor, Mr. W. S. Simpson.
 7.45: (approx.) Musical recordings from studio.
 8.15: Piano—Mr. Fred Page, (a) "La Plus Que Lente" (Debussy); (b) "Mazurka in A Flat" (Chopin); (c) "Old Vienna" (Godowsky).
 8.25: Baritone—Mr. A. G. Thompson, (a) "I Know of Two Bright Eyes" (Clutsam); (b) "Alfrida" (Knight); (c) "I'll Sing Thee Songs of Araby" (Clay); (d) "An Episode" (Lohr).
 8.35: Harp—Mr. H. G. Glaysher, (a) "Love's Fascination" (Thomas); (b) "By the Fountain" (Oberthur); (c) "Dermot Astore" (Chatterton).
 8.48: Soprano—Miss Agnes Cunningham, (a) "Open Thy Blue Eyes" (Massenet); (b) "Thy Daily Question" (Helmund); (c) "Avourneen" (Fitzpatrick); (d) "The Last Rose of Summer" (Irish Traditional).
 9.0 : Weather forecast and station notices.
 9.2 : Tenor—Mr. J. A. Blythe, (a) "Wandering in the Wood" (Grieg); (b) "My Lovely Celia" (Old English); (c) "O My Love is Like a Red, Red Rose" (Scottish).
 9.12: Selection—Debroy Somers' Orchestra, "Good News" (de Sylva).
 9.20: Contralto—Miss Nellie Lowe, (a) "Beloved, it is Morn" (Aylward); (b) "Angus MacDonald" (Roeckel); (c) "My Curly-Headed Babby".
 Contralto and baritone—The Dulcet Duo, "The Coming of a Dream."
 9.30: Selection—Philadelphia Symphony Orchestra, (a) "Tales from the Vienna Woods" (Strauss); (b) "Blue Danube Waltz" (Strauss).
 9.30: God save the King.

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, JANUARY 4.

- 3.0 : Chimes. Selected gramophone records.
 5.30: Children's song service, conducted by Big Brother Bill.
 6.15: Instrumental recordings.
 6.30: Relay of evening service from Knox Presbyterian Church. Preacher, Rev. D. C. Herron, M.C., M.A. Choirmaster and Organist, Mr. C. Roy Spackman.
 7.45: Selected recordings from the studio.
 8.15: Relay of concert programme from 3YA, Christchurch.
 9.30: God save the King.

2YB, NEW PLYMOUTH (1230 KILOCYCLES)—SUNDAY, JANUARY 4.

- 6.0 : Children's service.
 8.15: Studio concert.

Monday, January 5

1YA, AUCKLAND (900 KILOCYCLES)—MONDAY, JANUARY 5.

SILENT DAY.

2YA, WELLINGTON (720 KILOCYCLES)—MONDAY, JANUARY 5

- 3.0 : Chimes. Selected gramophone recordings.
 3.30 and 4.30: Sporting results to hand.
 5.0 : Children's session conducted by "Uncle Jeff."
 6.0 : Dinner music session.
 Milan Symphony Orchestra, "Mignon" Overture (Thomas).
 H. G. Amers and the Eastbourne Municipal Band, "The Clock on the Mantel" (Wheeler).
 Jean Lensen and His Orchestra, "Millions d'Arlequin" (Drigo).
 6.15: Symphony Orchestra, "Hungarian March" (Berlioz).
 Violin solo—Toscha Seidel, "Hebrew Melody" (Achron, arr. Zimbalist).
 Jean Lensen and His Orchestra, "Si Mes Vers Avalent des Ailes."
 Bernard Gallico and His Orchestra, "The Dance of the Dwarfs."
 6.30: H. G. Amers and the Eastbourne Municipal Orchestra, "Silhouettes" (Arensky), (a) "Introduction," (b) "La Coquette."
 Bernardo Gallico and His Orchestra, "The Clock is Playing" (Blaauw).
 H. G. Amers and the Eastbourne Municipal Band, "Dancing Doll" ("Poupee Valsante"—Poldini); "Silhouettes—The Dreamer."
 6.45: Zurich Tonhalle Orchestra, "Il Seraglio" Overture (Mozart).
 Violin—Toscha Seidel, "Ave Maria" (Schubert).
 Symphony Orchestra, "Coppelia Ballet—Entr'acte and Valse."
 7.0 : News session, market reports and sports results.
 7.40: Lecturette—Mr. H. C. South, "Books—Grave and Gay."
 8.0 : Chimes. Overture, 2YA Orchestra (Conductor, Signor A. P. Truda).
 "Lilac-Time" (arr. Clutsam); selection, "Master Melodies from Famous Light Operas" (arr. Roberts).
 8.15: Chorus—Light Opera Company, Gems from "The Bohemian Girl."
 8.23: Lecture recital, "Old English Song," by Mrs. Daisy Basham, assisted by the Ariel Singers.
 8.43: Selections—Band of H.M. Coldstream Guards, (a) "A Musical Switch" (Alford); (b) "Floradora" (Stuart).
 8.59: Weather report and station notices.
 Master Melodies from "Famous Light Operas" (arr. Roberts).
 9.16: Continuation of the lecture recital on "Old English Song" by Mrs. Daisy Basham and the Ariel Singers.
 9.36: Organ—Charles Saxby, "Classica."
 9.44: Selection—Orchestra, "Molloy Songs" (arr. Baynes); intermezzo, "Gioviana" (Frini).
 10.0 : Dance programme:
 Foxtrots—Leo Reisman and His Orchestra, "Puttin' on the Ritz."
 Jack Hylton's Orchestra, "Punch and Judy Show" (Black).
 Gus Arnheim and His Orchestra, "Dancing to Save Your Sole" (Gilbert-Baer).
 Jack Hylton's Orchestra, "Jollity Farm" (Sarony).
 10.12: Waltz—Ted Florito and His Orchestra, "Molly" (Goulding, Dougherty).
 Foxtrots—The Rhythmic Eight, "Fairy on the Clock" (Myers).
 Jack Hylton and His Orchestra, "The Kerb Step" (Young).
 10.21: Vocal duet—Esther Coleman and Foster Richardson, "The Voyagers."
 10.24: Foxtrots—Victor Arden, Phil Ohman, and Their Orchestra, "I Love You So Much" (Kaimar, Ruby).
 Coon-Sanders Orchestra, "Moanin' for You" (Goulding).
 Victor Arden, Phil Ohman, and Their Orchestra, "Dancing the Devil Away" (Harbach, Kaimar, Ruby).
 10.33: Waltz—Arcadians Dance Orchestra, "Melody Divine" (Ruby, Spencer).
 Foxtrots—Bernie Cummins and His Hotel New Yorker Orchestra, "Minnie the Mermaid" (De Sylva).

Week-all Stations-to Jan. 11

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Arcadians Dance Orchestra, "Evening Shadows" (Polla).
 Ted Weems and His Orchestra, "Mysterious Mose" (Doyle).
 10.45: Vocal duet—Esther Coleman and Foster Richardson, "Mountain Lovers"
 10.48: Foxtrots—The Rhythmic Eight, "Sweethearts' Holiday" (Kahal).
 Nat Shilkret and His Orchestra, "Singing a Vagabond Song"
 Jack Hylton and His Orchestra, "On Her Doorstep Last Night" (Hargreaves).
 Gus Arnheim and His Orchestra, "All I Want Is Just One."

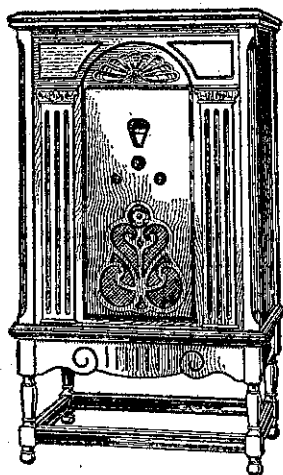
11.0 : God save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—MONDAY, JANUARY 5.

- 3.0 : Gramophone recital.
 4.25 : Sports results.
 5.0 : Children's hour, "Cousin Margot" and "The Mystery Man."
 6.0 : Dinner music session:
 The Philharmonic Orchestra, Berlin, "The Gipsy Baron" (Strauss)
 Heerman Trio, "Pierette" (Chaminade).
 Brunswick Concert Orchestra, "Only a Rose" (Hooker, Friml).
 6.15: Symphony Orchestra, "Eva" Medley (Lehar).
 New Light Symphony Orchestra, "Spanish Dance No. 1" (Moszkowski)
 Brunswick Concert Orchestra, "The Perfect Song" (Breil).
 6.30: Symphony Orchestra, "Frederick" Medley (Lehar).
 New Light Symphony Orchestra, "Spanish Serenade" (Bizet).
 Brunswick Concert Orchestra, "Sylvia" (Speaks).
 6.45: Heerman Trio, "Dalvisa" (Sanby).
 Paul Godwin's String Orchestra, "Lehariana" (arr. Geiger).

- 7.0 : News session.
 7.30: Dialogue—Messrs. E. E. Wiltshire and F. C. Fairclough, "The Story of the Garden"—Elementary botany as applied to garden plants.
 8.0 : Chimes. Band Programme by Christchurch Municipal Band (Conductor J. Noble), and assisted by 3YA artists:
 March—Band, "Old Glory" (Ord Hume).
 8.6 : Tenor—Mr. Oliver Foote, "Come into the Garden, Maud" (Balfe).
 8.10: Organ—E. F. Curzon, "Broadway Melody" (Freed-Brown).
 8.13: Soprano—Mrs. F. C. Vaughan, (a) "The Lass with the Delicate Air" (Arne), (b) "Philosophy" (Emmell).
 8.19: Selection—Band, "Knight Errant" (Trussell).
 8.28: Novelty—The Roosters, "Y.M.C.A. Concert" (Merriman).
 8.34: Baritone—Mr. A. E. Hobbs, (a) "King Duncan's Daughter" (Allitsen), (b) "In Town" (Coates).
 8.40: Songs of the people—Band, (a) "Community Songs" (arr. Scott): Hymn—Band, (b) "Nearer, My God, to Thee" (Mason).
 8.51: Mezzo-contralto—Mrs. Rhys Morgan, (a) "Morning" (Speaks), (b) "I Don't Suppose" (Trotter).
 8.56: Organ—E. F. Curzon, "Lady Divine" (Kountz-Shilkret).
 9.0 : Weather report and station notices.
 9.2 : Selection—Debroy Somers Band, "Russian Fantasy."
 9.6 : Tenor—Mr. Oliver Foote, (a) "Bostination" (De Fontainailles), (b) "Casey the Fiddler" (Haydn Wood).
 9.13: Fantasia—Band, "Normanhurst" (Greenwood).
 9.21: Soprano—Mrs. F. C. Vaughan, (a) "The Lilac Tree" (Gartlan), (b) "The Cuckoo" (Lehmann).
 9.26: Humour—Michael Casey, (a) "Casey's Birthday Party" (Casey), (b) "Casey at the Hospital."
 9.32: Baritone—Mr. A. E. Hobbs, "Port o' Sydney" (James Brash).
 9.35: Foxtrot—Band, "I'll Be Reminded of You" (Ken Smith).
 9.41: Mezzo-contralto—Mrs. Rhys Morgan, (a) "The Reason" (Del Riego), (b) "A Summer Song" (D'Hardelot).
 9.46: Selections—International Concert Orchestra, (a) "Sari Waltz" (Kalmann), (b) "The Waltz Dream" (Strauss).
 9.54: March—Band, "Old Nobility" (Ord Hume).
 10.2 : God save the King.

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4YA, DUNEDIN (650 KILOCYCLES)—MONDAY, JANUARY 5.

- 3.0 : Vocal and instrumental recordings.
 5.0 : Children's session, conducted by Aunt Anita and Uncle Sambo.
 6.0 : Dinner music session.
 New Mayfair Orchestra, "Lilac Time" (Schubert—arrgd. Clutsum).
 San Francisco Symphony Orchestra, (a) "Serenade" (Moszkowski); (b) "Aubade" (Anber).
 6.15: Creators' Band, "Semiramide" Overture (Rossini).
 New Light Symphony Orchestra, "Spanish Serenade" (Bizet); "Narcissus" (Nevin).
 6.30: San Francisco Symphony Orchestra, "Liebeslied" (Kreisler); "Valse de Concert" (Glazounov).
 New Light Symphony Orchestra, "Spring Song" (Mendelssohn).
 6.45: National Symphony Orchestra, "William Tell" Overture (Rossini).
 New Light Symphony Orchestra, "Spanish Dance," No. 1 (Moszkowski).
 7.0 : News session.
 8.0 : Chimes. March—Band of H.M. Grenadier Guards, "Dunedin" (Alford); selection, "Lightning Switch" (Alford).
 8.11: Soprano—Miss D. Yond, (a) "Wings" (d'Hardelot); (b) "I Got a Robe" (Thomas); (c) "Garden of Happiness" (Wood).
 8.21: Popular melody—Kenz Orpheans, "Dance of the Paper Dolls" (Siras).
 Trumpet—W. Tate, "Because" (d'Hardelot).
 Popular melody—Kenz Orpheans, "Happy Humming Bird" (Woods).
 8.32: Recital—Miss Isobel McGregor, (a) "Annabelle Lee" (E. Poe); (b) "The Listeners" (Mare).
 8.42: Waltz—Kenz Orpheans, "I Love You So" (Florito).
 Popular melody—"Happy Days and Lonely Nights" (Fischer).
 8.53: Organ—Sandy McPherson, (a) "Starlight" (Brownsmith); (b) "The Monk's Dream" (Holmes).
 9.0 : Weather report and station notices.
 9.2 : Tenor—Mr. J. B. Hamilton, (a) "At Dawning" (Cadman); (b) "Whatever is, is Best" (Lohr); (c) "I Hear a Thrush at Eve" (Cadman).
 9.12: Banjo—Mr. McNeill, "B and D Super March" (Anon).
 Popular melodies—Kenz Orpheans, "My Lucky Star" (Henderson); "Chloe" (Moret).
 9.23: Bass—Mr. R. B. McDonald, (a) "The Riderless Steed" (Russell); (b) "Tis Good to be Alive" (Cowdrell); (c) "Time to Go" (Sanderson).
 9.33: Popular melodies—Kenz Orpheans, (a) "Just a Night for Meditation" (Pollack); (b) "Paradise" (Zamecnik); waltz, (c) "All that I'm Asking is Sympathy" (Burke).
 9.45: Contralto—Miss M. Somerville, (a) "Kate O'Shane" (Tinley); (b) "Meeting of the Waters" (Moore); (c) "Hills of Donegal."
 9.55: Selection—Court Symphony Orchestra, "The Windmill Man."
 10.1 : God save the King.

2YB, NEW PLYMOUTH (1230 KILOCYCLES)—MONDAY, JANUARY 5.

- 6.30: Children's session.
 7.30: News, markets, and information.
 8.0: Studio concert.

Tuesday, January 6**1YA, AUCKLAND (900 KILOCYCLES)—TUESDAY, JANUARY 6.**

- 3.0: Selected gramophone recordings.
 3.15: Talk—Mrs. Les Crane, "Beauty of Mind and Body in Relation to Diet."
 3.30: Further selected studio items.
 5.0: Children's session, conducted by "Uncle Dave."
 6.0: Dinner music session.
 Berlin State Opera Orchestra, "Mignon" (Thomas).
 Grand Symphony Orchestra, "Tales of Hoffman—Barcarolle."
 6.15: Edith Lorand's Orchestra, "Faust" Fantasia (Gounod); "Wedding of the Winds" (Hall).
 6.30: Berlin State Opera Orchestra, "Italiana in Algeria" (Rossini).
 'Cello—Orabio de Castro, "Nocturne in E Flat" (Chopin).
 6.45: Grand Symphony Orchestra, "Fra Diavolo" (Auber); "Tales of Hoffman—Entr'acte and Minuet" (Offenbach).
 7.0: News and market reports.
 8.0: Chimes. March—Orchestral Octet, under direction of Harold Baxter, "Dunkirk" (Lott); ballet music, "Faust" (Gounod).
 8.15: Mezzo-soprano—Miss Molly Atkinson, (a) "When Roses Bloom" (Reichardt); (b) "Had You But Known" (Denza).
 8.21: Piano—Mr. Cyril Towsey, "Holberg Suite" (Grieg).
 8.33: Tenor—Mr. Arthur H. Ripley, "Onaway, Awake" (Coleridge-Taylor).
 8.37: 'Cello—Miss Lalla Hemus and Orchestral Octet, "Slumber Song" (Squire); patrol, Octet, "The Phantom Brigade" (Myddleton).
 8.45: Talk—Mr. A. B. Chappell, M.A., "Topical Talk."
 9.0: Evening weather forecast and announcements.
 9.2: Selection—Orchestral Octet, "The Vagabond King" (Friml).
 9.12: Mezzo-soprano—Miss Molly Atkinson, (a) "Where'er a Snowflake" (Lehmann); (b) "I Know Where I'm Going" (arrgd. Hughes).
 9.17: Tenor—Mr. Arthur H. Ripley, (a) "Lovely Night" (from "The Desert") (David); (b) "There is a Flower" (from "Maritana") (Wallace).
 9.23: Serenade—Orchestral Octet, "d'Amour" (Blon); waltz, "Weaner Mad'm" (Ziehrer).
 9.33: Programme of dance music.
 One-step—Jack Hylton and His Orchestra, "Moscow" (Evans).
 Foxtrots—"My Wife is on a Diet" (Tobias-Bennett).
 The High Hatters, "The Web of Love" (Cowan-Titsworth).
 Charles Dornberger and His Orchestra, "Campus Capers."
 Johnny Hamps Kentucky Serenaders, "Sunny Side Up."
 The High Hatters, "I'm in Love with You."
 9.48: Waltzes—The Troubadours, "Alice Blue Gown" (McCarthy-Tierney).
 Nat Shilkret's Orchestra, "Dream Lover."
 10.3: Foxtrots—Nat Shilkret's Orchestra, "Broadway Baby Dolls" (Bryan-Meyer); "You Wouldn't Fool Me, Would You?"
 Rudy Vallee and His Connecticut Yankees, "A Little Kiss Each Morning" (Woods).
 Henry Busse's Orchestra, "After the Clouds Roll By."
 10.15: Waltzes—Nat Shilkret's Orchestra, "Until the End."
 Jack Hylton's Orchestra, "Tondeleyo" (Gay).
 Foxtrots—Leo Reisman's Orchestra, "My Sweeter Than Sweet."
 Nat Shilkret's Orchestra, "Wishing and Waiting for Love."
 10.30: Foxtrots—Jack Hylton's Orchestra, "Jollity Farm" (Sarony).
 The High Hatters, "Aren't We All."
 Jack Hylton's Orchestra, "On Her Doorstep Last Night."
 The High Hatters, "You've Got Me Picking Petals off of Daisies" (de Sylva-Brown-Henderson).
 10.45: Waltz—The Troubadours, "Beautiful Lady" (McLennan-Caryll).
 Foxtrots—The High Hatters, "Nobody's Using it Now."
 Johnny Johnson and His Orchestra, "Just You, Just Me."
 Waltz—Nat Shilkret's Orchestra, "Love Me" (Lemoir-Morse-Aivaz).
 10.57: Foxtrots—Jack Hylton's Orchestra, "Yours Sincerely."
 The High Hatters, "My Love Parade" (Grey-Schertzing).
 Ted Weems and His Orchestra, "Sophomore Prom."
 Johnny Johnson and His Statler Pennsylvanians, "Your're Responsible" (Clare-Levant).
 Ted Weems and His Orchestra, "I Don't Want Your Kisses."
 11.0: God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—TUESDAY, JANUARY 6.

- 3.0: Chimes. Selected gramophone recordings.
 3.30 and 4.30: Sporting results to hand.
 5.0: Children's session, conducted by Uncle Toby and Jumbo.
 6.0: Dinner music session.
 Selection—Kauffman's Orchestra, "The Gipsy Baron" (Strauss).
 Waltz—La Vittoria Orchestra, "Wedding of the Winds" (Hall).
 6.15: Piccadilly Orchestra, "If Only I Had You" (Davies); "Lolita."
 Hawaiian—Kolomoku's Honoluluans, "Aloha Oe" (Liliuokalani).
 Piccadilly Orchestra, "Charmaine" (Rapee).
 6.30: Selection—New Mayfair Orchestra, "This Year of Grace" (Coward).
 Waring's Orchestra, "Ah! Sweet Mystery of Life" (Herbert).

- Hawaiian—Kolomoku's Honoluluans, "Three O'Clock in the Morning."
 6.45: Victor Concert Orchestra, "Minuet in G" (Paderewski); "Amaryllis."
 Piccadilly Orchestra, "Bird Songs at Eventide" (Coates).
 Waltz—International Concert Orchestra, "Blue Danube" (Strauss).
 7.0: News session, market reports and sports results.
 7.40: Lecturette Representative Agricultural Department, "For the Man on the Land."
 8.0: Chimes. Overture—Salon Orchestra, (Conductor Mr. M. T. Dixon), "Glory of Russia" (Krein).
 8.11: Tenor—Mr. Arthur Coe, (a) "Mignonette" (Brahe), (b) "Charming Creature" (Lane Wilson).
 8.16: Elocution—Mr. J. F. Montague, (a) "A Pack of Cards" (Andrews); (b) "The Crispin's Speech" (from "Henry V") (Shakespeare).
 8.26: Contralto—Mrs. W. E. Britton, (a) "Fancy Waft Me In Golden Vision" (Verdi, arr. Calcott); (b) "The Auld House."
 8.32: Selection—Salon Orchestra, "Songs Without Words" (Mendelssohn).
 8.42: Bass—Mr. R. J. G. Madigan, "Old Barty" (Grant).
 8.46: Mezzo-soprano—Miss Christina Young, (a) "I Wonder If Love Is a Dream" (Foster), (b) "A Little Coon's Prayer" (Hope).
 8.52: Songs at the piano—Mr. Billy Hart, (a) "Old New England Moon" (Vance), (b) "An' Furthemore" (Green), (c) "The Latest Hit."
 9.2: Weather report and station notices.
 9.4: Suite—Salon orchestra, "Monsieur Beaucaire" (Rosse).
 9.14: Tenor—Mr. Arthur Coe, (a) "Where'er You Walk" (Handel), (b) "Stars Above" (Squire).
 9.20: Recital—Mr. J. F. Montague, "Good-bye, God Bless You" (Field).
 Humour—Mr. J. F. Montague, (a) "The Wedding Breakfast" (Newman); (b) "Selected."
 9.24: Contralto—Mrs. W. E. Britton, (a) "Kate O'Shane" (Tinley); (b) "Silent O'Moyle" (Moore).
 9.39: Selection—Salon Orchestra, "Jocelyn" (Godard).
 9.49: Mezzo-soprano—Miss Christina Young, (a) "Was It a Dream" (Spears), (b) "Pale Moon" (Niven).
 9.54: Bass—Mr. R. J. G. Madigan, "Mandalay" (Willoughby).
 9.58: Selection—Salon Orchestra, "Bonheur De Printemps" (Borch).
 10.4: God save the King.

3YA, CHRISTCHURCH (930 KILOCYCLES)—TUESDAY, JANUARY 6.

SILENT DAY.

4YA, DUNEDIN (650 KILOCYCLES)—TUESDAY, JANUARY 6.

- 3.0: Selected recordings.
 5.0: Children's session, conducted by Uncle Bert.
 6.0: Dinner music session.
 Royal Opera Orchestra, "Praeludium" (Jarnefeldt).
 'Cello—Pablo Casals, "Melody in F" (Rubinstein).
 Waltz—Royal Opera Orchestra, "Eugin Onegin" (Tchaikowsky).
 Balalaika Orchestra, "Shining Moon" (Russian Folk Song).
 6.15: Paul Whiteman's Orchestra, "Suite of Serenades" (Herbert): 1. Spanish; 2. Chinese; 3. Cuban; 4. Oriental.
 Philadelphia Symphony Orchestra, "Tales From the Vienna Woods."
 6.30: Royal Opera Orchestra, "Berceuse" (Jarnefeldt).
 'Cello—Pablo Casals, "Traumerei" (Schumann).
 Male Quartet—The Rounders, "Ohlo-E" (Kahn).
 San Francisco Symphony Orchestra, (a) "Serenade" (Volkman); (b) "Flight of the Bumble Bee" (Rimsky-Korsakov).
 6.45: Chicago Symphony Orchestra, (a) "Valse Triste" (Sibelius); (b) "Funeral March of a Marionette" (Gounod).
 San Francisco Symphony Orchestra, "Marche Militaire" (Schubert).
 7.0: News session.
 8.0: Studio Concert by the St. Kilda Band, under the direction of Mr. James Dixon, and assisting artists. March—Band, "The Vanished Army" (Alford); valse—"Syringa" (Taylor).
 8.16: Contralto—Miss Helen Roy, (a) "My Heart's Desire" (Clarke); (b) "The Hawk" (Clarke).
 8.22: Accordeon—Guido Deiro, (a) "Serenade" (Drigo), (b) "Serenade."
 8.28: Bass—Mr. F. Woods, "Blow, Blow, Thou Winter Wind" (Sergeant).
 8.32: Scottish Overture—Band, "Fair Maid of Perth" (Volpi).
 8.40: Recital—Miss P. Marshall, "The Pedlar" (de la Mere).
 8.46: Guitars—Four Hawaiians, "Honolulu Sweetheart of Mine."
 8.49: Soprano—Miss D. Sligo, "The Flutes of Spring" (Blare).
 8.52: Cornet, with Band accompaniment, "The Lost Chord" (Sullivan).
 9.0: Weather report and station notices.
 9.2: Selection—Classic Symphony Orchestra, "Classical Memories."
 9.10: Bass—Mr. F. Woods, (a) "The Little Girl from Hanley Way" (Clarke); (b) "I Be Hopin' You Remember" (Clarke).
 9.16: Guitars—Four Hawaiians, "Song of the Islands" (King).
 9.19: Recital—Miss P. Marshall, "The Lost Dog" (Mark Twain).
 9.23: Selection—Band, "The Desert Song" (Romberg).
 9.37: Contralto—Miss Helen Roy, "St. Valentine" (Martin).
 9.40: Organ—Jesse Crawford, (a) "How Am I To Know" (King); (b) "I'll Close My Eyes to the Rest of the World" (Friend).
 9.46: Foxtrot—Band, "Tiptoe Through the Tulips" (Burke).
 9.50: Soprano—Miss D. Sligo, (a) "Moonstruck" from "Our Miss Gibbs" (Monckton); (b) "She Had a Letter From Her Love" (German).
 9.56: March—Band, "The Moa" (Bulch).
 10.0: God save the King.

Wednesday, January 7

1YA, AUCKLAND (900 KILOCYCLES)—WEDNESDAY, JANUARY 7.

- 3.0 : Selected gramophone recordings.
 3.30 : Literary selection and further gramophone recordings.
 5.0 : Children's session.
 6.0 : Dinner music session:
 J. H. Squire's Celeste Octet, "Operatic" (arr. Squire).
 Band—The Bombardiers, "Hungarian Dance No. 5" (Brahms).
 Orchestre Symphonique de Paris, "L'Arlesienne Suite—Adagietto."
 6.15 : Regal Orchestra, "Pagliacci" Selection (Leoncavallo).
 J. H. Squire's Celeste Octet, "Song of the Waterfall" (Squire).
 Orchestre Symphonique de Paris, "L'Arlesienne Suite—Entr'acte, Le Carillon" (Bizet).
 6.30 : London Theatre Orchestra, "A Country Girl" Selection (Monekton).
 Band—The Bombardiers, "Hungarian Dance No. 6" (Brahms).
 Orchestre Symphonique de Paris, "L'Arlesienne Suite—Intermezzo."
 6.45 : Regal Cinema Orchestra, "Show of Shows" Selection.
 J. H. Squire's Celeste Octet, "Scent of the Jasmine" (Squire).
 Orchestre Symphonique de Paris, "L'Arlesienne Suite—Entr'acte, La Cuisine de Castelet" (Bizet).
 7.0 : News and market reports.
 8.0 : Chimes. Studio concert by the Auckland Artillery Band, under the conductorship of Mr. Wynne Smith, and assisting artists.
 March—The Band, "Queen of the North" (Morehouse); selection, "La Stranier" (Bellini).
 8.17 : Bass—Mr. Duncan Black, "Hybrias the Organ" (Elliot).
 Vocal duet—Messrs. Lambert Harvey and D. Black, "All's Well."
 Tenor—Mr. Lambert Harvey, (a) "Absent" (Metcalf), (b) "If I Can Live" (Stephenson).
 8.30 : Selection—Band, "Wagner's Works" (Wagner).
 8.45 : Chorus—Columbia Light Opera Company, (a) "Paul Ruben Memories," (b) "Ivan Caryll Memories."
 Ever-ready Hour Group, "Going Home" (arr. Fisher).
 8.57 : Foxtrot—Band, "Stein Song" (Colcord and Fenstad).
 9.1 : Evening weather forecast and announcements.
 9.3 : Vocal quartet—The New Clarion Quartet, "When Tom and I Were Young" (Butterfield); "Old Mother Hubbard" (Wheeler); "Good-night, Good-night, Beloved" (Pinsuti).
 9.16 : Cornet Duet—Bandsmen K. Smith and L. Mackay, "Besses o' the Barn" (Carrie).
 Overture—Band, "Tancredi" (Rimmer).
 9.28 : Organ—W. G. Webber, "Organ Fantasia of Old Songs" (arr. Webber).
 Organ—Gatty Sellars, "The Lost Chord" (Sullivan).
 9.40 : Soprano—Miss Lillian Wood, "Columbine's Garden" (Besley).
 Vocal duet—Misses Beryl Smith and Lillian Wood, "In the Spring-time" (Newton).
 Contralto—Miss Beryl Smith, "Home" (Walford Davies).
 9.52 : Band—"Tiptoe Through the Tulips" (arr. Wynne Smith); march, "B.B. and C.E." (Ord Hume).
 10.0 : God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—WEDNESDAY, JANUARY 7.

SILENT DAY.

3YA, CHRISTCHURCH (980 KILOCYCLES)—WEDNESDAY, JAN. 7.

- 3.0 : Gramophone recital.
 4.25 : Sports results.
 5.0 : Children's hour, "Peterkin."
 6.0 : Dinner music session:
 Paul Godwin's Orchestra, "Through Weber's Enchanted Woods" (Ernst Urbach); "Mignon" Entr'acte Gavotte (Thomas); "Firefly's Idyl."
 6.15 : Paul Godwin and His Orchestra, "Third Waltz Medley" (Robrecht).
 Members of the State Opera Orchestra, Berlin, "Don Pasquale."
 6.30 : Paul Godwin's Orchestra, "Suite Algerienne" (Saint-Saens).
 Symphony Orchestra, "Homage March" (Grieg).
 Vienna Schrammel Quartet, "Firefly's Appointment" (Ludwig Siede).
 6.45 : Polydor Brass Band Orchestra, "Il Trovatore" (Verdi).
 Great Symphony Orchestra, "Paying a Visit to Millocker" (Morena).
 7.0 : News session.
 7.30 : Addington Stock Market Reports.
 8.0 : Chimes. Studio Programme by the Working Men's Club Orchestra (Conductor, Mr. Arthur G. Heath) and assisting artists.
 March—Orchestra, "Entry of the Gladiators" (Julius Fuell); overture, "Concert Overture" (Franke).
 8.12 : Baritone—Mr. F. W. Simpson, (a) "The Fortune-Hunter" (Willeby).
 (b) "Buy My Strawberries" (Oliver), (c) "Vauxhall Way."
 8.18 : Cello—Lauri Kennedy, (a) "Hungarian Rhapsody" (Popper), (b) "Cradle Song" (Dvorak), (c) "Songs My Mother Taught Me."
 8.24 : Contralto—Mrs. F. M. Kerr, "The Gleaners' Slumber Song."
 8.28 : Humour—Mr. H. Instone, "A Holiday on the Farm" (Kendal).
 8.35 : Wurlitzer organ—"La Rosita" (Dupont).
 8.39 : Tenor—Mr. Roy Hill, (a) "Afton Water" (traditional Scotch), (b) "My Love's an Arbutus" (traditional Irish).
 8.44 : Choral—Don Cossacks' Choir, "Serenade" (Aht).
 8.48 : Selection—Orchestra, "William Tell" (Rossini).
 9.1 : Weather forecast and station notices.

- 9.3 : Selection—Band of H.M. Coldstream Guards, "La Fille de Madame Angot" (Lecocq).
 9.11 : Baritone—Mr. F. W. Simpson, (a) "All the Fun of the Fair" (Easthope-Martin), (b) "Hatfield Bells" (Easthope-Martin).
 9.15 : Cornet—Mr. Fred Fox, "Souvenir de Suisse" (Liberati).
 9.20 : Contralto—Mrs. F. M. Kerr, (a) "Sleep and the Roses" (Tate), (b) "Killarney" (Balfe).
 9.26 : Humour—Mr. H. Instone, "The Village Choir" (arr. Instone).
 9.29 : Flute and clarinet—Messrs. T. Amos and F. L. Wolege, "Lo! Here the Gentle Lark" (Bishop).
 9.34 : Tenor—Mr. Roy Hill, (a) "To Daisies" (Quilter), (b) "The Maiden Blush" (from "To Julia" (Quilter), (c) "Duna" (McGill).
 9.42 : Vocal jazz—Layton and Johnstone, "Wake Up and Dream" (Porter); Negro Spiritual, "Looking at You," "Ev'ry Time I Feel the Spirit."
 9.48 : Characteristic piece—Orchestra, (a) "In a Monastery Garden" (Ketelbey); intermezzo (b) "The Gladiator's Farewell" (Blankenburg).
 God save the King.

4YA, DUNEDIN (650 KILOCYCLES)—WEDNESDAY, JANUARY 7.

- 3.0 : Selected recordings.
 3.15 : Lecturette—A 15-minutes' talk arranged by the Home Science Extension Service of the Otago University: "Sweets, or No Sweets?"
 4.25 : Sporting results.
 5.0 : Children's session conducted by Big Brother Bill.
 6.0 : Dinner music session:
 Royal Albert Hall Orchestra, "Carmen—Prelude Act 1" (Bizet).
 National Symphony Orchestra, "Sylvia Ballet—Cortege Bacchus."
 Organ—Reginald Foort, "Schon Rosmarin" (Kreisler).
 6.15 : Marek Weber's Orchestra, "Vienna by Night" (Komzak).
 Cello—Lauri Kennedy, "Hungarian Rhapsody" (Popper).
 6.30 : National Symphony Orchestra, "Bohemian Girl" Selection (Balfe).
 Royal Albert Hall Orchestra, "Carmen—Prelude Act 2" (Bizet).
 Organ—Reginald Foort, "A Brown Bird Singing" (Haydn-Wood).
 6.45 : Royal Opera Orchestra, "Hungarian Dance No. 5" (Brahms).
 Band of H.M. Coldstream Guards, "H.M.S. Pinafore" Selection.
 7.0 : News session.
 7.15 : Talk—Mr. L. W. McCaskill, under auspices of 4YA Primary Productions Committee, "Review of the December Issue of the Journal of Agriculture."
 8.0 : Selection—La Scala Orchestra, "Daughter of the Regiment" (Donizetti).
 Trios—Miss R. Holmes, Miss E. Judd, and Mrs. Moffatt, (a) "Raymond" (Thomas), (b) "Romanza" (Athenion).
 8.19 : Baritone—Mr. B. C. Bellhouse, (a) "Yeomen of England" (German), (b) "Rolling Down to Rio" (German), (c) "Droop Not, Young Love" (Handel).
 8.29 : Recital—Mr. A. Gorrie, "Ten Minutes with Kents."
 8.39 : Selections—Instrumental Trio, "Lohengrin" Selection (Wagner); "Hearts and Flowers" (Tobani).
 8.49 : Contralto—Miss Mary Teviotdale, (a) "Come Back" (Quilter), (b) "A Secret" (Quilter), (c) "Advice" (Carew).
 9.0 : Weather report and station notices.
 9.2 : Tenor—Mr. W. Harrison, (a) "Echo" (Somerset), (b) "A Resolve" (Fontenailles), (c) "She is Far from the Land" (Lambert).
 9.12 : Selections—Instrumental Trio, "Marche Militaire Viennois" (Kreisler); "Melodies from 'Souvenir d'un Lien Cher'" (Tschalkowsky).
 9.20 : Soprano—Miss Lettie de Clifford, (a) "Come, Dance at Our Wedding," (b) "Carissima" (Penn), (c) "You've Got Your Mother's Eyes."
 9.30 : Dance session:
 Foxtrots with vocal trio—Alfredo and His Band, "Sweetheart of All My Dreams" (Fitch).
 The Blue Jays, "Dance of the Paper Dolls" (Tucker).
 Alfredo and His Band, "Deep Night."
 The Blue Jays, "The Toymaker's Dream" (Golden).
 9.42 : Waltzes with vocal chorus—Alfredo and His Band, "My Song of the Nile" (De Sylva); "I'll Always be in Love with You" (Ruby).
 Foxtrots with vocal chorus—Alfredo and His Band, "Turn on the Heat" (De Sylva); "This is Heaven" (Yellen); "If I had a Talking Picture of You" (De Sylva).
 Vocal—G. H. Elliott, "Muddlin' Thro'" (Howard Flynn).
 10.0 : Foxtrot with vocal duet—Alfredo and His Band, "Little Pal" (De Sylva); "Laughing Marionette" (Collins); "Why Can't You?"
 Waltz with vocal chorus—Alfredo and His Band, "Sometimes."
 Waltz with vocal trio—Alfredo and His Band, "Let Me Dream in Your Arms Again" (Nicholls).
 10.15 : Vocal—Stanley Kirkby, "My Mother's Eyes" (Baer).
 Foxtrot with vocal chorus—Radio Rhythm Boys, "Painting the Clouds with Sunshine" (Burke).
 Alfredo and His Band, "Mean to Me" (Turk).
 Radio Rhythm Boys, "Tiptoe Thro' the Tulips with Me" (Burke).
 The Plaza Band, "A Precious Little Thing Called Love" (Davis).
 10.30 : Waltz with vocal chorus—Alfredo and His Band, "Lady Divine."
 Foxtrot with vocal chorus—Harry Hudson's Melody Men, "Why Do I Love You?" (Kern).
 Two-step—Bal Musette Orchestra, "Mayorqua" (Brunel).
 Vocal—G. H. Elliott, "Yodelling Coon" (Howard Flynn).
 10.42 : Foxtrots with vocal choruses—Alfredo and His Band, "I've Never Seen a Smile Like Yours" (Johnson); "I Think of What You Used to Think of Me" (Turk).
 Harry Hudson's Melody Men, "Ol' Man River" (Kern).
 Alfredo and His Band, "I Don't Know Why I Do It, But I do"; "Do Something" (Green, Stept).

Dutch dance—Bal Musette Orchestra, "Raffle" (Berniaux).
 11.0 : God save the King.

2YB, NEW PLYMOUTH (1230 KILOCYCLES)—WEDNESDAY, JANUARY 7.

6.30: Children's session.
 7.30: News, markets, and information.
 8.0 : Studio concert.

Thursday, January 8

1YA, AUCKLAND (900 KILOCYCLES)—THURSDAY, JANUARY 8.

8.0 : Selected gramophone recordings.
 8.15: Lecturette—"Sandwiches and Sandwich Fillings." Talk arranged by The Home Science Extension Department, Otago University.
 8.30: Further selected studio items.
 9.0 : Children's session.
 9.0 : Dinner music session.
 Great Symphony Orchestra, "Vienna Operetta Revue" (Robrecht).
 Jacques Jacobs' Ensemble, "Wiener Blut" (Strauss).
 6.15: Band of H.M. Grenadier Guards, "La Benediction des Poignards."
 Jacques Jacobs' Ensemble, "España Waltz" (Waldteufel).
 Plaza Theatre Orchestra, "My Lady Dainty" (Hesse).
 Jacques Jacobs' Ensemble, "Sobre Las Olas" (Rosas).
 6.30: Symphony Orchestra, "Countless Mariza" Medley (Kalman).
 Jacques Jacobs' Ensemble, "L'estudiantina" (Waldteufel).
 6.45: B.B.C. Wireless Symphony Orchestra, "Il Trovatore" Selection (Verdi).
 Band of H.M. Grenadier Guards, "Lo! Here the Gentle Lark" (Bishop).
 Plaza Theatre Orchestra, "The Busy Bee" (Bendix).
 7.0 : News and market reports.
 8.0 : Chimes. March—Orchestral Octet, under direction of Harold Baxter, "London Scottish" (Haines). Intermezzo—"Poupee Valsante."
 8.10: Contralto—Mrs. M. Robertson, (a) "You're Always in My Arms" (Tierney); (b) "Wondering Why" (Coningsby Clarke).
 8.16: Sketch—Miss Maisie Carte-Lloyd and Mr. Alan McSkimming, "Scene Between Mrs. Malaprop and Sir Anthony" (Sheridan).
 8.24: Selection—Orchestral Octet, "Coppelia" (Delibes).
 8.34: Baritone—Mr. Claude H. Suisted, (a) "The Kerry Dance" (Molloy); (b) "Give Me Youth and a Day" (Drummond).
 8.40: Contralto—Mrs. M. Robertson, (a) "The World is Waiting for the Sunrise" (Seitz); (b) "The Little Old Garden" (Hewitt).
 8.46: Selection—Orchestral Octet, "Mikado" (Sullivan).
 8.58: Evening weather forecast and announcements.
 9.0 : Baritone—Mr. Claude H. Suisted, (a) "Crown of the Year" (Easthope Martin); (b) "Tune of the Open Country" (Easthope Martin).
 9.6 : Concert piece—Orchestral Octet, "Chanson de Nuit" (Elgar); dance, "La Cinquantaine" (Marie).
 9.13: Sketch—Miss Maisie Carte-Lloyd and Mr. A. McSkimming, "A Fool's Paradise" (Grundy).
 9.25: Waltz—Orchestral Octet, "Gold and Silver" (Lehar).
 9.31: Gramophone lecture-recital—Mr. Karl Atkinson, "In Lighter Vein."
 10.1 : God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, JANUARY 8.

8.0 : Chimes. Selected gramophone recordings.
 8.15: Lecturette—Miss I. F. Meadows, "Sandwiches and Sandwich Fillings." Arranged by the Home Science Extension Department of Otago University.
 8.30 and 4.30: Sporting results to hand.
 9.0 : Children's session, conducted by Uncle George and Big Brother Jack.
 9.0 : Dinner music session.
 Overture—Grand Symphony Orchestra, "Zampa" (Herold).
 Waltz—Dajos Bela Orchestra, "Morgenblatter" (Strauss).
 6.15: Instrumental—Orchestra of the Opera Comique, Paris, "Scenes Pittoresques" (Massenet).
 Waltz—Edith Lorand's Orchestra, "Vienna Waltz" (Drda).
 6.30: Waltz—Dajos Bela Orchestra, "Marien Klange" (Strauss); "Ideale."
 Waltz—Edith Lorand's Orchestra, "Merry Vienna" (Zishrer).
 6.45: Waltz—Edith Lorand's Orchestra, "Song of Autumn" (Waldteufel).
 Waltz—Queenie and David Kaili, "Hawaiian March" (Ellis).
 Valse intermezzo—Edith Lorand's Orchestra, "The Flowers' Dream."
 Selection—H.M. Irish Guards, "The Desert Song" (Romberg).
 7.0 : News session, market reports and sports results.
 8.0 : Chimes. A studio concert by the Wellington Boys' Institute Band (Conductor, Mr. A. Iremonger) and 2YA artists. March—Band, "Burlington" (Pryor); overture, "Pique Dame" (Suppe).
 8.20: Contralto—Miss Dorothy Spiller, (a) "An Open Secret" (Woodman); (b) "That's All" (Brahe).
 8.25: Selection—J. H. Squire's Celeste Octet, "Everybody's Melodies," Part 1.
 8.29: Baritone—Mr. H. W. Dowling, (a) "Up from Somerset" (Sanderson); (b) "The Blind Ploughman" (Clarke).
 8.35: Japanese poem—Band, "Ke-sa-ko" (Chapus).
 Characteristic—Band, "The Lizard and the Frog" (Morse).
 8.42: Soprano—Miss Phyllis M. Martin, (a) "Dawn is a Song" (Montague Phillips); (b) "Only a Rose" (Friml).
 8.48: Novelty—Royal Serbian Tambouritzza Orchestra, "Kosovo Waltz."
 8.51: Waltz—Band, "Merry Widow" (Lehar).

9.1 : Weather report and station notices.
 9.3 : Tenor—Mr. Edwin Dennis, (a) "Sing, Break into Song" (Mallinson); (b) "Baby" (Mallinson).
 9.9 : Selection—Band, "Maritana" (Wallace).
 9.21: Contralto—Miss Dorothy Spiller, "The Fairy Tales of Ireland."
 9.25: Selection—J. H. Squire's Celeste Octet, "Everybody's Melodies," Part 2.
 9.29: Baritone—Mr. H. W. Dowling, "Friend o' Mine" (Sanderson).
 9.33: Piccolo polka—Band, "The Woodbird" (Schmidt-Berka).
 9.39: Tenor—Mr. Edwin Dennis, (a) "Mother o' Mine" (Tours); (b) "I Did Not Know" (Trotiere); (c) "May I Print a Kiss?" (C. J. Bond).
 9.46: Chorus—Light Opera Company, "Songs of the Past."
 9.54: Characteristic—Band, "The Parade of the Tin Soldiers" (Jessel).
 March—Band, "Joyce's 71st N.Y. Regiment" (Baynes).
 10.2 : God save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—THURSDAY, JANUARY 8.

8.0 : Gramophone recital.
 8.15: Lecturette—"Sandwiches and Sandwich Fillings." Arranged by the Home Science Extension Department, Otago University.
 4.25: Sports results.
 5.0 : Children's hour, "Uncle Frank."
 6.0 : Dinner music session.
 Dajos Bela Orchestra, "I Pagliacci" Selection (Leoncavallo).
 Frank Westfield's Orchestra, "The Druid's Prayer" (Davson).
 Orchestra of the Opera Comique, Paris, "Carmen Overture" (Bizet).
 6.15: Edith Lorand's Orchestra, "Tales of Hoffmann—Fantasia."
 Grand Symphony Orchestra, "L'Arlesienne Suite No. 1." (a) "Minuet"; (b) "Adagietto" (Bizet).
 6.30: Dajos Bela Orchestra, "La Traviata—Fantasia" (Verdi).
 Grand Symphony Orchestra, "L'Arlesienne Suite No. 2." (a) "Intermezzo"; (b) "Farandole" (Bizet).
 6.45: Edith Lorand's Orchestra, "Cavalleria Rusticana—Fantasia."
 Orchestra of the Opera Comique, Paris, "Carmen—Entr'acte."
 Frank Westfield's Orchestra, "Neapolitan Nights."
 7.0 : News session.
 7.30: Talk—Mr. A. Leslie, M.R.C.V.S., "The Maintenance of Health in Sheep."
 8.0 : Chimes. Instrumental trio—Miss Thelma Cusack, Miss Marjorie Chapman and Mr. Fred. Page, (a) "Ave Maria" (Schubert); (b) "Scherzo" (Schubert).
 8.10: Soprano—Miss Cicely Audibert, "Ombra Leggera" (Meyerbeer).
 8.15: Piano—Miss Ellis Gilders, "Caprice" (Sibelius).
 8.19: Elocutionary recital—Mr. J. F. Montague, "From My Scrap Book."
 8.42: Baritone—Mr. F. C. Penfold, (a) "O Flower Divine" (Haydn Wood); (b) "Prologue" (from "Pagliacci") (Leoncavallo).
 8.50: Violin—Miss Thelma Cusack, "Thais" (Massenet).
 Selection—Instrumental Trio, "Miniature Trio" (Gurlitt).
 9.0 : Weather forecast and station notices.
 9.2 : Piano—Miss Ellis Gilders, "Loreley" (Selling).
 9.7 : Soprano—Miss Cicely Audibert, (a) "The Dreary Steppe" (Greschaninov); (b) "Robin's Song" (White).
 9.12: Elocutionary recital—Mr. J. F. Montague, (a) "Fate" (MS.); (b) "The Girl Who Began Again" (Hazzard); (c) "Clarence's Dream."
 9.22: Selections—Instrumental Trio, (a) "Adagio" (from "Trio in D Minor") (Mendelssohn); (b) "Andante" (Beethoven, arr. Kreisler).
 9.30: Dance music until 11 p.m. by the Bailey-Marston Dance Orchestra.
 God save the King.

4YA, DUNEDIN (650 KILOCYCLES)—THURSDAY, JANUARY 8.

SILENT DAY.

Friday, January 9

1YA, AUCKLAND (900 KILOCYCLES)—FRIDAY, JANUARY 9.

8.0 : Selected gramophone recordings.
 8.30: Literary selection and further gramophone items.
 9.0 : Children's session, conducted by "Nod" and "Aunt Jean."
 9.0 : Dinner music session.
 Dajos Bela Orchestra, "Pique Dame" Fantasia (Tchaikowsky).
 Grand Symphony Orchestra, "Polonaise No. 1 in A" (Chopin).
 Dajos Bela Orchestra, "Dynamiden Waltz" (Josef Strauss).
 6.15: Grand Symphony Orchestra, "Hungarian Dances Nos. 5 and 6."
 Edith Lorand's Orchestra, "Myosotis Waltz" (Waldteufel).
 Parlophone Dance Orchestra, "The Skaters" (Waldteufel).
 6.30: Orchestra of the Opera Comique, Paris, "Ballet Egyptien" (Luigini).
 Cello—Gregor Piatigorsky, "The Swan" (Saint-Saens).
 6.45: Edith Lorand's Orchestra, "The Merry Widow" Selection (Lehar).
 Grand Symphony Orchestra, "Scherzo from Midsummer Night's Dream" (Mendelssohn).
 7.0 : News and market reports.
 8.0 : Chimes. Overture—Plaza Theatre Orchestra, "Three Bears" (Coates).
 Selection—Eddie Thomas' Collegians, "Waltz Medley."
 8.14: Baritone—Mr. A. G. McPhail, (a) "The Monarch of the Woods" (Cherry); (b) "The Lonesome Road" (Shilkret); (c) "Homeward Bound" (Gleeson); (d) "Roses" (Adams).
 8.26: Vocal and instrumental—The Salon Trio, Instrumental Trio, "Hungarian Dance in G Minor" (Brahms).

- Pianoforte solo, "Presto Con Fuoco" (from "Sonata Op. 31, No. 3") (Beethoven); vocal solo, with violin obligato, "Ave Maria."
- 8.38: Novelty piano and vocal—The Snappy Three, (a) "If I Had a Girl Like You" (McDermott); (b) "Popular Hits."
- 8.47: Clarinet—Mr. S. C. Lewis, (a) "Fantasia on Moore's Irish Melodies" (McDonald); (b) "Selection from I Puritani" (Bellini); (c) "Chant Sans Paroles" (Tschalkowsky).
- 9.0: Evening weather forecast and announcements.
- 9.2: Mezzo-soprano—Miss Kathleen Morrison, (a) "If I Were the Man in the Moon" (Fisher); (b) "The Lark's Song" (D'Hardelot); (c) "The Valley in the South" (Klein); (d) "Summer Rain."
- 9.14: Novelty vocal—Gotham Comedy Quartet, "King Arthur" (Trad'l); "The Old Sow" (Trad'l).
- Layton and Johnstone, "Oh, Kay Medley" (Gershwin); Columbia Light Opera Company, Gems from "Rio Rita" (McCarthy).
- 9.26: Elocution—Miss R. Speed, (a) "Ballad of Splendid Silence"; (b) "The Egg."
- 9.37: Vocal and instrumental—The Salon Trio, 'Cello solo, "Songs My Mother Taught Me" (Dvorak); vocal solo, with violin obligato, "Echo Song" (Bishop); violin solos, "Rondino" (Beethoven-Kreisler); "Hungarian Rhapsody" (Hensley).
- 9.52: Novelty piano and vocal—The Snappy Three, (a) "If I'm Dreaming" (Burke); (b) "Latest Hit."
- 9.57: Selection—Band of H.M. Coldstream Guards, "The Belle of New York" (Kerker).
- 10.1: God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—FRIDAY, JANUARY 9.

- 3.0: Chimes. Selected gramophone recordings.
- 3.30 and 4.30: Sporting results to hand.
- 5.0: Children's session, conducted by Uncle Jim and the Story Book Lady.
- 6.0: Dinner music session.
- Grand Symphony Orchestra, "Raymond Overture" (Thomas).
- Edith Lorand Orchestra, "Wine, Women and Song" (Joh. Strauss).
- Orchestra Mascotte with Edith Lorand, "Siren Magic" (Waldteufel).
- 6.15: Orchestra of the Opera Comique, Paris, "Scenes Pittoresques": (a) Marche, (b) Fete Boheme (Massenet).
- Dr. Ormandy's Instrumental Trio, "Barcarolle" (Offenbach).
- Edith Lorand Orchestra, "Minuet" (Boccherini).
- 6.30: Edith Lorand Orchestra, "Tales from the Vienna Woods."
- The Royal Music Makers, "Ah! Sweet Mystery of Life" (Herbert).
- Orchestra Mascotte with Edith Lorand, "I'd Like to Kiss the Ladies."
- 6.45: Edith Lorand Orchestra, "Toreador and Andalouse" (Rubinstein); "Roses of the South" (Joh. Strauss).
- Dr. Ormandy's Instrumental Trio, "From the Land of the Sky-Blue Water" (Cadman).
- The Royal Music Makers, "Kiss Me Again" (Herbert).
- 7.0: News session, market reports and sports results.
- 8.0: Chimes. Note.—This programme is subject to interruption to permit of a relay of a sound film feature from the Majestic Theatre. Overture—2YA Orchestra (Conductor, Signor A. P. Truda), "Pottered Overture" (Englemann).
- 8.11: Elocution—Mr. Lawrence Searle, (a) "The Art of Kissing" (Blaschick); (b) "The Cow" (Anon.).
- 8.21: Soprano—Miss Myra Sawyer, (a) "The Lass with the Delicate Air" (Arne); (b) "Lovers in the Lane" (Lehmann).
- Duet—Miss Myra Sawyer and Mr. William Boardman, "Angels Guard Thee" (Godard).
- Bass—Mr. William Boardman, (a) "Sea Road" (Haydn Wood); (b) "Asthere" (Trotter).
- 8.38: Selection—2YA Orchestra, "The Leek" (Myddleton).
- 8.50: Tenor—Mr. Stewart Nelson, (a) "Tom Bowling" (Dibden); (b) "At Dawning" (Cadman); (c) "I Know of Two Bright Eyes."
- 9.0: Weather report and station notices.
- 9.2: Selection—2YA Orchestra, "Robin Hood" (Wiegand).
- 9.12: Popular songs at the piano—Miss Muriel Johns, (a) "I'm Sailing on a Sunbeam" (Dreyer); (b) "You'll Find Your Answer in My Eyes" (Baer); (c) "When I'm Looking at You" (Stothart); (d) "If I Had a Girl Like You" (McDermott).
- 9.22: Selections—2YA Orchestra, (a) "Christmas Bells" (Eilenberg); (b) "One Girl" (Lang); (c) valse, "Tout Paris" (Waldteufel).
- 9.35: Dance programme.
- Foxtrots—Lloyd Huntly and His Isle o' Blues Orchestra, "Moaning for You" (Goulding).
- Roger Wolfe Kahn and His Orchestra, "Without a Song."
- Colonial Club Orchestra, "It's You I Love" (Davis).
- Lloyd Huntly and His Isle o' Blues Orchestra, "Alone in the Rain" (Goulding).
- Colonial Club Orchestra, "Why?" (Davis).
- 9.45: Duet—Billy Murray and Walter Scanlan, "Shut the Door" (Ives).
- Foxtrots—The A. and P. Gypsies, "South Sea Rose" (Gilbert).
- Roger Wolfe Kahn and His Orchestra, "Great Day" (Rose).
- The A. and P. Gypsies, "Only the Girl" (Ruby).
- 9.57: Waltz—Hal Kemp and His Orchestra, "Romance" (Leslie).
- Foxtrots—Herman Waldman and His Orchestra, "Marbles" (Canicas).
- Hal Kemp and His Orchestra, "Navy Blues" (Turk-Ahlert).
- Benny Meroff and His Orchestra, "The Talk of the Town."
- Colonial Club Orchestra, "March of the Old Guard" (Grey).
- 10.12: Vocal—Frances Williams, "Bigger and Better than Ever" (Friend).
- Foxtrots—Colonial Club Orchestra, "Sweetheart, We Need Each Other."
- Herman Waldman and His Orchestra, "Waiting" (Gardner).

- Ben Bernie and His Orchestra, "What Is This Thing Called Love?" (Cole-Porter).
- 10.24: Waltz—Regent Club Orchestra, "You're Always in My Arms."
- Foxtrots—Ray Miller and His Orchestra, "Funny, Dear, What Love Can Do" (Bennett).
- Benny Meroff and His Orchestra, "Happy Days are Here Again" (Ager).
- Ray Miller and His Orchestra, "Finesse" (Maltin Doll).
- 10.36: Duet—Billy Murray and Walter Scanlan, "Sergeant Flagg and Sergeant Quirt" (Klein).
- Foxtrots—Colonial Club Orchestra, "Charming" (Grey).
- Ben Bernie and His Orchestra, "She's Such a Comfort to Me."
- 10.48: Waltz—Lloyd Huntly and His Isle o' Blues Orchestra, "Molly."
- Foxtrots—Ray Miller and His Orchestra, "My Victory" (Miller).
- Al Goodman and His Orchestra, "M-a-r-y" (Gordon).
- Ray Miller and His Orchestra, "Blue Butterfly" (Tucker).
- Al Goodman and His Orchestra, "Lonesome Little Doll."
- 11.0: God save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—FRIDAY, JANUARY 9.

- 3.0: Gramophone recital.
- 4.25: Sports results.
- 5.0: Children's hour—"Aunt Pat."
- 6.0: Dinner music session.
- Bohemian Orchestra, "Love and Life in Vienna" (Komzak).
- Organ—G. T. Pattman, "Alice, Where Art Thou?" (Traditional).
- Bruno Walter and Berlin Philharmonic Orchestra, "Roses of the South."
- 6.15: Band of H.M. Grenadier Guards, "Ivanhoe" Selection (Sullivan).
- Edith Lorand's Orchestra, "Venetian Barcarolle" (Leoncavallo).
- Bohemian Orchestra, "Destiny Waltz" (Baynes).
- 6.30: Edith Lorand's Orchestra, "La Serenade" (Metra).
- Plaza Theatre Orchestra, "A La Gavotte" (Finck).
- Dajos Bela Orchestra, "Schatz Waltz" (The Gypsy Baron) (Strauss).
- J. H. Squire's Celeste Octet, "La Serenata" (Braga).
- 6.45: Dajos Bela Orchestra, "Moonlight on the Alster" (Fetras).
- Plaza Theatre Orchestra, "Minuet" (Finck).
- Organ—G. T. Pattman, "Cinderella Waltz" (Pattman).
- J. H. Squire's Celeste Octet, "Serenade" (Titl).
- 7.0: News session.
- 7.30: Dialogue—Messrs. D. Cossgrove and W. Melbourne, "Radio Service."
- 8.0: Chimes. Overture—Band of H.M. Coldstream Guards, "La Source Ballet" (Delibes).
- 8.8: Valencia Quartet, "Hail Caledonia" (Stroud).
- Bass—Mr. E. J. Johnson, "Because" (d'Hardelot).
- 8.14: Piano—Mark Hambourg, "Waltz in A Flat" (Chopin).
- 8.18: Soprano—Miss Lucy Fullwood, "Whatever is, is Best" (Lohr).
- 8.21: Instrumental—Studio Octet, (Deputy Conductor, H. G. Glaysher), overture, "Bohemian Girl" (Balfe).
- 8.30: Tenor—Mr. T. G. Rogers, "When Other Lips" (Balfe).
- Valencia Quartet, "John Peel" (Williams).
- Contralto—Miss Jean Johnson, "Early in the Morning" (Phillips).
- 8.38: Organ—G. T. Pattman, "Four Indian Love Lyrics" (Woodforde-Finden).
- 8.46: Humour—Mr. L. T. J. Ryan, "Spring Cleaning" (George Robey).
- 8.51: Instrumental—Studio Octet, (a) "Celtic Dance" (Bullard); (b) "Serenata" (Cujani); (c) "Passepied" (Delibes).
- 8.59: Weather forecast and station notices.
- 9.1: Selection—Band of H.M. Coldstream Guards, "Policeman's Holiday" (Ewing); patrol, "Wee MacGregor" (Amers).
- 9.7: Valencia Quartet, "On the Banks of Allan Water" (Horn).
- Bass—Mr. E. J. Johnson, "Friend o' Mine" (Sanderson).
- 9.14: Instrumental—Studio Octet, Selection, "Cavalleria Rusticana."
- 9.24: Soprano—Miss Lucy Fullwood, "The Garden of Your Heart" (Ball).
- 9.28: Humour—Mr. L. T. J. Ryan, "Random Ramblings" (own argt.).
- 9.34: Instrumental—Octet, (a) "Song of the Volga Boatmen" (arr. Langey); (b) "Cossack Lullaby" (Jiranck); (c) "Dance Orientale."
- 9.41: Tenor—Mr. T. G. Rogers, "Azra" (Newton).
- 9.45: Violin—Fritz Kreisler, "Tambourin Chinois" (Kreisler).
- 9.49: Contralto—Miss Jean Johnson, "In an Old-Fashioned Town" (Squire).
- Valencia Quartet, "In This Hour of Softened Splendour" (Pinsuti).
- 9.57: Instrumental—Studio Octet, "Indian Love Lyrics" (Woodforde-Finden).
- 10.5: God save the King.

4YA, DUNEDIN (650 KILOCYCLES)—FRIDAY, JANUARY 9.

- 3.0: Selected recordings.
- 5.0: Children's session conducted by "Aunt Sheila."
- 6.0: Dinner music session:
- Paul Godwin's Orchestra, "Musical Panorama Medley" (Lincke); "Birthday Serenade" (Lincke).
- 6.15: Paul Godwin's Orchestra, "The Spider" Intermezzo (Klose); "Tonerna" (Sjoberg); "Wedding Serenade" (Klose); "Butterfly" Intermezzo" (Schkenk).
- Violin and Orchestra—Paul Godwin's Orchestra, "Serenade" (Tosti).
- 6.30: Paul Godwin's Orchestra, "Geisha" Medley (Jones).
- Vienna Schrammel Quartet, "Firefly's Appointment" (Siede).
- 6.45: Paul Godwin's Orchestra, "Medley Memorial of Strauss's Waltzes."
- Vienna Schrammel Quartet, "Serenade" (Heykens).
- 7.0: News session.
- 8.0: Chimes. Overture—Herman Finck's Orchestra, "Waldteufel Memories" (arr. Finck).

- 8.9: Tenor—Mr. R. Mitchell, (a) "Macushla" (Macmurrough), (b) "Marcheta" (Schertzinger).
 8.15: Marimbaphone—Mr. H. Dalziel, (a) "Urvillers" (Etchecopar); (b) "Lullaby Land" (Prival).
 8.20: Recital—Miss M. Juriss, "A Rainy Day Episode" (A. London).
 8.24: Selection—Instrumental Quintet, (a) "Quaker Girl" (Monckton), (b) "Prelude" (Svendsen).
 8.34: Contralto—Miss M. Stokes, (a) "Child o' Mine" (Dunhill), (b) "Fair Flight" (Harris).
 8.40: Organ—Mr. E. O'Henry, "Just as We Used to Do" (Rulli).
 8.43: Baritone—Mr. L. J. Neilson, "Annie Laurie" (arr. Lehmann).
 8.46: Selection—Instrumental Quintet, "Rebel Maid" (Phillips).
 8.55: Soprano—Mrs. D. Carty, (a) "Thou Bonnie Wood of Craigilea" (Tannahill), (b) "My Ain Folk" (Mills).
 9.0 : Weather report and station notices.
 9.3 : Selections—New Concert Orchestra, (a) "Vienna Maidens," (b) "Nights of Fragrance" (Ziehrer).
 9.11: Tenor—Mr. R. A. Mitchell, "For You Alone" (Geehl).
 9.14: Marimbaphone—Mr. H. Dalziel, (a) "Billy Possum" (Thurban), (b) "Girl of My Dreams" (Clapp).
 9.20: Recital—Miss M. Juriss, "The Old Stage Queen" (A. London).
 9.26: Banjo—Mario de Pietro, "Frivolous Joe" (De Pietro).
 9.29: Soprano—Mrs. D. Carty, "Jessie's Dream" (Campbell).
 9.32: Selection—Instrumental Quintet, (a) "Rainbow" (Gershwin), (b) "Reconciliation" (Fletcher).
 9.42: Baritone—Mr. L. J. Neilson, (a) "In the Sunshine of To-morrow" (Summers), (b) "Chain of Roses" (Lohr).
 9.48: Waltz—Instrumental Quintet, "Reine Valse" (Schwartz).
 9.54: Contralto—Miss M. Stokes, "Slumber Song of the Madonna" (Head).
 9.57: Selection—American Legion Band, "The Conqueror" (Telke).
 10.0 : God save the King.

Saturday, January 10

1YA, AUCKLAND (900 KILOCYCLES)—SATURDAY, JANUARY 10.

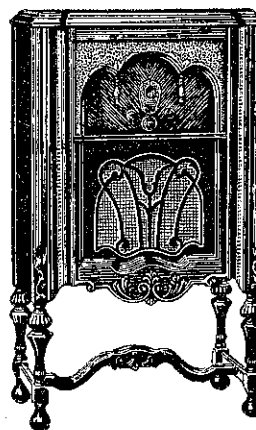
- 3.0 : Selected gramophone recordings.
 3.30: Literary selection and further gramophone recordings.
 5.0 : Children's session, conducted by "Cinderella."
 6.0 : Dinner music session:
 March—H.M. Grenadier Guards, "Martial Moments" (arr. Winter).
 Waltz—Eddie Thomas's Collegians, "Missouri Waltz" (Logan).
 6.15: Violin and Wurlitzer organ—Marnello, "Evening in the Desert."
 Hawaiian—South Sea Islanders, "Dreamy Hilo Bay" (Heagney).
 March—Columbia Symphony Orchestra, "March of the Toys."
 Piano solo—Percy Grainger, "Molly on the Shore" (Grainger).
 6.30: Waltzes—Eddie Thomas's Collegians, "Till We Meet Again" (Whiting), "Beautiful Ohio" (Earl).
 Piccolo duet—Jean and Pierre Gennin, "Rippling Streams" (Gennin).
 6.45: Violin and organ—Marnello, "Once" (Saunders).
 Xylophone—W. W. Bennett, "Gee Whiz" (Byron).
 Hawaiian—South Sea Islanders, "Lei Lani" (Heagney).
 Denza Dance Band, "In the Shadows" (Finck).
 7.0 : News and market reports.
 8.0 : Chimes. Relay from the Auckland Town Hall of Municipal Band Concert under the conductorship of Mr. Geo. Buckley.
 10.0 : Programme of Dance Music:
 Foxtrots—Arcadians Dance Orchestra, "Always" (Ruby).
 George Olsen and His Music, "Sweet Nothings of Love."
 Arcadians Dance Orchestra, "At the End of the Lonesome Trail" (Ruby).
 Ted Weems and His Orchestra, "Slappin' the Bass."
 10.12: Waltz—Regent Club Orchestra, "Underneath the Russian Moon."
 Foxtrots—Johnny Hamp's Kentucky Serenaders, "Lady Luck."
 Victor Arden, Phil Ohman, and Their Orchestra, "Why?"

- 10.21: Vocal—Frank Luther, "The Moon is Low" (Freed).
 10.24: Foxtrots—New Mayfair Dance Orchestra, "She's My Slip of a Girl."
 Leo Reisman and His Orchestra, "Mia Cara."
 Victor Arden, Phil Ohman, and Their Orchestra, "It's You I Love" (Davis, Coots, Swanstrom).
 10.33: Waltzes—Regent Club Orchestra, "Dear, When I Met You."
 Rudy Vallee and His Connecticut Yankees, "Sweet Susanne"
 Foxtrots—New Mayfair Dance Orchestra, "Spread a Little Happiness" (Ellis).
 Nat Shilkret and His Orchestra, "May I Say 'I Love You'?"
 10.45: Vocal—Johnny Marvin, "Lucky Me, Lovable You" (Yellen, Ager).
 10.48: Foxtrots—The High-Hatters, "Singin' in the Bathtub."
 New Mayfair Orchestra, "In An Old-World Garden."
 Nat Shilkret and His Orchestra, "Cross Your Fingers."
 The High-Hatters, "Duke of Ka-Ki-Ak!"
 11.0 : God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—SATURDAY, JANUARY 10.

- 3.0 : Chimes. Selected gramophone recordings.
 3.30 and 4.30: Sporting results to hand.
 5.0 : Children's session.
 6.0 : Dinner music session.
 New Mayfair Orchestra, "Follow Through" Selection (de Sylva).
 'Cello—Pablo Casals, "Spanish Dance" (Granados, arr. Casals).
 Novelty Orchestra, "Ginger Snaps" (Bourdon).
 6.15: Victoria Orchestra, "La Serenata" (Metra).
 Kirilloff's Balalaika Orchestra, "Medley of Old-Time Songs."
 Organ—Jesse Crawford, "How Am I to Know?" (Parker, King).
 6.30: Vienna Philharmonic Orchestra, "Die Fledermaus"—Du Und Du.
 Organ—Jesse Crawford, "I'll Close My Eyes to the Rest of the World" (Friend).
 Novelty Orchestra, "Midnight Bells" (Heuberger).
 6.45: Novelty Orchestra, "Passion Rose" (Lehar).
 Victoria Orchestra, "Espanita" (Rosey).
 'Cello—Pablo Casals, "Vito" (Spanish dance) No. 5 (Popper).
 Novelty Orchestra, "Danse Bagatelle" (Bourdon).
 7.0 : News session, market reports, sports results.
 8.0 : Chimes. Overture—Salon Orchestra (Conductor, Mr. M. T. Dixon), "Three Dances from 'Hello America'" (Finck).
 8.11: Duet—Messrs. Sam Duncan and W. W. Marshall, "Larboard Watch."
 Tenor—Mr. Frank Bryant, "A Song and a Dream" (Cadman).
 Quartet—Melodie Four, "Little Cotton Dolly" (Giebel).
 8.21: Humour—Leonard Henry, (a) "The Tale of the Talkies"; (b) "General Post" (Henry).
 8.27: Mezzo-soprano—Miss Anne Davies, (a) "Mifanwy" (Forster); (b) "Morning" (Speaks).
 8.33: Selection—Salon Orchestra, "Ballad Memories" (Baynes).

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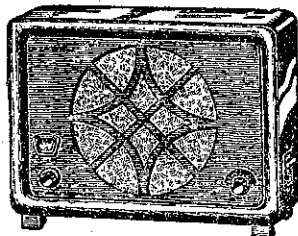
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MANNERS ST., WELLINGTON.

- 8.43: Quartet—Melodie Four, "Drifting and Dreaming" (arr. Melodie Four).
Baritone—Mr. R. S. Allwright, "Four Jolly Sailors" (German).
8.49: Novelty—Regal Pantomime Co., "Dick Whittington" (Arthurs).
9.1: Weather report and station notices.
9.3: Selection—Salon Orchestra, "Wildflower Selection" (Youmans).
9.13: Mezzo-soprano—Miss Anne Davies, "Bird Songs at Eventide."
9.17: Violin—Toscha Seidel, (a) "Chanson Arabe" (Korsakoff-Kreisler);
(b) "Le Deluge" (Saint-Saens).
9.23: Tenor—Mr. Sam Duncan, "Sally in Our Alley" (Old English).
Bass—Mr. W. W. Marshall, "Gypsy Dan" (Russell).
9.30: Saxophone—Mr. W. J. Haines and Salon Orchestra, "Shipmates o'
Mine" (Sanderson).
Novelty selection—Salon Orchestra, "The Mouse and the Clock."
9.36: Novelty—The Roosters, "Army Reminiscences" (Merriman).
9.42: Quartet—Melodie Four, "All Through the Night" (Welsh Trad'l).
9.45: Instrumental—Salon Orchestra, "Dance Novelties."
10.0: Dance programme.
Foxtrots—Earl Burnett and His Los Angeles Biltmore Hotel Orches-
tra, "So Beats My Heart For You" (Henderson).
Roger Wolfe Kahn and His Orchestra, "Cheer Up" (Klages).
Earl Burnett and His Los Angeles Biltmore Hotel Orches-
tra, "Singing a Song to the Stars" (Johnson).
Jack Denny and His Mount Royal Hotel Orchestra, "Girl
Trouble" (Fisher).
10.1: Waltz—Castlewood Marimba Band, "Old New England Moon" (Vance).
Foxtrots—Isham Jones' Orchestra, "Not a Cloud in the Sky" (Jones).
Jesse Stafford and His Palace Hotel Orchestra, "I Like to
do Things for You" (Yellen).
10.21: Vocal—Chester Gaylord, "When I'm Looking at You" (Grey).
10.24: Foxtrots—Ben Bernie and His Orchestra, "Black Eyes."
Jesse Stafford and His Palace Hotel Orchestra, "To-night."
Ben Bernie and His Orchestra, "Sharing" (Davis).
10.33: Waltzes—Castlewood Marimba Band, "If You Can't Have the Girl of
Your Dreams" (Young).
Ben Bernie and His Orchestra, "The Kiss Waltz" (Dubin).
Foxtrots—Colonial Club Orchestra, "My Future Just Passed."
Jack Denny and His Mount Royal Hotel Orchestra, "Leave
It That Way" (Rice, Fisher).
10.45: Vocal—Chester Gaylord, "Under a Texas Moon" (Perkins).
10.48: Foxtrots—Frank Sylvano and His Orchestra, "So Sweet."
Hal Kemp and His Orchestra, "I Remember You from
Somewhere" (Warren).
Frank Sylvano and His Orchestra, "After Sunday Afternoon" (Harris).
Colonial Club Orchestra, "With My Guitar and You."
11.0: Sporting summary.
11.10: God save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SATURDAY, JANUARY 10.

- 3.0: Gramophone recital.
4.25: Sports results.
5.0: Children's hour, "Aunt Pat."
6.0: Dinner music session.
Band of H.M. Grenadier Guards, "Sir Harry Lauder Medley."
J. H. Squire's Celeste Octet, "Second Movement from Symphonie
Pathetique" (Tschalkowsky, arr. Robertson).
Modern Dance Players, "Amoretten Tanze" (Gung'l).
6.15: Court Symphony Orchestra, "The Windmill Man."
Organ—Stanley Macdonald, "The Rosary" (Nevin).
Symphony Orchestra, "When the Lemons Bloom" (Strauss).
6.30: Plaza Theatre Orchestra, "The Three Bears" (Coates).
Symphony Orchestra, "Doctrinen" (Strauss).
Continental Novelty Orchestra, "Las Lagarteranas."
6.45: B.B.C. Wireless Military Band, "Le Reve Passe" (Krier).
J. H. Squire's Celeste Octet, "Scene of Ballet" (De Beriot, arr. Sear).
Organ—Stanley Macdonald, "La Rosita" (Dupont).
Continental Novelty Orchestra, "Los Claveles de Sevilla" (Guerrero).
7.0: News session.
7.30: Sports results.
8.0: Chimes. Overture—Nat Shilkret's Salon Group, "Stephen Foster Melo-
dies."
8.16: Tenor—Mr. Syd. Andrews, (a) "I Send You Roses"; (b) "Baby
Moon"; (c) "The Four Leaf Clover" (Willeby); (d) "Keep on
Hopin'" (Heron Maxwell).
8.20: Instrumental—Studio Octet (Deputy-conductor, H. G. Glaysber), (a)
"Comrades in Arms" (Greenwald); (b) "La Paloma" (Yradier).
8.33: Contralto—Mrs. D. W. Stallard, (a) "Melody of Life" (Leigh); (b)
"The Kerry Dance" (Molloy); (c) "Tse Gwine Back to Dixie."
8.43: Dialogue—Will Hay and His Scholars, "The Fourth Form at St.
Michaels" (Hay).
8.51: Soprano—Mrs. L. B. Salkeld, (a) "Secret of the Stars" (Leoni); (b)
"June Music" (Trent); (c) "The Hills at Asolo" (Lohr); (d)
"Ah, Tho' the Silver Moon were Mine" (Lohr).
9.1: Weather forecast and station notices.
9.3: Instrumental—Octet, Musical Comedy Selection, "Katinka" (Friml).
9.15: Humour in song and story—Mr. Jock Lockhart, introducing—(a)
"Love, Wonderful Love" (Seagler Morgan); (b) "That Rests
Entirely with Me" (Vernon).
9.27: Selection—Kettelbey's Concert Orchestra, "By the Blue Hawaiian
Waters" (Kettelbey).
9.35: Bass—Mr. Leslie Fleming, (a) "Nina" (Pergolesi); (b) "Your Eyes
Have Told Me So" (Hardy); (c) "Gae Bring to Me a Pint of
Wine" (Trad'l).

- 9.45: Instrumental—Studio Octet, (a) "Cinderella's Bridal Procession"
(Dicker); (b) "Southern Roses Valse" (Strauss).
10.0: Dance Music until 11 p.m.
Foxtrots—Nat Shilkret and His Orchestra, "Nobody But You."
Jack Hyton and His Orchestra, "Orange Blossom Time."
Nat Shilkret and His Orchestra, "Your Mother and Mine."
Waltz—Leo Reisman and His Orchestra, "Dance Away the Night."
10.12: Foxtrots—Jack Hyton's Orchestra, "Singin' in the Rain."
The High Hatters, "Low Down Rhythm" (Klages-Greer).
Waring's Pennsylvanians, "Navy Blues" (Turk-Ahlert).
10.21: Humour—Norman Long, "Is It British?" (K. and G. Weston).
10.24: Foxtrots—Henry Busse and His Orchestra, "Since I Found You."
George Olsen and His Music, "South Sea Rose."
Charles Dornberger and His Orchestra, "Maybe—Who Knows?"
Leo Reisman and His Orchestra, "Doing the Boom Boom."
10.36: Waltz—Henry Busse and His Orchestra, "Like a Breath of Spring-
time" (Dubin-Burke).
Vocal—Norman Long, "I Think of You" (K. and G. Weston).
10.42: Foxtrots—Victor Arden, Phil Ohman and Their Orchestra, "Love Your
Spell is Everywhere" (Janis-Goulding).
Nat Shilkret and His Orchestra, "You Made Me Love You,
Why Did You?" (Lombardo).
Leo Reisman's Orchestra, "Look What You've Done to Me."
10.51: Waltz—Ben Pollack and His Park Central Orchestra, "You're Always
in My Arms" (McCarthy, Tierney); Foxtrot, "Sweet-
heart, We Need Each Other" (McCarthy, Tierney).
Charles Dornberger and His Orchestra, "I Want to Meander
in the Meadow" (Wood and Tobias).
11.0: God save the King.

4YA, DUNEDIN (650 KILOCYCLES)—SATURDAY, JANUARY 10.

- 3.0: Selected recordings.
5.0: Children's session, conducted by Aunt Anita and Uncle Sambo.
6.0: Dinner music session.
Albert Sandler and His Orchestra, "Someday, Somewhere."
B.B.C. Wireless Military Band, "Strathspeys and Reels," Part 1 (arr.
B. Walton O'Donnell); Part 2 (arr. G. Williams).
Saxophone—Rudy Wiedoeft, "Sax-o-Phun" (Wiedoeft).
Len Ellis Novelty Trio, "The Heart of the Sunset" (Nicholls).
6.15: Percy Pitt and Augmented Symphony Orchestra, "Poet and Peasant"
Overture (Suppe).
Harp—Sidonie Goossens, "Song of the Volga Boatmen" (arr. Salzedo).
H. G. Amers and the Eastbourne Municipal Band, "The B'boys of Tip-
perary" (Amers).
6.30: Albert Sandler and His Orchestra, "Sonny Boy" (de Silva).
H. G. Amers and the Eastbourne Municipal Orchestra, "Second Serenata."
Saxophone—Rudy Wiedoeft, "La Cinquantaine" (Marie).
Debroy Somers' Band, "Russian Fantasy" (arrgd. Lange and Somers).
6.45: H. G. Amers and the Eastbourne Municipal Band, "All on a Christmas
Morning—Idyll" (Amers).
B.B.C. Wireless Symphony Orchestra, "H.M.S. Pinafore" Selection.
H. G. Amers and the Eastbourne Municipal Orchestra, "Tarentelle for
Flute and Clarinet" (Saint-Saens).
7.0: News session.
8.0: Chimes. Overture—Band of H.M. Coldstream Guards, "Martha" Selec-
tion (Plotow). Selection—National Military Band, "The Gladia-
tor's Farewell" (Blankenburg).
Baritone—Mr. R. W. Fox, (a) "The Minstrel Boy" (Moore); (b)
"When Shadows Gather" (Marshall); (c) "Youth" (Allitsen).
Popular melodies—Novelty Syncopators, (a) "Telling it to the Daisies"
(Young); (b) "The One Girl" (Hammerstein); (c) "You've
Brought a New Kind of Love" (Fain).
Humour—Mr. J. F. Montagne, (a) "Pat-a-Cake" (MS.); (b) "I'm
Excited" (Foy).
Shakespearean recital—"Agin-court" (Shakespeare).
Soprano—Miss E. Shepherd, (a) "Darkness and Dawn" (Lough-
borough); (b) "Sweet Early Violets" (Shrington); (c) "Spring
Comes Laughing" (Carew).
Clarinet novelty—Mr. J. McCaw, "Bear Tracks" (Barroll).
Popular melody—Novelty Syncopators, "Sitting on a Rainbow."
9.0: Weather report and station notices.
9.2: Tenor—Mr. W. Harrison, (a) "O Sole Mio" (Di Capua); (b) "At
Dawning" (Cadman); (c) "Mary" (Richardson).
Popular hit—Syncopators, "Ragamuffin Romeo" (Costa); valse, "I'm
Dreaming" (Dubin).
Piano novelty—Mr. Moore-Wilson, "Tallahassee Nights" (Houghton).
Humour—Mr. J. F. Montagne, (a) "All But" (Overton); (b) "Cricket
at Killaloe" (MS.).
Contralto—Mrs. A. H. Ritchie, (a) "I Heard You Singing" (Coates);
(b) "Bitterness of Love" (Dunn); (c) "Ships that Pass in the
Night" (Stephenson).
Saxophone—Mr. J. McCaw, "Juliana" (Gurewich).
Valse—Syncopators, "Blue Danube" (Strauss).
10.0: Dance session.
Foxtrots—Waring's Pennsylvanians, "Won't You Tell Me, Hon?"
Rio Grande Band, "Dites Mai Ma Mere" (Yvain).
Rudy Vallee and His Connecticut Yankees, "The Album of
My Dreams" (Davis-Arluck).
Rio Grande Band, "Valentine" (Christine).
10.12: Vocal—Maurice Elwin, "I've Never Seen a Smile Like Yours."

- Foxtrots—Irrving Aaronson and His Commanders, "Outside" (Flynn).
 George Olsen and His Music, "I'm in Seventh Heaven."
 Rudy Vallee and His Connecticut Yankees, "Me Queres?"
 (Vallee); "You Want Lovin'" (Osterman).
 Waltz—Nat Shilkret and His Orchestra, "Let Me Have My Dreams."
 10.30: Humorous duet—Dora Maughan and Walter Fehl, "A Woman who
 Knows" (Ruskin).
 10.33: Foxtrots—George Olsen and His Music, "Little Pal" (de Sylva).
 Jack Hylton and His Orchestra, "Everybody Loves You."
 Rudy Vallee and His Connecticut Yankees, "Lonely Troubadour"
 (Klennner).
 Nat Shilkret and His Orchestra, "Am I Blue?" (Clarke).
 10.45: Vocal—Paul Oliver, "Evangeline" (Rose).
 10.48: Foxtrots—Jack Hylton and His Orchestra, "Don't Hold Everything."
 Rudy Vallee and His Connecticut Yankees, "Perhaps"
 (Razaf); "On the Alamo" (Kahn).
 Waltz—Jack Hylton and His Orchestra, "Let Me Dream in Your Arms
 Again" (Nicholls).
 11.0: God save the King.

Sunday, January 11

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, JANUARY 11.

- 3.0: Selected gramophone recordings.
 3.30: Literary selection and further gramophone recordings.
 6.0: Children's song service, conducted by "Uncle Bert."
 6.55: Relay of divine service from St. David's Church. Preacher to be
 arranged. Organist, Mr. E. S. Craston.
 8.30: (approx.) Relay of Municipal Band Concert, under the conductorship
 of Mr. Geo. Buckley, from Albert Park.
 9.30: (approx.) God save the King.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JANUARY 11.

- 3.0: Selected gramophone records.
 6.0: Children's song service conducted by Rev. J. Hubbard, assisted by the
 Children's Choir from the Cambridge Terrace Congregational
 Church.
 7.0: Relay of evening service from the Vivian Street Baptist Church.
 Preacher, Rev. E. N. Goring; Organist, Mr. Chas. Collins; Choir-
 master, Mr. J. R. Samson.
 8.20 (approx.): Studio concert by the Miramar Silver Band (Conductor,
 Mr. R. A. Sutherland) and 2YA artists:
 Marches—Band, (a) "Star of the Desert" (Thomas), (b) "Ever
 Ready" (White).
 Soprano—Mrs. R. D. Potts, (a) "O Fair and Sweet and Holy" (Rubin-
 stein), (b) "The Mission of a Rose" (Cowen).
 Negro Spirituals—Fisk Jubilee Singers, (a) "Ezekiel Saw the Wheel"
 (traditional), (b) "Little David" (traditional).
 Baritone—Mr. S. Evelyn Rodger, (a) "The Star" (Rodgers), (b)
 "God's Earth and Thee" (Nicholls).
 Selection—Band, "The Daughter of the Regiment" (Donizetti).
 Weather report and station notices.
 Tenor—Mr. E. W. Robbins, (a) "O Lovely Night" (Landon Ronald),
 (b) "For You Alone" (Geehl).
 Fantasia—Band, "Songs of Gallant Wales" (Raymond).
 Instrumental—Poltronieri String Quartet, (a) "Canzonetta" (Men-
 delsohn), (b) "Serenade" (Haydn).
 Baritone—Mr. S. Evelyn Rodger, "The Message" (Blumenthal).
 Waltz—Band, "Crown of Love" (Rimmer).
 Tenor—Mr. E. W. Robbins: Recit., "Comfort Ye" (Handel); Aria,
 "Every Valley" (from "The Messiah"—Handel).
 Hymn—Band, "191" (R. A. Sutherland).
 March—Band, "Invicta" (Greenwood).
 God save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, JANUARY 11.

- 3.0: Gramophone recital.
 5.30: Children's Song Service by Children of Church of Christ Sunday School.
 6.15: Chimes from studio.
 6.40: Musical recordings from studio.
 7.0: Relay of evening service from Church of Christ, Moorhouse Avenue.
 Preacher, Pastor J. Watt; Organist, Miss B. Redhead; Choir Con-
 ductor, Mr. H. Ames.
 8.15 (approx.): Relay of programme from 4YA, Dunedin.
 9.30 (approx.): God save the King.

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, JANUARY 11.

- 3.0: Selected recordings.
 5.30: Children's Song Service conducted by "Big Brother Bill."
 6.15: Instrumental recordings.
 6.30: Relay of evening service from St. Paul's Cathedral, Dunedin. Preacher,
 Canon Neville; Organist, Mr. Heywood, F.R.C.O.
 7.5: Selected gramophone recordings.
 8.15: Relay from St. Kilda Band Rotunda of concert by the St. Kilda Band.
 9.30: God save the King.

2YB, NEW PLYMOUTH (1230 KILOCYCLES)—SUNDAY, JANUARY 11.

- 6.0: Children's service.
 8.15: Studio concert.

Programme Features

(Continued from page 19.)

A programme will be given by the Salon Orchestra under Mr. M. T. Dixon, who has selected a number of interesting compositions, including a saxophone solo by Mr. W. J. Haines entitled "Shipmates o' Mine," a novelty selection, "The Mouse and the Clock," and a number of the latest dance novelties.

There will be dance music from 10 till 11 p.m.

Christchurch Notes

THE concert portion of this evening's programme will be bright and varied.

From 4YA

ELOCUTIONARY recitals by Mr. J. F. Montague, of Auckland, will be featured on this programme. His items will range from humorous to dramatic. The Novelty Syncopaters will provide popular melodies and the latest hits. There will be a piano novelty by Mr. Moore-Wilson and a saxophone solo by Mr. J. McCaw.

Air Travel in the Desert

(Concluded from page 3.)

down in their territory. For if there is trouble, it will not be an unarmed passenger-carrying aeroplane that will come, but the swooping wings of the Royal Air Force machines, well armed with bombs and machine-guns and ready to deal out reprisals swiftly and surely.

In Europe the chief danger of flying is not from dust-storms but from fog. Very important experiments with wireless are being carried out now which, if successful—and the results so far are promising—will enable an aeroplane caught in a fog to be directed with absolute certainty to her landing ground.

It is no exaggeration to say that every improvement in the technique of wireless is of value to aviation and will tend to make flying safer.

Using Two Speakers

CONE speakers do not possess the brilliance of the horn speaker in the upper musical range, but the lower frequencies are reproduced much better. Many listeners who have become accustomed to hearing music from a horn speaker would not on this account readily change to a cone, but probably the majority would agree that reproduction is improved by the addition of a cone speaker to the horn. By running the two speakers together the listener retains all the brilliance of the horn with the added improvement of strengthened bass notes from the cone.

World Radio News

OUT of 116 applicants for the post of announcer at a Spanish broadcasting station, six were chosen to undergo the acid test at the microphone. Each candidate was given an evening to himself, and listeners were asked to express their preference by vote.

SEVERAL European towns are known to have instituted laws forbidding the use of loudspeakers after about 10 p.m., but the town of Nîmes-en-Provence (France) has gone further. The police superintendent there has issued an edict that all loudspeakers are to "shut up" at sunset!

THE traditional heroism of the wireless operator's profession was splendidly maintained by Mr. Arthur Disley, operator on the R101, whose gallantry has been recognised by the award of the Medal of the Civil Division of the Order of the British Empire for Meritorious Service. Mr. Disley, after escaping from the airship wreck with serious burns, refused treatment before he had telephoned the first details of the disaster from Beauvais to the Air Ministry.

AUSTRIA, having experimented with a system of license fees graduated according to the cost of the receiving set, has now decided to adopt a uniform scale, viz., two shillings per head per month.

A MINIATURE beam wireless system for communication between Sicily and the surrounding islands has been authorised by the Italian Government.

THAT America is fully aware of the value of police radio is shown by the decision of the U.S. Federal Radio Commission to permit twenty-four cities and two States to operate police wireless stations. Twenty other cities have been granted permission to build such stations.

THE broadcasting station at Berne, Switzerland, is intending to specialise in radio drama. A school of radio elocution is to be formed for the training of the fifteen or twenty actors who will compose the station's dramatic company.

A PICTURE player has been made in America. It is a gramophone furnished with a projector which, when the machine plays, shows pictures in harmony with the music. A film of 18 pictures, each replaced at every ten seconds, accompanies each record. Synchronisation of sound with the pictures is automatic while the record revolves.

RADIO Agen, the station which was almost completely destroyed in the Great French floods some months ago, will again make itself heard in the near future. A State subsidy of £2400 has been allotted for its reconstruction.

Do We Really Listen?



It is an extraordinary coincidence that the word "listen" and the word "loud" come from the same source. "Listen," in Anglo-Saxon, was once hlistan, from hlust, the ear; "loud" was originally blud—and both words are derived from the Greek verb kluo, to hear. So that we ought, one would think, to "listen" to our "loud"-speakers.

Are we doing so? Do we give the attention to—at least—the better type of music that is broadcast for our benefit?

Those Musical Evenings!

It is not so long since the days when we used to congregate in the houses of our friends to endure that form of purgatory known as the musical evening. We all remember how everyone was expected to do something, whether they were qualified or not—to play, to sing, or to recite. It was generally a case of the survival of the fittest in the audience, and often amongst the "artists" also.

So far as the latter were concerned only he (or she) who had sufficient personality (or effrontery) to "get over" could restrain the audience from continuing its conversation as if nothing had happened to make it do otherwise.

A pianist stood not even the proverbial dog's chance; he generally had to perform upon an upright piano on which ornaments and photo-frames rattled their disapproval, and was forced to be seated with his back to his hearers. No matter what he played or how he played it, the audience accompanied him vocally with loud and animated conversation.

The vocal aspirant fared a little better; he could at least face his audience (so long as he knew his words or had an extra copy of the song) and generally managed to keep his victims in better order.

They were queer days, those; the seeds of a bad habit were undoubtedly sown, and we, in these enlightened times, are reaping what others sowed for us. *We are not listening.*

If we go to the opera, of course, we are *made* to listen. We dare not do otherwise. The man is not yet born who would dare to light a cigarette or chew a chocolate during the performance of an opera.

I suppose it is only reasonable to realise that one is more at liberty where wireless music is concerned because one is at home (or in someone else's home) and because, as one cannot see or be seen, it does not greatly signify.

When we like somebody, we may find ourselves at a loss; we cannot recall him. But when we do not like him, we can rudely push in the knob which controls our set and consign him to the four corners of the earth.

Natural Carelessness?

PERHAPS it is only natural that we should become careless in the matter. Being at home, amid domestic influences, we may find ourselves listening to a Beethoven symphony while

the table is being laid or the dog being washed. All the same, I am not sure that it is really good for us. We can easily take a bath and take in most of a foxtrot without either losing the soap or blowing up the geyser; but we cannot take in a Beethoven symphony and do something else at the same time. It simply cannot be done.

The wireless is just the reverse; our untimely conversation interferes with our reception and "digestion" of it. It is unreasonable to suppose that we can be expected to remain in one position for the whole of an evening—even though we do so at a concert; but it is quite within the dictates of common-sense to suggest—as a piece of psy-

An article by M. Whitaker-Wilson, a noted English musician (published in "Wireless Magazine") on an art which few of us really possess—the art of listening.

For this very reason there is something to be said for earphones; we do stand some chance of keeping our ear on the ball, so to speak. Of course, if we begin reading novels at the same time the less said the better. I have seen that done.

With a loud-speaker we are apt to do things by halves. My study of psychology tells me that this is not good; one of the operations must suffer; but any remarks which follow here must be taken, of course, to apply only to serious music. I hasten to add that I do not wish to appear to belong to the section of the public generally known by the name of high-brow; I appreciate fully the uses of light music.

In Great Value.

THAT generally heard in a restaurant, if suitably subdued, is of great value. It mingles with our conversation; it forms a misty mirage to our musings; it is incidental music to our unwritten plays. If it becomes definite it also becomes a nuisance! It interferes with our conversation and probably with our digestion also.

chology—that if we study the programmes and take the trouble to select some attractive-looking item and listen to it, we shall derive considerable benefit from the mental activity involved.

There used to be a notice in the corridors outside the studios of the London broadcasting station to the effect that if the words of a song were not said, and well said, the song was lost. The injunction was obviously intended, from the B.B.C. point of view, for the broadcaster; it would have been a truism to have written: "Say your words so that your audience cannot avoid hearing them, remembering that very few really listen."

Straining—to Train.

NOT so many of us care to listen—by which I mean that we act as though we imagined that it is as injurious to strain the ears as it is to strain the eyes in an indifferent light. It is not so. The more the ears are strained the more they are trained, consequently the more acute they be-

come. If we wish to hear the grass grow we must begin by hearing the wind in the grass first.

There is no doubt that we are becoming so used to wireless transmission that we are falling into the habit of turning it on during meals, during periods when our friends visit us, and during the evenings we spend alone with an attractive novel.

I do not attempt to try to persuade you (or myself) that there is any actual harm in it; but I do feel inclined to urge that we ought to make suitable selections from the broadcast repertory for occasional serious listening.

If I may presume to preach to those who know so much more about wireless construction than I do myself, and who build sets from what I want to call *recipes*, it will be to suggest that it is easily possible to become so interested in the reception in the technical sense that the reception in the artistic sense is practically missed altogether.

I know more than one man thus affected. I know an enthusiast who has (I believe) a five-valve set of considerable power. He can, apparently, "get" every station on earth; he has a small fleet of loudspeakers in the room where his sets live; and what he does not know about wireless from that point of view is scarcely knowledge.

Yet he never takes the trouble to remember the name of a work or of its composer; to recognise a composer by the style of his music; to remember the name of more than one singer in ten, or to take the slightest interest in the quality of what he hears from the artistic point of view. He has developed an absorbing interest in wireless, not in wireless art.

I suppose he would say that I am just the opposite. I confess to abysmal ignorance of wireless technically. I know what to do to my set if it will not do what I want it—up to a point. I fidget with the knobs until the thing stops howling like a diseased dervish and music floats into the room. When the tone is satisfactory I settle down and listen. I can honestly say I do that.

The Influence of Music.

I THINK the whole point of view may be summarised in this way: music was not written by fools, nor yet for fools. Music is a powerful influence, one of heaven's greatest gifts to earth. We can now send it from the flood into the world's end; we can call the world; we can speak, sing, and play to millions. It is a bit of a thrill, when we come to think of it.

We should not be the intelligent race we are if we were deprived of art. But because it is unseen, and additional strain is thereby imposed upon us, there is no argument for our not standing up against that strain. After all, it is only for the time being.

I say that advisedly, for the time is coming, slowly but none the less

The Rainbow

WHEN earth was in its dawning
In ages long ago,

Between the sun and rain-cloud

The rain god wrought a bow.

'Twas hewn from precious jewels,

And woke mad greed in man,

He sought it out and shattered it,

He fought about and scattered it,

Thus precious stores began.

The god was filled with sorrow,

He made a bow again,

He fashioned it from sunlight,

From sunlight and the rain,

And laid a spell upon it,

This glorious arch of gleams,

That made it as intangible,

Untouchable as dreams.

The spell was laid for ever,

The spell endureth still,

For rainbow ever hovers

Beyond the nearest hill.

—D.P.

surely, when we shall see those who sing and play in the studios.

Quickening Our Perception.

THEN perhaps, we shall begin to listen. In the meantime it will be to our great advantage if we seek to quicken our perception by taking in as much as we are able through our ears alone. Television is a thing of the near future. It is going to revolutionise art; it is going to make it possible for the eyes of the world to be upon a single speaker or singer; it is going to make it possible for one single soul to stand in full view of mankind.

Said Colton: "Were we as eloquent as angels, yet we should please some men, some women, and some children, much more by listening than by talking."

Said Thoreau: "It takes two to speak the truth—one to speak, and another to hear."

Said Keble: "Give us grace to listen well."

An International Dinner

Held Simultaneously in Eight Countries

TO celebrate 61 years of friendly industrial relationship, over 11,000 employees of H. J. Heinz Company were entertained recently at a "radio banquet" held simultaneously in Great Britain, the United States, Canada, Australia, Germany, France, Spain and Belgium.

The menu and the speeches were the same at every dinner. The main gathering was held at Pittsburgh, Pennsylvania, whence speeches were broadcast to the other functions. The dinner at London commenced at 11 o'clock on a Saturday night; that in Pittsburgh at 6.30 p.m.; and that in Australia at 9.5 a.m. on the following day.

The "Differential" One Origin of the "S.O.S."

(Concluded from last week.)

TO make a fixed coil by the simplest manner obtain 4in. of 2in. tubing. About 1in. from the top wind on 1in. of 24-gauge D.S.C. wire. By making holes through the former the wire can be threaded through and held in position. Now, leaving a space of about 1in., wind on the tuning coil consisting of 1 1/2in. of the same. This can similarly be fixed to the former. Now come to the tickler. This is wound on at about 1in. from the main tuning coil. Just about an inch of wire is required for this winding. All the wires are brought out on the side, as can be seen from the photograph published last week. The connections can very clearly be seen in the theoretical diagram.

Care of Accumulators

BRASS terminals on batteries can be kept in good condition for years if they are frequently wiped and greased, but even the most conscientious of us are likely to neglect such tasks, especially during the summer months. It wants only a week or two of neglect of such a nature in order for acid to corrode such metals as brass, and an accumulator terminal that corrodes and binds up is a most awkward item to deal with. Often the reward of a little gentle persuasion is the complete wrecking of the terminal, and that generally means the end of the life of the accumulator as a useful accessory.

WHEN you instal an aerial lead-in switch make sure that the contacts are firm and sound, and arrange that the whole switch is covered with some weatherproof device that will protect it adequately.

Marine Distress Call

THE precise origin and history of the famous distress call "SOS" has puzzled many an enthusiastic radio amateur. How, one often hears asked, did those now-celebrated letters come to be accepted all over the world as the acknowledged radio call-sign for a ship in dire distress at sea?

It would appear that the first suggestion of a distress call for vessels at sea came from a party of Italian delegates who attended a conference on Wireless Telegraphy at Berlin in 1903.



MRS. D. W. STALLARD

A Christchurch contralto, whose next appearance from 3YA will be on January 10.

—Steffano Webb Photo.

They suggested the universal adoption of the signal "SSSDDD" to be employed by ships in cases of emergency, and they advocated, also, the formulation of a number of rules governing the use of such a distress call.

Not very long after this suggestion had been broached, the Marconi Company, recognising the vital need for some type of distress call, instituted its at one time well-known "CQD" call on all its ships, the signal being a combination of the company's general call "CQ" with the addition of the letter "D," which signified distress. The instructions of the Marconi Company were that the signal "CQD" was to be used only at the order of the captain of a distressed vessel or by a land station re-transmitting the signal. Radio operators who abused the call were to be dismissed.

Another radio conference was held in Berlin in the year 1906, and during the sitting of that body the German Government put forward the suggestion that a universal standard distress call for ships at sea should be adopted. The German Government further suggested that the distress call "SOS" should be made use of.

Why, it may be asked, were the letters "SOS" suggested for an international distress call?

At this period German ships desiring to communicate with all vessels in their neighbourhood would, particularly if the names of such vessels were

unknown, transmit an inquiry call "SOE," or, in Morse, ... — — — —

The adoption of this call signal as an international marine distress signal had first been considered, but it was obvious that the signal was not distinctive enough, the final letter "E" being represented merely by a dot, which could easily be overlooked in times of atmospheric disturbance or of heavy radio traffic.

For this reason, therefore, the distress call "SOS" (in Morse ... — — — —) was submitted for the consideration of the delegates to the Berlin Conference of 1906. It was adopted officially, and it was put into effect by the International Radio-telegraphic Convention of Berlin in 1908. Thus the very apt interpretations, such as "Save Our Souls" and "Save Our Ship," which have been put on the "SOS" distress call are untrue.

It was a matter of much regret to the old Marconi operators that their old signal "CQD" had not been adopted as the international distress call. Indeed, many of these operators continued to follow up their "SOS" signals with "CQD." Gradually, however, the latter signal was relinquished, and now it is almost forgotten.

Detecting Power Leakages

Aeroplanes Used

POWER leakages in electrical transmission lines may now be detected by aeroplanes equipped with a special form of trouble locator, and have been used by an American power company. The pilot follows the lines across country, flying low, and the apparatus not only detects a leak instantly but indicates the pole at which it may be found.

It is now proposed that the airplane also carry repair parts in readiness to be dropped overboard where a leak is found. In an emergency a repair crew would also be carried and landed by means of parachutes at the point where the trouble was detected.

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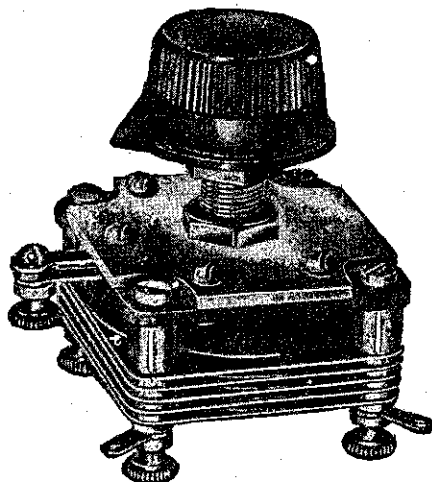
Jackson Neutralising Condensers (for Browning-Drakes). 8/6 each

Lotus Differential Condensers, .00013, .0002 and .00027. 8/- to 9/6 each

The New Blue Spot 11in. Cone and chassis. 18/6 each

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JOHNSON'S WIRELESS SCHOOL

St. George's Buildings, 8-10 Brandon Street, Wellington.



WOMEN of to-day pay little attention to rainy days. They simply don appropriate clothes and sally forth unconcernedly, knowing, probably, that a brisk walk in the rain is the finest beauty treatment they can get. Soft rainwater, splashing on the face, tones up the circulation under the skin and makes lines and wrinkles disappear. A bath or jug set out in a down-pouring shower will collect enough water for the toilet and both hair and complexion will benefit thereby to an extraordinary degree.



A RATHER bizarre fashion in Paris is to have one's cigarettes to match the colour of the finger-nails! At fashionable women's clubs you will see nails of pale lilac, amber, rose colour, apple green, and the owners of which, in order to "fit," will smoke monogrammed, coloured cigars to match.

THERE is a beautiful line of china with a virtue all its own, known as Lustre Ware. You will see men, women and children fascinated by the exquisite designs of tea and coffee services. They will stand with faces glued to the windows before old lustre ware, which has become very popular lately, and that of the modern potters is of a very high quality, quite worthy of the old models they have followed.

WHENEVER Americans want something done they get together and do it. During the month of October they were credited with having had a strenuous campaign for making all true Americans "doughnut conscious." They called it a "National Doughnut Month" and devoted the services of a complete office staff to the task of making people eat doughnuts, all day and every day up to October 31. What happened after that date has not yet been disclosed, but the doctors' income-tax contributions will doubtless make a substantial addition to the national exchequer.

A FRIEND who has just returned from London, tells me that the new fashions in long trailing dresses have forced women to adopt a new movement in walking. This is called the "lazy-slide" walk, reminiscent of mannequin parades and the slinking slither adopted by film vamps. From this you may gather that it is not in the least becoming to the average woman. Often in West End restaurants and theatres one sees a woman progressing in the prescribed manner along the aisle till suddenly she forgets, and takes to the free-swinging stride of the unfettered female. Result: Disaster to a forty-guinea frock.

THE almost world-wide use of electricity should help to solve the unemployment problem, for it is quite possible to scatter small electrically equipped factories all over the country districts, which might prevent the deplorable drift from the healthy and cheaper living conditions of the country to the already crowded towns. Electricity also allows for work being carried out under pleasant conditions, and removes the necessity for a large amount of manual labour, thus lessening the differences between town and country life. If this question were considered carefully, and money was used for electrical factories, in time there would be a reduction in the flow of population city-wards, and it would help to bring about instead the population of country areas.

WITH the forthcoming visit of Lord and Lady Baden-Powell to the Dominion, the Girl Guides will be very much in the limelight. It is twenty-one years since the movement was begun by the Chief Scout's sister, Miss Agnes Baden-Powell, in response to hundreds of letters from

girls, begging to be allowed to join the Boy Scouts. At the beginning Miss Baden-Powell met with many difficulties, for she had no money and no office, but she carried on courageously, and she herself wrote the whole of the first Girl Guides' Handbook, published in 1910. Now the movement has spread all over the world, and at the head office over one hundred and twenty secretaries are employed.

HENRY FORD, in his autobiography, said that Thomas Edison gave him his first encouragement thirty-four years ago. Mr. Ford, having described the making of his first and second horseless cars to Mr. Edison, was encouraged by these words from the great man: "Young man, that's the thing; you have it. Keep at it. Elec-

Thought for the Week

Nothing splendid has ever been achieved except by those who dared believe that something inside themselves was superior to circumstance.

—Bruce Barton
in "*The Man Nobody Knows.*"

tric cars must keep near to power stations. The storage battery is too heavy; steam cars won't do either, for they have to have a boiler and fire. Your car carries its own power plant—no fire, no boiler, no smoke and no steam. You have the thing. Keep at it."

HEARING sundry groans from the male members of the family at the breakfast table this morning, I inquired the reason thereof, and was nearly deafened by the reply. "Income-tax," they roared in unison, brandishing their assessment forms in my face. "Well, well; no need to get hot and bothered over it," I replied; "just listen to this," and I read them the following tale from my "Daily Sketch." "Reuter tells of a Holstein peasant who, unable to pay his income-tax in cash, decided to do so with deliveries in kind. Driving up to the local tax office, he deposited in the courtyard four tons of red cabbages, with the remark: 'I have paid my taxes.'" "Now," I continued, reviewing the assembled males with a critical eye. "You, George, could roll up with a few bales of wool; Jack with several samples of 'gents' natty suitings from the warehouse; while young Mick, who thinks he's a second George Robey, might sing a few comic songs outside the Government Buildings." Yells of derision from all but Mick, who demanded hotly: "And what do you suppose you could do, Smart One?" "Oh, I'd leave a few prize poems on the tax-collector's desk," said I modestly.

LOOKING back on the past year, we recall many things we made up our minds to do, but they were not done, especially connected with our home; those cupboards we intended to turn out, and all the household receipts of long ago that we meant to sort out and burn. Then there was our cookery book, which we intended to compile ourselves; to typewrite neatly on paper all the recipes which our friends gave us. We were going to have them bound in book form. "Do ye the nexte thinge" is a good motto for a housekeeper, and the New Year is the best time of all for forming our resolutions of last year all over again.

THE new fashions for the English winter season demand a somewhat darker shade of hosiery for out-of-door wear; mushroom and nut brown shades predominating. Many stockings are decorated with slender clocks, the embroidery of which is carried out in contrasting colours. Heels compromise between square and pointed, starting with a slope and ending squarely. Even stockings for evening wear are in darker hues. Gunmetal, in a very fine gauge, is the favourite wear with black frocks, beaver and mole being chosen for evening gowns of the darker colours. For white dresses champagne tints seem to be holding their own, but pinky beige has quite definitely gone out for day or evening wear.

IN a letter I received from a friend in Germany, it was stated that "Englishmen and colonials are warmly welcomed in Germany, and are made much of; and it is a very easy matter for an Englishman to obtain a good position here. Living is ridiculously cheap. I am living in the greatest possible comfort for the large sum of thirty shillings per week. Perhaps our excellent reception in this country is due to the fact that our army of occupation left a very favourable impression behind them. A prominent German, expressing the voice of the people, said to an Anglican bishop: 'We shall always remember you sent us an army of gentlemen.' Therefore, we have to thank the courtesy and self-control of the British soldier. Perhaps it is the first time in the world's history that foreign troops have occupied a country without arousing bitterness and hatred. We liked the Germans and the Germans liked us,' (says a soldier from the Rhine). 'We have always had a square deal from the British.' (A resident of Wiesbaden).—Mary E."

FASHIONS in babies' cots and their trimmings change from time to time, in the same way as do those for baby clothes and nursery furnishings (says an English writer). The canopied cots that have been popular so long, are run very close in favour to-day by those with a hood, or a simple head rail. Some mothers prefer a cot without any of these, but with a mosquito net support, which allows a net to be thrown at night over the cot, and protects baby from flies or other insects. These nets look very dainty edged with lace, and as they are transparent, the cot trimmings can be seen through them. Net, organdie, spotted muslin and voile, frilled or hemstitched, are favourite materials for trimming cots, because they are so easily kept clean and look so dainty. When in plain white, they are usually lined with a colour that is repeated in a large rosette on one corner of the cot cover. White organdie with pink or blue floral sprigs is often used with linings and trimmings to match the sprig. When more elaborate materials are used they are chosen, as a rule, to fit in with the colour scheme of the nursery. One pretty cot I saw recently in a nursery with pastel blue walls and cork floor-covering in the same shade, was trimmed with lace-edged ecru net over blue satin, and it had large bows of blue satin ribbon to finish the hood and the cover. An equally happy idea was a cot trimming of smoke grey ninon over pink ninon, having pink flowers and green leaves appliqued on it.

THE fashions for men seem to be equally as important as those for women. This year the shops have very pretty brocaded rayon dressing-gowns for men in brilliant colours of rich reds, blues and greens. One very charming gown I saw in a window the other day was of artificial silk in gold shot with blue. There are other gowns of plain face cloths in maroon, blue, grey, brown and fawn with pockets embroidered with fancy badges and monograms. These would make an ideal New Year's gift.

MISS ANITA LOOS, author of "Gentlemen Prefer Blondes," is to publish another book very shortly. It will be called "The Better Things of Life." At present it is running in "Cosmopolitan" and "Nash's" magazines.

SIR HERBERT AUSTIN stated at the annual banquet of the Austin Motor Company that the sales of Austin motors showed an increase of 30 per cent. over those of last year.

PROBABLY the most popular and most useful of fruits is the lemon. No, one does not eat it for pleasure, but it is of tremendous household

LADIES! MAKE YOUR LIFE WORTH WHILE

You can do it if you give up smoking. Tobacco is sapping your vital forces. Decide now to see us. We can help you. Home Welfare Pty., A.M.P. Bldg., 36. R. Hunter Street, Wellington.



O Sole Mio

—is a wonderful song when the dishes have been cleared away and you are sitting by a cosy fireside—but it isn't much of a help to the housewife preparing scones and cakes for the evening meal.

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Another Chance

WILL you not stay?
Old year, whose hurrying feet
Speed on—away, away—
And soon, too soon, another year will greet
New day.

Will you not stay?
So short a space for kindly deed
We left to do some later day.
But, heeding not, you onward speed
Away.

Will you not stay?
Ah, nay! Yet pause to tender kindly glance—
Fear not! Fear not! You say,
For when the New Year sunbeams dance
God's heralds, singing, will advance
Their message clear—Another chance!
God's way!

—Oh Mack.

Bachelor Girls' Exhibition

Novel Competitions

ON November 12, 1930, a Bachelor Girls' Exhibition was opened at the New Horticultural Hall, Westminster, England, which lasted nine days. It was a wonderful exhibition, organised entirely by women for women, and it was the first of its kind. It dealt with every need and aspiration of the modern girl's life. No man, unless accompanied by a woman, was admitted, consequently it was a great honour for any man to attend. Even the police in attendance there were women. There was an interesting cooking competition held each day, in

Why is the announcer of 2YA like a lover? Because he takes a long time to say "Good night"

which the prize was given to the bachelor girl who could turn out the best impromptu "dinner for two" in an hour. Aviation, motoring, sport, squash tennis and fencing; television, travel, cooking and fashions were all represented, and we must not forget to mention that among the exhibits was also a bachelor girl's electric flat. Another novel competition was for a bachelor girl who had just been left a legacy, who was invited to help herself to the clothes she had always wanted. The one who made the best choice was the prize-winner. When the lucky men who were invited to this exhibition saw the wondrous talents and works of these girls they inwardly decided that next year the statistics would show a decrease in the number of bachelor girls.

value. We fly to it to remove a stain, for hot drinks to prevent a chill, to give flavour to an insipid dish, to take away the over-sweetness from another, to whiten our hands, to shampoo our hair and give it a glossy look, to ease a sore throat, and singers are known to suck a lemon before a recital. It also cleans brass, cures rheumatism, and is a health-giving fruit, and no home should be without it.

VISITING a house the other day, I saw two things there I was determined to improve my home by having. One was a kitchen table with a white porcelain enamel top, which was fitted with a most useful cupboard underneath. The other was an ironing cupboard recessed in the wall, with an ironing board which lets down for use. It is impossible almost to be without these ironing boards in summer if you launder your own summer frocks.

THE other day I asked an old couple aged 93 and 92 what was their formula for longevity. "Plain food," replied the old lady promptly, "and hard work. When I was a little girl I was sent out to work and for 1/6 a day I worked twelve hours." Her husband added cheerfully: "We both of us have never known anything but hard work, and it doesn't look as though it hurt us, does it?"

—ALISON.

SORE THROAT?

Pulmonas
INVALUABLE PASTILLES
for
QUICK
RELIEF



PAIN AFTER EATING

Indigestion Acidity &
all Stomach disorders
SPECIALLY RELIEVED BY
PEPTOS
The GREAT PAW-PAW
REMEDY
37-AT ALL CHEMISTS

A Luxurious Mansion Simplicity the Keynote

THE furnishings for an American millionaire's country home in South Africa have just been shipped from London. Everything has been sent—furniture, crystal, china, bathroom fittings, tiles, mirrors and lampshades. The packing and shipping of the above cost nearly £2000. The decorator who held the commission went to Holland for old wood carvings for the fireplaces, and also for lovely antique rugs. But all the easy chairs and couches he procured in England.

Einstein says "The radio among the nations is an instrument of peace." It will have to do better than it has yet in some neighbourhoods and flats that we know.

as he thinks that in no other country is comfort so well understood. The colours of the furnishings are soft, for Mr. Schrijver considers that a house should not call attention to itself, but should act as a background for the man or woman living in it. Therefore none of the curtains are of shiny materials such as taffeta or satin. These may be very charming for a woman, but not for a man, so damask or brocatelle was chosen. There are seven bedrooms, each with its bathroom attached, and each suite has its linen and blankets in the colour of the decorations. The cupboards have mirrors on the inside of their doors, and as these doors are opened a light is automatically switched on. The whole house is lit from the domed ceilings.

An interesting omission, and one which might with advantage be copied in many humbler homes, is no cabinet for "showing" china. Everything beautiful is to be used just as our grandmothers used their delicate china. In fact, the keynote of the whole place is simplicity—but a most expensive simplicity!

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COOKERY NOTES

Cooling Drinks for Hot Days



Unfermented Wine

THE juice of grapes, blackberries, or raspberries, etc. are all good for this satisfying drink. To each pint of juice add 1 pint of water and $\frac{1}{2}$ lb. sugar. Boil for a few minutes, skimming if any scum rises; bottle while hot, corking tight and dipping tops into wax; keep in a dry place. If iced when drunk, it is nourishing, satisfying to the thirst, and not intoxicating, because there has been no fermentation.

Hop Beer

TAKE a small handful of hops and boil in a quart of water, to which add 1 tablespoon of ginger (ground). Boil 20 minutes. Strain into a receptacle that will hold 4 gallons. Into this liquid stir 5 cups of sugar till dissolved. Fill up to make 4 gallons with cold water. Mix 1oz. of compressed yeast in a cup of lukewarm water and add to above. Cover and leave for 24 hours, during which time skim off the top occasionally. Bottle and cork tightly.

Quince Wine

TAKE 4lb. quinces to 1 gallon fruit. Put fruit into a tub and smash to pulp or as fine as possible, then add the water and let stand 10 days. Strain well. Then add 4lb. sugar to each gallon of liquid; stir a little to dissolve the sugar. Then cask. Keep one or 2 gallons for topping—that is, as it works over, keep filled up. When silent, add 1 good ripe banana, peel, but put in skin; bung down. Banana must be free from all blemishes.

Strawberry Vinegar

TO 4lb. of strawberries use one quart of white vinegar. Bruise the fruit in a large basin, pour the vinegar over it, and let it stand for 36 hours. Then drain slowly, without squeezing, for a night. To each pint of juice allow from $\frac{1}{2}$ to 1lb. of sugar; boil up for three or four minutes, bottle when cold and seal. This recipe may be used for raspberries, but if raspberries are used, $\frac{1}{2}$ pints of vinegar are used.

Milk Punch

TAKE 2lb. sugar, rub it upon 6 oranges and 6 lemons in order to extract the essence. Put the sugar into 4 quarts of water, pare lemons and oranges very thinly, putting the parings to steep in a bottle of rum or brandy for 24 hours. Squeeze the fruit on the sugar and water, add 1 quart of fresh milk boiling hot, mix well together, add parings and spirit. Strain whole through jelly-bag till clear, and bottle for use.

Turkish Delight

Ingredients: 1 large tin apricots, 1 cup water, 1 pint cider, $\frac{1}{2}$ cups sugar, 1 quart ice water, juice three lemons, juice two oranges.

Method: Rub apricots through a colander. Make a syrup of sugar and water, and just before removing from fire add apricot pulp and juice. Chill, and mix with the cider and orange and lemon juice. Let ripen for three hours, add ice water and serve.

Beetroot Wine

TAKE 4 quarts of water, 4lb. of beetroot, and 3lb. sugar. Wash and cut up the beet and boil in water till tender. Strain and boil the liquor again with the sugar added for 20 minutes. Strain again and work in 1oz. of yeast. A little ginger may be added if desired. Do not cork the bottles for some time. If kept till it is quite clear and dark it will taste exactly like port wine. The beetroot should be just freshly dug to be used.

Rhubarb Wine

TO 10lb. rhubarb pulp allow 2 gallons of cold water. To every 2 gallons of liquid strained from it allow 6lb. of sugar, 1oz. of isinglass and 2 lemons. Bruise rhubarb in a wooden tub to a pulp. Weigh it and add the water. Let this stand 36 hours, stirring often. Strain and add sugar and lemon rind. Stir well and allow it to ferment for a week till fermentation subsides. Strain off into a cask. If it ferments again, strain off again. Put the bung in loosely. After a week or two put the bung in tightly. It can be bottled and improves with age.

Fruit Punch

Ingredients: 2oz. sugar, 1 lemon, 1 orange, $\frac{1}{2}$ pints water, 2oz. shredded pineapple, 1 gill pineapple juice. Any berry fruit to flavour. Boil sugar and water, add fruit, and boil up. Strain and serve cool with whipped cream on top. Very refreshing.

Cream Nectar

Ingredients: 12 cups water, 2lb. sugar. Heat lukewarm, then add white of 1 egg (well beaten) and boil 5 minutes. When cold add 3oz. tartaric acid, 1 teaspoon soda, few drops essence lemon. Stir well and bottle.

A THOUGHT WAVE

I CAPTURED a thought from a golden dream,
Rich-hued with the splendour of life a gleam;
A wonderful gem from the Land of Nod,
Adrift in the ether—a gift from God.
I treasured my captive and sought in vain
For one with the wisdom that might explain
My wonderful thought from the Land of Nod,
Adrift in the ether—a gift from God.
I tuned my soul to the mystic wave
That carries life's meaning beyond the grave;
And I heard my thought from the Land of Nod,
Adrift in the ether—the Voice of God.
—Jim Stroud.

Lemon Beer

WATER 2 gallons, 2 lemons, 2lb. sugar, 2oz. cream of tartar. Get a large basin, cut the lemons in slices, add the sugar and cream of tartar. Pour the boiling water over them. When nearly cold, add a tablespoon of yeast. Bottle at once.

Home-brewed Beer

Ingredients: Wilson's Amber Malt, Morton's isinglass and Nelson hops.

Method: Add to the copper 9 gallons of water, bring to the boil. Have two scalded petrol tins ready. Add 7lb. of sugar and 3lb. of malt to the other. Dissolve them with boiling water from the copper, and pour into the copper when properly dissolved. Put $\frac{1}{2}$ lb. of hops into a white bag and tie the top. Boil all for $\frac{1}{2}$ of an hour. Lift out the hops and leave the beer in the copper till quite cool. Then add the starter (one bottle of beer) and stir. Pour it into your petrol tins and cover with a cloth. In 24 to 48 hours a thick scum forms on top. Skim this off every day for a week, when beer should be quite flat. Strain it through butter muslin, leaving sediment in tin, and soak one packet of isinglass with some of the beer; then pour a quart of boiling water to dissolve it properly and add to the beer. Let it stand for three days. Skim it and again strain off, leaving all sediment on bottom of tin. Bottle, and it is ready for use in 2 week or ten days.

Summer Sherbert

Ingredients: $\frac{1}{2}$ lb. tartaric acid, $\frac{1}{2}$ lb. carbonate of soda, $\frac{1}{2}$ lb. icing sugar, 16 drops essence of lemon and a little powdered ginger.

Method: Mix powders well, drop essence over, mix again. Place in a screw-top jar and use 1 teaspoon of powder to 1 glass of cold water. Easily carried for picnics.

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SORE THROAT?

Pulmonas

PASTILLES

QUICKLY RELIEVE

1/6 a tin all chemists

A GERMAN scientist claims that by subjecting seeds to ultra-short radio waves he can so accelerate the growth of plants so that only half the usual time is required for them to mature.

AN ingenious young lady in London is earning her living by providing music publishers with daily statistics of the broadcasts of songs, etc., so that their relative popularity may be estimated.

ONE of the largest circuits of cinema theatres in England has been negotiating for the installation in its theatres of the necessary apparatus for showing wireless news pictures.

A NEW system of radio decentralisation is to be installed at a school in Fort Wayne, U.S.A. It comprises a receiver, an automatic gramophone, a microphone, and individual loudspeakers for each class. The studio is to be close to the headmaster's room, and programmes will be broadcast to the whole school simultaneously.

AN elaborate "Radio House" is at present under construction in Berlin, and is expected to be ready for occupation early in January. This home of broadcasting is one of the largest buildings to be constructed in the capital in recent years. The facade has a frontage of 168 yards. Above the five stories a terraced garden will be available for meetings and public concerts.

AN American radio listener named Pierce has verification cards from 740 different stations all over the world. He attributes his success to his elaborate earth system. This consists

of 15 pipes embedded in the ground in a circle, 3ft. in diameter, with a leaky motor-car radiator in the centre to keep the ground damp.

ONE thousand radio receivers, adjudged obsolete, went up in flames at Philadelphia recently. It was felt that people owning old receivers could not appreciate radio to the fullest extent, and consequently sales were adversely affected. To counteract this, they were invited to bring their obsolete sets to the bonfire, and receive generous trade-in allowances on new receivers.

AFTER six years of experiment, broadcast reception on express trains of the Paris-Orleans railway has been abandoned. It is reported that the background of atmospheric disturbances and the high level of other extraneous noises completely spoilt reception. Radio engineers attribute the failure to lack of power from the broadcasting stations.

MORE than two thousand schools in England are now equipped with radio for listening-in to the special educational broadcasts arranged by the B.B.C.



AN attempt is being made in America to preserve records of eventful broadcasts, particularly those of historical interest. It is doubtful whether the scheme will succeed, for the broadcasting authorities in London recently destroyed two hundred similar records because they were considered useless for any possible rebroadcast.

THAT the aurora borealis induces a kind of temporary paralysis on the higher frequencies was affirmed at a recent meeting of the French Academy of Science. Reports were produced showing that on a particular night in September the "northern lights" gravely affected 30-metre communications on the Paris-New York service, necessitating a change-over to 17,000 metres.

Poetry by Wireless

Dr. John Masefield, the Poet Laureate, in a recent address offered the opinion that broadcasting could be a great asset in the dissemination of poetry. To him it seemed a joy to speak to people 5000 miles away, and to feel that people whom he could not see might be listening to poetry and hearing sentiments which might let them go to their beds with feelings of joyfulness and happiness.

He believed that if the broadcasting authorities would co-operate with poets, England would possess one of the most remarkable schools of poetry she had had for centuries.

A LITTLE difficulty has arisen between English and French radio circles owing to the disapproval expressed by certain members of the Church in England, against the frivolous nature of the programmes broadcast by Radio Paris on Sunday. France considers that this attitude is an unwarranted intrusion upon her own affairs, and certain commercial houses are complaining against loss of revenue on certain English products which they advertise.

A NEW wireless receiving set has been specially constructed for installation in the Science Museum at South Kensington, London. Elaborate precautions have been made for the safety of visitors, for the voltage of the final stage is 1000 volts—or nearly five times that of the normal power supply from the electric mains. Only the local twin-wave transmissions are received by this set, for the object of the receiver is to establish a standard of distortionless reception.

AN American has invented an allegedly infallible method of recognising false cheques and those that have been altered. Bankers will use a special paper and ink, or both at the same time. These will contain a very minute quantity of a special chemical product which will not alter the appearance of the cheque. Upon presentation the banker will subject cheques to a small ultra-violet ray plant, and the action of these rays upon the paper will enable the cashier to determine if the cheque is false or has been altered in any way.

THE wireless telephone link between India and Great Britain is practically ready, and plans are now being made for the opening of the line between Great Britain and South Africa in the near future. This will mean that a London subscriber will be able to speak by telephone direct to Cape Town and Calcutta, as well as to Sydney and Montreal. Australian, and in the near future New Zealand, telephone subscribers, will be able to communicate via the English shortwave station with subscribers in India, Canada, or South Africa.

A FRENCH magazine has this amusing piece of news:—"Listeners! Opinions and Visions of an Announcer.—"Oh! he is an ass. He gets on my nerves! He has a voice full of feeling. When I listen to him I want to box his ears! He must be a charming man. What an unutterable poseur! I picture him as being tall, dark and clean-shaven. I bet he is rather fat with a wart on his nose, and whiskers!" Human nature being what it is, it is safe to assume that some such remarks have been passed about announcers considerably nearer home.

AN interesting analysis was recently made by the British Broadcasting Corporation of the letters received by them during 1929 complaining of electrical interference with radio reception. Expressed as percentages, the figures are as follow:—Motors driving machine tools, 23.09; accumulator charging plant, 14.12; refrigerating plant, 10.01; generating plant, mains, etc., 9.5; overhead telephone and power lines, 6.29; cinemas, 6.1; flashing signs, 4.96; H.F. medical apparatus, 1.71; miscellaneous, 2.57; unidentified causes, 21.05.

THE Technical Institute of California is about to acquire a soft X-ray valve which is more than 30 in. high and over 13 in. in diameter. The Institute of Radio Research has sought to employ X-ray of more than 250,000 volts for a long time. With 40,000 it was hoped to produce rays equal in strength to that of radium, but researches were held up for want of a sufficiently strong valve. The X-rays produced with the new valve pass through a piece of lead 2 in. thick. If the valve gives the results hoped of it, a new era will be opened up in the medical world and a profound change will take place in the price of radium which at the present time is almost fabulous and the monopoly of one or two companies.

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IS NOW AVAILABLE, EMPLOYING THE 224 R.F. VALVE.

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