

PUBLISHED WEEKLY

# THE RADIO RECORD

AND

HOME JOURNAL

Vol. IV., No. 45.

WELLINGTON, FRIDAY, MAY 22, 1931.

Price, 3d.

## RADIOLOLA 86

Make your  
own records  
as well as  
enjoying

Super Het.

Radio plus

All Electric

Gramophone

Entertainment



Model 86 Super  
Heterodyne; Nine  
tuned Circuits; Re-  
mote Control; Improved  
Dynamic Speaker; Push-  
pull Power Amplifier;  
Magnified, Illuminated Dial;  
Volume Control; Local Dis-  
tance Switch; Tone Colour  
Control; Microphone for Home  
Recording. Ask for a Free  
Demonstration at your Radiola  
Dealers.

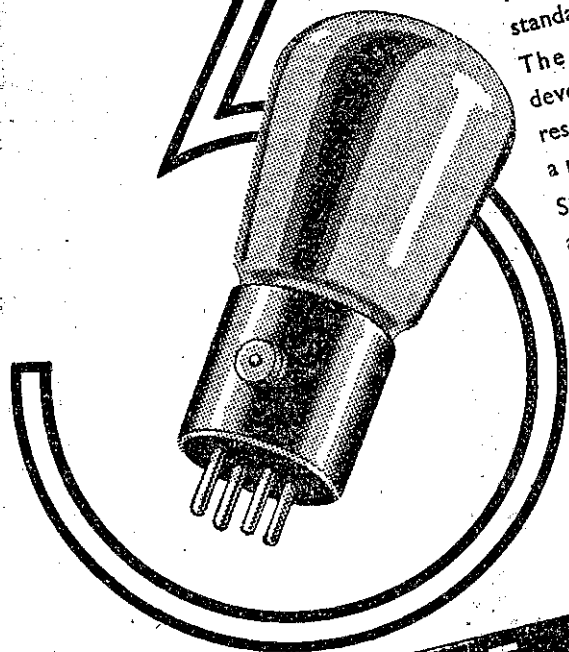
Wellington Agents—  
The Bristol Piano Co., Ltd.,  
LAMBTON QUAY.

Advt. of

Amalgamated Wireless  
Australasia Ltd.  
P.O. BOX 830, WELLINGTON.

# PHILIPS

## introduced the PENTHODE\* VALVE 7 YEARS AGO



THE Penthode Valve is one of the greatest of recent radio inventions. It revolutionised receiver construction and set a new standard for quality radio reproduction.

The Penthode Valve was designed and developed during 1926/1927 in the large research laboratories of Philips Radio, and is a masterpiece of radio engineering.

Since its introduction, it has been enthusiastically welcomed everywhere. Its superiority was at once recognised, because it supplies a larger output at the same anode current energy and renders far more faithful reproduction of speech and music than any other valve. The Penthode has always been a feature of every Philips Radioplayer receiving set, and should be in all others. Buy Philips Penthodes and you'll be amazed at the improvement in power and quality.

**PHILIPS ARE ALWAYS FIRST**

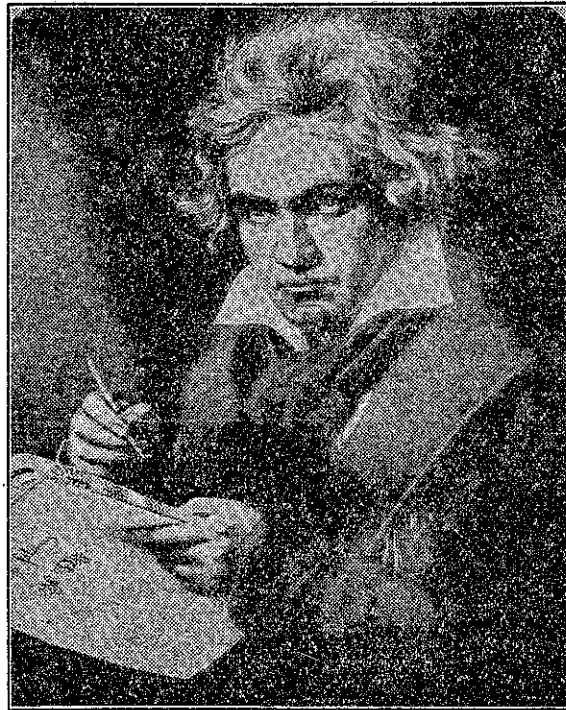
\* The word Penthode is derived from the Greek word 'penta' meaning 'five', and 'hodos' meaning 'way', so that a 'Penthode' Valve signifies a 'five-way' valve.

Advt. of Philips Lamps (N.Z.) Limited, P.O. Box 1673, Wellington.  
Building, Anzac Ave. Auckland Office: Paykel's  
226 Tuam Street. Christchurch Office:

W75R

# Beethoven and Domestic Problems

2YA is this week commencing a series of "Petites Periodes" with favourite masters of music. They include short sketches and recitals by eminent musicians. The first of these will be "Beethoven."



Beethoven—after Schiller.

Beethoven was a man apart—a soul longing for love—but he was not understood and, as he prematurely decayed, he became more difficult to tolerate. Following is Matthew Quinney on one of his difficulties.

A GOOD managing wife—a typical Hausfrau—would have made all the difference to Beethoven. Let us see how. For a start, she would have put a stop to the numerous flittings that must have disorganised his work and sacrificed his nerves. It is a pious and picturesque custom to mark with a suitably inscribed plate the houses in which the great have passed their lives. To distinguish in this way all the dwelling places of Beethoven in Vienna, however, would be impossible, for there were thirty of them!

On an average he packed up and moved about once a year, and only a few of his lodgings are known to-day. Nor can the reason for his frequent migrations be ascertained, though we can easily guess at some of them. His eccentricity, violent temper, irregular habits, and (it must be said with regret) his casualness in matters of personal hygiene, must have made him an undesirable tenant; the probability is that he received notice to quit as often as he gave notice of quitting. In the matter of personal hygiene we must not be misled by his excellent habit of pouring jugs of water over his head. Such enthusiastic ablutions weigh little against some less desirable habits, such as spitting on the floor of any room and in any house in which he happened to be. Nor did he confine his marksmanship to the floor; occasionally (we read) he would regard a large mirror as an attractive area, and . . . however this may have been mere absence of mind. But the worst on this subject cannot be told in a refined, family journal.

His devoted slave and worshipper, Schindler (who was so proud of his servitude that he printed on his visiting cards, "L'ami de Beethoven") says, after speaking of Beethoven's shortage of underwear, "I must hesitate

to describe his condition exactly as it was." Think of the difference a first-rate wife would have made!

Yet, though he worshipped some women (albeit never the same one for long at a time) and even more women worshipped him (in spite of his embarrassing manners) a wife was not for Beethoven. His pursuits were as vain as they were fleeting. 'Now you can help me to hunt a wife,' he wrote to his friend Count Gleichenstein, in 1810, during a period of comparative affluence; and he bids the Count to buy him "at least half a dozen neckties," in preparation for the chase; and a few months later he goes even farther than neckties, asking another friend to obtain his (Beethoven's) birth certificate as a preliminary to the documentary part of the ceremony.

Among the women who fluttered round him, however, was one who deserves honourable mention for her disinterested devotion. She was Nanette von Stricher, wife of a noted pianoforte maker. As a child of eight, by the way, she had lessons from Mozart, and so was a link between the two great men. She undertook from time to time to straighten out things for Beethoven when they got too bad even for him. We may safely guess that it was to the faithful Nanette that Beethoven wrote the list of questions that is still preserved in the State Library at Berlin:—

What ought one to give two servants to eat at dinner and supper, both as to quantity and quality?

How often ought one to give them roast meat?

Ought they have it at dinner and supper, too?

That which is intended for the servants, do they have in common with the victuals of the master, or do they prepare their own separately, i.e., do they (Concluded on page 2.)



## Beethoven

(Continued from page 1.)

have different food from the master?

How many pounds of meat are to be reckoned for three persons?

What allowance per day do the housekeeper and maid receive?

How about the washing?

Do the housekeeper and maid get more?

How much wine and beer?

Does one give it to them, and when?

Breakfast?

Domestic worries of all kinds played a large part in Beethoven's correspondence, and most of them were due to

his constant change of servants. In order to realise the kind of agitated procession that went on we have only to glance at this extract from one of his notebooks:—

On April 17 the kitchenmaid came. May 16, gave notice to the kitchenmaid.

May 19, the kitchenmaid left.

May 30, the woman entered upon her duties.

July 1, the new kitchenmaid came.

July 28, the kitchenmaid ran away in the evening.

July 30, the woman from Lower Dobbling entered service.

September 9, the girl entered service.

October 22, the girl left.

December 12, the kitchenmaid entered service.

December 18, the kitchenmaid gave notice.

No doubt there were some trying specimens among them, but it must be admitted that they started work under a heavy handicap, for there seems to have been a natural animosity between Beethoven and the genus. On June 8, 1818, he writes: "The new housekeeper arrived—troglodyte, inhabitant of Hell!"

As Beethoven was wont to be even more frank in speech than on paper we may imagine that the new housekeeper soon found herself called some thing far worse than a troglodyte. Nor did he stop at words. Hear what happened to a slut named Nany:—

The evening before last Nany began to jeer at me for ringing the bell, after the manner of all low people, so she already knew that I had written to you [Frau Streicher] about it. Yesterday the infernal tricks recommenced. I made short work of it, and threw at her my heavy chair; after that I was at peace the whole day.

But Nany was evidently used to assorted missiles:—

I have endured much to-day from N., but have thrown half a dozen books at her head as a New Year's gift.

He was no better off when he tried men-servants:—

Again unfortunate with a servant and probably also robbed. Already on the 14th I gave him 14 days' notice, but he gets drunk, stays whole nights out of the house, and is so bold and coarse that I would like to send him away still sooner.

Musical friends tell me that all these trials played their part in making Beethoven's music what it was; the angry explosions (say they) that are so frequent in his music are in part the result of the spiritual unrest brought about by his physical and domestic tribulations. It may be so. I dare not venture into regions where only musicians can tread with certainty. All I know is that to me (a plain man not without bowels of compassion for my suffering fellows) it seems incomprehensible that in order to make the Fifth Symphony the cataclysmic work it is, Beethoven should have had to spend half his working life in a state of muddle and torture indicated by such letters as I have quoted.

I have so far heard little of Beethoven's music, and that little with only a confused notion as to what all the turmoil was about; but I am ready to salute him as a great man. For only a hero—however untidy and unhygienic—could stand up against all squalid discomfort and do his life's work in such a way as to rank (as Beethoven seems to rank) among the world's greatest benefactors. (But I still maintain that marriage with the right woman would have enabled him to do his job even better than he did.)

HAVE you renewed your subscription to the—

"Radio Record and Home Journal?"

12/6 in Advance; 15/- Booked.

Box 1032, Wellington.

**Mullard**  
THE MASTER VALVE

Embodies all improvements  
known to Valve Manufacturers.

## Chinese Lecturer

### Broadcast from 3YA

DR. T. Z. KOO, of China, at present on a visit to New Zealand, is one of the really interesting personalities of this generation. He is making this visit at the invitation of the New Zealand Student Christian Movement, an affiliated body of the World Student Christian Federation of which Dr. Koo is the vice-chairman.

Dr. Koo has had a remarkably diverse university experience. He graduated Master of Arts at St. John's University, Shanghai, and within the last few years he has done post-graduate work at Oxford and at Oberlin, U.S.A. While at Oxford, Dr. Koo read philosophy under Dr. Lindsay, the Master of Balliol, and theology with Canon Streeter. T. Z. Koo is an honorary Doctor of Laws of Oxford.

For nine years Dr. Koo was in the administrative department of the Chinese Railway Service. In 1918 he joined the staff of the National Committee of the Y.M.C.A. of China, of which he is now the associate general secretary with special responsibilities for the student department. In 1923-1926 he was one of the travelling secretaries of the World Student Christian Federation, the first Oriental to be appointed to such a position. During those years he spent much time with the students of Europe and America on whom he made a deep and lasting impression. In 1925 he was one of three chosen by 34 Chinese organisations to represent China at the Second Opium Conference called by the League of Nations.

Four things impress those who are fortunate enough to hear Dr. Koo speak: his faultless English, his acute, analytical thinking, the practical nature of his religion with full social, national and international implications, and his passion for the higher education of his own people.

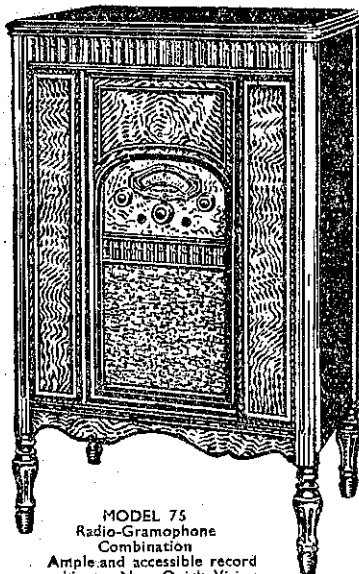
Dr. Koo will be heard from 3YA on Monday, May 18, and on the afternoon of Sunday, May 17.

## "Ghost" Images

### On Television Receivers

TELEVISION experimenters have frequently noticed two or more identical "ghost" images fading and shifting in the background of the strong image. The cause is attributed to the reception of the signal over two or more paths from the transmitter, one path being by the ground wave and the others by the sky waves reflected from various heights. Tests have so far revealed that the ghostly effect is noticeable only during the twilight period, possibly because the ground and sky waves are about equal in energy at that time.

**NOW**  
**HEAR**  
**your**  
**RECORDS!**



MODEL 75  
Radio-Gramophone  
Combination  
Ample and accessible record  
cabinet. New Quick Vision  
Dial and Tone Control

There are details on your favourite records that you have never heard yet. Try them on an Atwater Kent Radio-Gramophone Combination. New shades of tone leap to life. Voices suddenly become uncannily natural and lifelike. Every instrument becomes richer, fuller, more vivid. And the perfect Tone-Control shades your record from bass to treble, just as you prefer. Don't be satisfied with less—for Radio and Records alike only the GOLDEN VOICE will really thrill you.

**ATWATER KENT**  
**RADIO-GRAMOPHONE**

with the **GOLDEN VOICE**

Your nearest Atwater Kent dealer will gladly demonstrate or write to distributors.



# Earthquakes and Seismographs

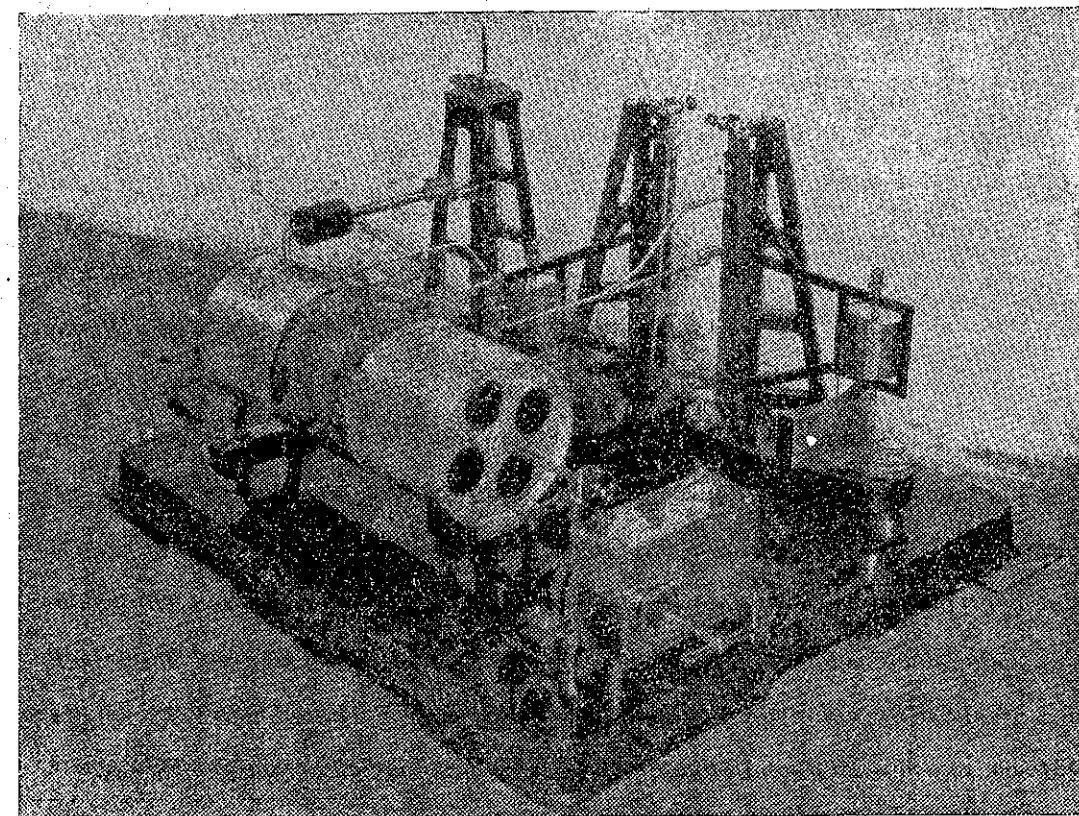
*A talk broadcast recently from station 2ZM, Gisborne, by Sydney W. S. Strong, A.O.S.M. (Hon. Official Listener, Gisborne.)*

**E**ARTHQUAKES are the waves or vibrations set up in the earth as a result of either movement along "faults" or volcanoes becoming active and making spasmodic outbursts of lava, steam, etc.

The two different types of waves which are started from the centres of activity are called longitudinal and transverse waves. The former type is the faster and has the same principle of formation as we find in sound waves, i.e., the particles of the earth's crust are alternatively forced together and then stretched apart, thus making a series of rapid compressions and rarefactions. If they are of slow enough frequency, they give rise to sound waves or rumblings, a phenomenon many of us have unfortunately heard frequently of late.

The longitudinal waves have the property of passing through the rocks, water and air.

The other type of earth wave is the slower and is similar to light waves in its motion, i.e., the particles in its path move up and down at right angles to the direction in which the wave is travelling. This transverse type of wave is propagated through solids only, and follows a different path from the longitudinal waves in its journey through the earth. Both types of waves spread out in all directions,



A seismograph for determining origin and magnitude of earthquakes.

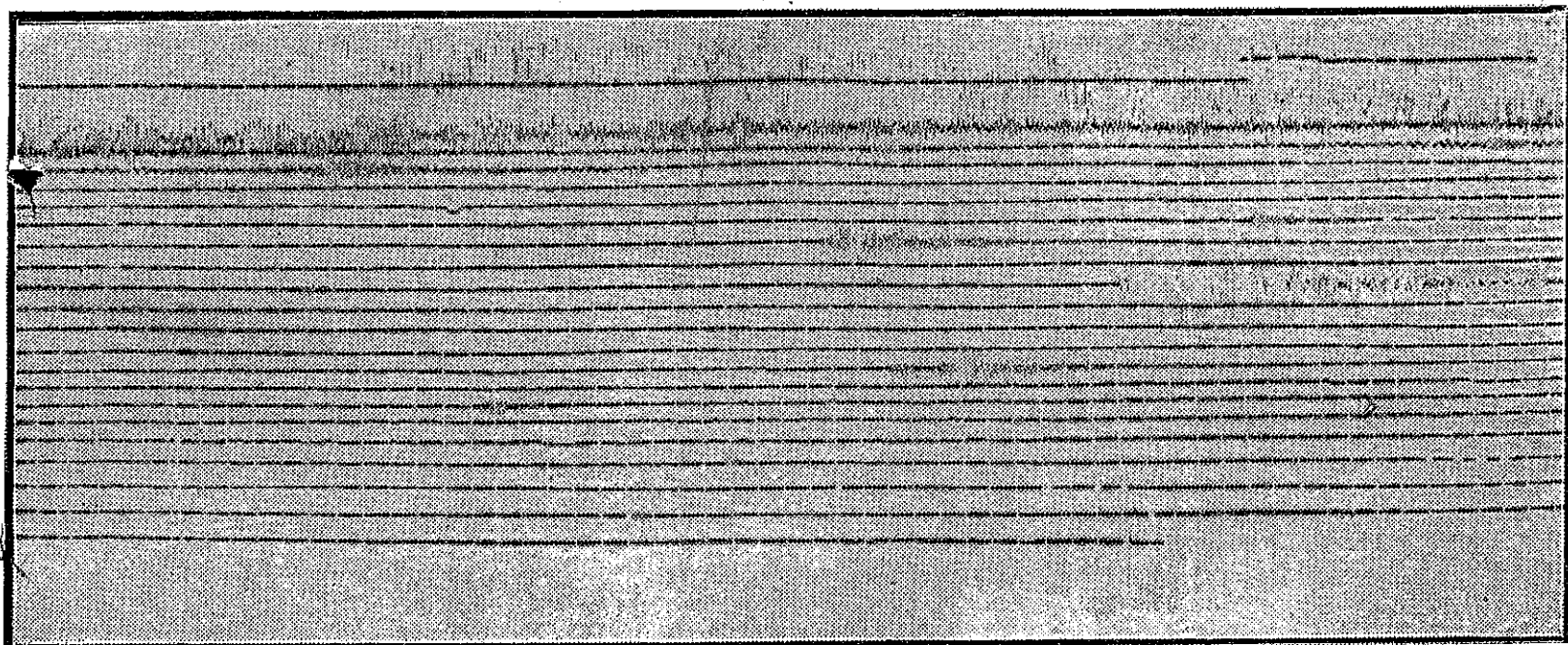
i.e., every direction of the compass as well as vertically downward.

At any moment an advancing wave front would be more or less hemispherical in its outline and the energy conveyed through the earth and along the surface becomes lessened as the waves progress away from the source.

When the vibrations reach a recording station a long complex curve is traced up and down on the record. A typical curve showing the reception of a distant quake is illustrated.

The rays of earth waves are reflected and refracted (i.e., bent) in their journey through the earth, and as both types of waves travel with different velocities in different kinds of rocks, we see why the recordings are very complex. One of the chief results of the study of these waves is that important data have been found regarding the nature of the interior of the earth.

Broadly the earth is thought to be made up of a series of layers of different thicknesses, something similar to (Concluded on page 30.)



A seismograph record of an earthquake.

—Photo, "Evening Post."

# The New Zealand Radio Record

—AND—

## Home Journal

(Incorporating the "Canterbury Radio Journal.")

P.O. BOX. 1032, WELLINGTON.

Published Weekly. Price 3d. Subscription Post Free in advance, 12s. 6d. per annum; booked, 15s.

Literary communications should be addressed: "The Editor"; business communications to "The Manager"; technical communications to "The Technical Editor."

Advertisers are asked to note that alterations of advertisements should be in hand Friday of each week for insertion in the succeeding issue, printed Tuesday, bearing Friday's date. No responsibility is accepted for blocks remaining unclaimed three months after last insertion.

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

WELLINGTON, FRIDAY, MAY 22, 1931.

### EDITORIAL NOTES.

**CONGRATULATIONS** may be extended to the Wellington Rugby Union upon its decision to permit of its matches being broadcast this season by 2YA. By this decision the Rugby Union will maintain the prestige of the national game in the Capital City and its environs, and confer a distinct benefit upon invalid and country listeners. There is no doubt as to the popularity of football broadcasts, and the decision to meet the public wishes in this matter is a wise one. The arrangement effected on both sides fully meets the position.

**ALTHOUGH** the official opening of the private station which has been erected in Wellington has been postponed from May 14 to 21, the station has been operating for the past few days. Its operation has brought home to listeners who use crystal sets and unselective valve sets certain disabilities which will have to be rectified by them before they can enjoy radio in the future as in the past. From the technical point of view the position created is that, because both 2YA and the new station are using relatively high power, and are close together, listeners with non-selective sets are bound to be troubled with interference. The position created is that crystal users with sets of old design will in all probability have to scrap their old apparatus. A design of crystal set, however, is possible which can separate the two transmissions. A description of such a crystal set which, on results so far secured, it is believed will give the necessary separation, is printed elsewhere in this issue. Those using non-selective sets will be compelled to install a wave-trap. The material for the construction of an ideal wave-trap is, we understand, unfortunately not on the local market at the moment, although supplies are en route. In those circumstances a certain amount of inconvenience is likely to be caused set-owners in that category, although less efficient "traps" are possible.

**BECAUSE** of the technical difficulties indicated in the foregoing, the trend of radio in America, where numerous stations operate relatively close together, has been for the elimination of the crystal set and the low-powered non-selective set, and concentration of sales effort upon the relatively high-powered make with a high degree of selectivity. This imposes a certain amount of extra cost upon listeners who have been relying upon the class of apparatus now rendered unsuitable.

**B** CLASS stations are now operating in each of the four centres, Wellington being the last to witness this development. We have on previous occasions expressed our views on this situation. We believe that the best interests of listeners will be served by concentration upon one main national service, building up over a period the necessary relay and distributive points in provincial centres. For the sake of alternative programmes and more speedy coverage, the Government authorities have permitted the development of a number of privately-owned stations at different points. The Postmaster-General has expressed himself as being definitely averse to the institution of radio advertising of either a direct or sponsored character. We commend his declarations on that point, and trust that the regulations thereupon will be adequately administered. The danger inherent in the creation of a B class system is that demand may ultimately be made, either for a share of listeners' revenue, or the right to secure advertising revenue at the cost of artistry. Either of those developments, we believe firmly, would do ultimate damage to the interests of listeners; but, given suitable guarantees against those possibilities, listeners may in the meantime welcome and enjoy any extra service made available from B class sources.

### New Wellington Station

#### Hours of Operation

**SEVERAL** months ago it was announced in Wellington that in the near future a private station, owned and operated by Messrs. H. Nimmo & Sons, Ltd., would commence transmissions.

An unexpected delay ensued, however, and it was not until a few days ago that 2ZW, the call allotted to the new station, began operations. Reports on transmissions have been received from listeners in every province of New Zealand, and many of these remark on the clarity and volume of reception. 2ZW is operating on a power of 1 kw., on a frequency of 1120 kilocycles (268.9 metres).

Hours of operation are as follow:—Monday-Saturday (incl.), 10-11.30 a.m.; Monday to Friday (incl.), 12-2 p.m.; Monday, Tuesday, and Thursday, 7-11 p.m.; Wednesday, 5-11 p.m.; Friday evening, silent; Saturday, 2.30-5 p.m., 7-12 p.m.; Sunday, 9-10 a.m., 11-12 a.m., 8-10 p.m.

Reports from listeners would be appreciated by Messrs. Nimmo & Sons, Ltd., whose address is Nimmo's Buildings, 89 Willis Street, Wellington.

### Margherita Zelanda Touring YA Stations

**NEW ZEALAND** has every reason to be proud of the coloratura soprano Margherita Zelanda (Miss Daisy Hall), just now touring the YA stations under engagement to the Radio Broadcasting Company. She has only recently returned from Italy, which country she proposes to visit to make her debut in grand opera at the La Scala, Milan.

In Italy she was known as the Bambino prima donna.

Miss Hall was born in Dupedin, and made her debut at a school concert at the age of seven years. She recalls how the schoolmaster carried her on his shoulder and called her "our little Melba." His prophecy has come true, for to-day critics compare her golden voice with those of the great Patti and Tetrazzini. Leaving Dunedin, she crossed over to Australia to study, and later completed her studies in Italy, first at Palermo and then at Milan with the famous Maestro Manlio Bavagnoli.

Margherita Zelanda will sing at the Auckland Radio Exhibition this week. She is to sing from 2YA on Monday, May 25, and Tuesday, May 26, and for 3YA on Friday, May 29.

### Sports Broadcasts Position Summarised

**THE** position in the four cities in regard to the broadcasting of football is as follows:—

**AUCKLAND.**—Permission granted week by week. The Auckland Union has always been favourably disposed to broadcasting.

**WELLINGTON.**—Permission granted, subject to the Wellington Rugby Union being referred to in the event of the Broadcasting Company wishing to broadcast some outstanding topical event which clashes with a football match.

**CHRISTCHURCH.**—Permission refused by the Canterbury Rugby Union. Fee of £500 stipulated. Rugby League requests broadcasts of its matches, as also does the Football Association.

**DUNEDIN.**—Permission refused by the Otago Rugby Union, but privileges of the Press accorded for the purpose of preparing reports to be broadcast at the conclusion of the matches, if desired.

# Metrodyne

WRITE  
OR CALL  
AT

RADIO FOR TONE & DISTANCE

AT ROYDS-HOWARD CO. 553 COLOMBO ST. CH. CH.

## Broadcast Debate

## Wellington Radio Exhibition

## 2YA Children's Service Committee

## "Democracy a Failure"

ON Friday, May 29, a debate to take place at Victoria University College, Wellington, will be broadcast by 2YA. The subject will be: "That Democracy is a Failure."

The leading speakers will be:—Affirmative: Mr. W. J. Mountjoy, jun. (mover) and Miss Z. Henderson (second). Negative: Miss C. S. Forde (opposer) and Mr. C. G. Watson (second). The opening speakers will speak for fifteen minutes each and the seconds ten minutes each. Members of the society will speak seven minutes each during the discussion, after which the leaders will be allowed ten minutes each to sum up.

Considerable time and thought is being given to the preparation of the debate, and listeners should not miss the opportunity of tuning in on what should prove to be a most instructive and entertaining evening. The debate is scheduled to finish at 9.30 approximately.

## Health Talks

## A Weekly Series at 2YA

ONE of the interesting features marking the extended sessions of 2YA is the series of talks on health to be given for the benefit of parents every Thursday morning by officers of the Department of Health. The schedule of talks has been arranged by Dr. M. R. Watt, Director-General of Health, and is as follows:—

"Building Up Strong School Children," by Dr. Ada Paterson, Director, Division of School Hygiene, May 14.

"Common Colds," by Mr. F. Clayton, May 21.

"Family Food Supply," by Mr. E. R. Myers, May 28.

"Pre-School Child," by Dr. Helen Bakewell, June 4.

"Sleep," by Mr. F. Clayton, June 11.

"Fresh Fruits Dietary Value," by Mr. E. R. Myers, June 18.

"Nervous Children," by Dr. Ada Paterson, June 25.

"Hints on Home Nursing," by Miss Lambie, R.N., R.M., July 2.


"Storage of Food in the Home," by Mr. E. R. Myers, July 9.

"Children's Eyesight," by Mr. F. Clayton, July 16.

CARRY THEM WITH YOU

**Pulmonas**

INVALUABLE PASTILLES for COUGHS COLDS 'FLU



## Maori Party Engaged

THE Wellington Radio Exhibition this year will be held in the Town Hall on June 10 to June 13 inclusive. The exhibition will be open from 10.30 in the morning till 10.30 in the evening.

As was the case in past years, Maori life will be a strong feature of the exhibition. The whole of the stage this year will take the form of the entrance to a Maori village, with dwelling-houses and suitable decorations, the whole ensemble being of a very unique and striking character.

A party of talented performers from Otaki, numbering 25 members of the Native race, has been engaged for the exhibition, and will give performances each evening. Those performances will cover a full range of Maori items, dances and haka.

The exhibition is assured of the fullest support of the radio trade, and it is anticipated that an even better success will be achieved than in past years.

## Children's Sessions

From 2YA

**Monday, May 25:** Mrs. Halligan's pupils are presenting the very pretty operetta "A Day in Flowerdom." Uncle Jeff will be Master of Ceremonies, and during the interval will send Birthday Greetings and give the puzzle results.

**Tuesday:** Miss Fitzgerald has arranged a delightful Nursery Rhyme Evening, with chorus work, songs and mouth-organ solos by Uncle Toby. Jumbo will tell the story of "Old Mother Hubbard."

**Wednesday:** We are getting near the end of the Meeting Pool Stories now, so mind you do not miss this one. Aunt Daisy and the Cheerful Chirpers will have some riddles and jokes, besides some cheerful choruses.

**Thursday:** Another playlet this evening called "The Fairy Prisoners," and Uncle George and Big Brother Jack will be in the audience. During the interval Cousin Vermont will give you a farmyard story with animal imitations.

**Friday:** Cousin Marjorie will give you a clog dance, and Gwenda will sing "Fairy Bells." There will be chorus work from the 2YA Children's Choir.

**Saturday:** Uncle Jasper and Spot will send out Birthday Greetings. Aunt Molly will also be here to welcome the pupils from Kilbirnie Convent, who will sing.

**Sunday:** The Children's Evening Song Service will be conducted by Uncle George, assisted by the Children's Choir from the Taranaki Street Methodist Church, under the leadership of Mr. Howe.

From 3YA

**Monday:** Cousin Margot will have many cousins to assist her to-night—girls from the Y.W.C.A. will sing solos and choruses and give a short play and talk under the direc-

## Linking Broadcast Stations

## New Cable System

A NEW cable system for linking broadcasting stations to permit them to render musical notes more faithfully over a wider range of frequencies is being laid down in America.

With a test circuit of 2200 miles in length already operating successfully between New York and Pittsburg, the new system will be extended as rapidly as possible to embrace all of the 35,000 miles of telephonic lines utilised to link radio stations into networks for programmes of common origin. Where the frequency range in present radio telephone lines is around 150-5000 cycles, the new cable will widen this to 50-8000 cycles.

Broadcast cable developments may also be expected in Great Britain in the near future. The Post Office is collaborating with the B.B.C. in the substitution of underground cables to replace all the overhead lines still used for broadcasting purposes.

tion of Miss Burnley. The choir will sing the "Good-night" chorus.

**Wednesday:** Here are Uncle John and Cousin Beatrice. Mr. Richards is bringing such a jolly little choir to sing and perhaps a cousin or two will recite.

**Thursday:** Hello, to you all, say "The Thursday Three"—Uncle Frank, Ladybird and Uncle Dick.

**Friday:** Such a melodious little choir under Mrs. James to-night, and "Chuckie" will sing songs and tell his stories.

**Saturday:** A very interesting programme has been arranged for to-night, and the birthday greetings will help entertain the little guests at parties.

**Sunday:** A talk will be given this evening by Rev. T. W. Armour and scholars from the Knox Presbyterian Sunday School will sing the hymns.

AT a meeting of the 2YA Children's Service Committee, the following were present:—Mr. L. G. Greenberg (chairman), Mr. R. Walpole (Uncle Toby), Mr. W. E. Howe (Sunday Schools' Union), Mrs. Green (Federation of University Women), Mrs. M. Chatfield, Pastor W. G. Carpenter (Uncle George), Mr. G. W. Morgan (Radio Children), Mr. W. A. Andrews (Anglican Boys' Home), Mr. J. Crewes (Big Brother Jack), Mrs. D. Evans, Mrs. D. Basham, Mr. J. Ball.

Various aspects of the work at the children's sessions were discussed and suggestions made.



The Man who has revitalised thousands of neurasthenic cases.

## SELF-CONSCIOUSNESS, NERVOUSNESS, BLUSHING.

A Startling New Book by a Former Sufferer Offered FREE to Every Nervous Reader.

THERE is no greater obstacle to social and business success than a nervous and shy disposition. There is no human weakness so humiliating and responsible for so much secret misery and despair as this unfortunate affliction. Nervousness deprives you of the ability to reveal your real self, to develop your talents, and make a headway in the battle of life. Neither ambition, talent, nor hard work can achieve success when handicapped by nervous fears.

If you are a victim of this distressing mental disorder, if you are nervous and shy, if you blush and stammer when spoken to, if you feel awkward and embarrassed in company, if you are letting opportunities slip by through being too nervous to step out of the crowd and become a leader instead of one of the led—here is a real chance to conquer your weakness instead of letting it conquer you—here is your chance to become forceful and red-blooded.

## FREE BOOK!

A remarkably interesting book, explaining how you can cure yourself privately at home, as I did, will be sent in a plain sealed envelope to all sufferers sending 4d. to cover cost of postage. Write at once in confidence to—

## FREDERICK GRAY

DEPT. R.R., LOMBARD CHAMBERS, PITT STREET, SYDNEY, N.S.W.

Tear This Out—Send Now!

Frederick Gray, Dept. R.R., Lombard Chambers, Pitt Street, Sydney, N.S.W.

Dear Sir,

Please send me absolutely Free and without any obligation on my part whatever, a copy of your book, "Nerve Strength, Self-Consciousness, and Personality." I enclose 4d. in stamps for postage.

Name .....

Address ..... Radio Record 22/5/31.



# Overseas Radio Telephone Service

## Details of the Equipment



PARTICULARLY interesting and instructive lecture was delivered recently before the Victoria University College Mathematical and Physical Society, when Messrs. S. J. Rubenstein, A.M.I.R.E., and D. M. Burns, of the Laboratory staff (radio section) of the Post and Telegraph Engineering Division, gave an illustrated description of the recently-opened Sydney to Wellington radio telephone service.

Mr. Burns gave an account of the early difficulties encountered in the experimental work, and then described a portion of the apparatus as it was finally evolved by the department's engineers.

The equipment consists of three main groups: The transmitter (ZLW) on Mount Etako, Tinakori Hills; the receiver on Mount Crawford, Watts Peninsula; and the terminal equipment at the Central Telephone Exchange, Wellington. It is necessary to have the transmitter and receiver separate to avoid interference.

Both the receiving and transmitting

aerial arrays have been designed on scientific principles. The receiving array consists of two similar sections, a front portion and a rear, or "reflecting," system, at a distance of quarter of a wave-length behind the first. By suitably arranging and connecting the networks it is found that this system will receive signals arriving at all angles, with the vertical, from the point of transmission (Sydney), effectively eliminating interference from the opposite direction, whilst another design for the transmitting aerial array enables a very narrow vertical ray to be sent out.

The frequencies used in this service vary from approximately 6000 to 15,000 kilocycles, the value used depending on the season of the year, a compromise being made for the effect of the time of the day.

### Huge Transmitter.

SOME idea of the magnitude of the transmitter may be gained from the fact that the filament current of the second and third amplifiers for the output of the master oscillator (the

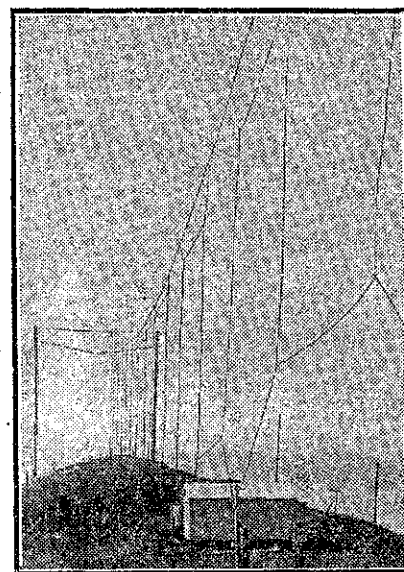
third amplifier being a push-pull stage, using 1500 watt valves), is 45 amperes; grid bias batteries of 120 and 300 volts are employed. The ordinary valve in a home receiving set takes a filament current of from .06 to 1.5 amperes, and has a grid bias varying from 4 to 50 volts. The amplifier for the speech section uses an oil-cooled valve rated at 5 kilowatts, taking a filament current of 48 amperes, and having a grid bias of 1350 volts.

The receiver is built up in four vertical bays or sections, and the various units are arranged on these sections. A separate panel is used for the power supply.

Screened-grid valves are used extensively, and very frequent recourse is made to the push-pull method of coupling.

### Switching Devices.

SOME means must be provided for rapidly changing from a listening position to a speaking position. When a person is speaking the disturbance due to the voice must go via ZLW, on Tinakori Hills, and when listening he



The receiving station at Mt. Crawford, Wellington, showing the directional array.

must be connected through to the receiving station on Mount Crawford. With one pair of wires both these positions cannot be simultaneously connected to the telephone subscriber. It is equally impossible to have a manual or mechanical switching device, for these would not be rapid or flexible enough.

The difficulty was overcome by use of thermionic valve-controlled apparatus. This apparatus, which, according to Mr. Rubenstein, hides its identity under such symbols as V.O.D., V.O.D.A., and V.O.D.A.S., the last of which really means voice operated device amplifier suppressor, is one of the most interesting features of the whole equipment.

The ingenious pieces of apparatus enable the change-over to be made in a time which is of the order of 3 milliseconds. Special precautions had to be taken, however, to guard against over-rapid operation, and to prevent extraneous noises from causing the various devices to function.

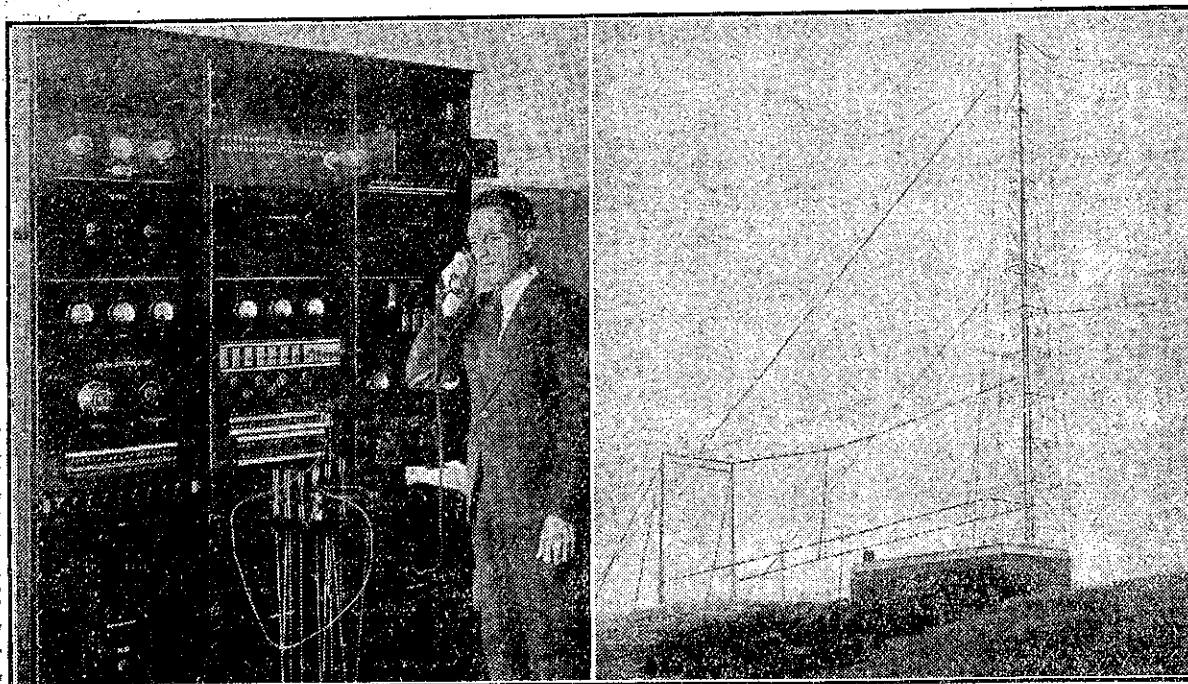
### New Zealand with England.

TESTS are now being carried out with a view to linking New Zealand up with England, and it is confidently predicted that ere long a regular commercial service will be in operation between the two countries. The value of such a service as this cannot be over-estimated, for not only would it be of primary importance in event of a national crisis, but also it will show that New Zealand is not lagging behind where the scientific advances of the age are concerned.

### Reasonable Charges.

THE charges are extremely reasonable. It costs only £1 per minute for conversation with Australia, and the charges for a call to England, Scotland, or Wales will be about £2/5/- per minute. The proposed charges for connection to Germany, France, Sweden, Czechoslovakia, Spain, and Italy vary from £2/10/- to £2/14/- per minute.

All the calls have a minimum charge as for three minutes. Each subscriber's line is tested before use, and every call is monitored up to a certain constant level. Further, should any interruption due to circumstances beyond the control of the technical operator occur during the call, only the effective portion of the whole is charged for.



Left: Technical operator's position at the Telephone Exchange, Stout Street, Wellington. Right: Transmitting Station, Mt. Etako, Tinakori Hills, Wellington, showing the transmitting array.

—All photographs by courtesy of "The N.Z. Post & Telegraph Journal."

## Rugby Broadcasts

### Wellington Union's Decision

CLUB Rugby football matches in Wellington are to be broadcast this season under the same arrangement as last year, according to a decision reached at the weekly meeting of the Management Committee of the Wellington Rugby Union held on May 13.

The chairman, Mr. J. Prendeville, in reporting on the conference held with representatives of the Radio Broadcast-

## Ever Mounting Upward

### Licenses Increase a Thousand During March

THE following return of radio licenses shows the position obtaining when the year expired on March 31, 1931:—

District.	Reers.	Dealers.	Trans.	Exper. and special	Free.
Auckland ....	18,913	312	94	2	101
Canterbury ...	10,486	263	61	2	56
Otago .....	7,095	188	45	2	35
Wellington ...	25,968	516	136	6	54
	62,462	1,279	336	12	246

Total: 64,335.

It is interesting to note that on March 31 last year the total stood at 52,467. This represents 23 per cent. increase in the last twelve months. The fact that during the month of March licenses increased by 1100 odd indicates the growing popularity of radio even in these times.



CONDUCTOR J. M. WATSON, of the Wanganui Garrison Band, which is presenting a concert on relay from 2YA on May 28.

ing Co., said that it had been agreed that the broadcasting should commence the following Saturday, and that the game at Athletic Park each week would be broadcast, unless there were some game of national importance being played, in which case a Saturday would be skipped if the committee agreed. In reply to a question, Mr. Prendeville said that the Broadcasting Co. would not agree to make a contribution to charity, and he did not think it would be possible to come to any better arrangement.

The sub-committee's action was approved, the only dissentient being Mr. J. Moffitt, who continued to hold the opinion he had expressed previously, that the company should be asked to pay for the privilege.

### Announcing Titles

A LISTENER suggests that the titles of musical items should be announced at the conclusion of the item. One often misses this when announced before the item, and then, when something particularly pleasing is played one does not know its name. The suggestion appears sound, but it is easy to find the names of most items by referring to the programmes published in the "Radio Record."

## Relay from Wanganui

### Garrison Band Concert

STATION 2YA will broadcast on relay from Wanganui on Thursday, May 28, a concert to be given by the Wanganui Garrison Band. No name is better known in musical circles, for the band has occupied an honoured place on the prize list of every contest for decades past. At present, under Conductor J. M. Watson, it is in splendid form and an excellent programme has been arranged for its first broadcast concert.

The Wanganui Garrison Band was formed in 1882—nearly 50 years ago—and is therefore one of the oldest contesting bands in the Dominion, with a record that few bands, if any, in the world can boast of. A glance at the band's contesting record shows the reason why the citizens of Wanganui are so proud of their famous Garrison Band. It has to its credit 26 firsts, 9 seconds and 5 third prizes—a truly wonderful record. The prize list includes: First prize at the Christchurch International Exhibition Contest, 1907, were 29 bands competed and the honour of "The International Prize Band"; first prize in selections at Dunedin Exhibition Contest, 1926, and winners of the Australasian Championship (selections and quickstep) at Ballarat in 1910. The Garrison Band is the only New Zealand band that has won the Australasian championship.

### Famous Conductor.

THE band played under Mr. Watson when it won first prize at Dunedin, and recently, after an absence of two years in Australia, this very capable conductor again resumed the baton.

Mr. Watson became well-known in New Zealand through his conductorship of the Garrison Band in the "A" grade tests at the Dunedin Exhibition

Contest in 1926, winning both test selections—"Der Freischutz" and "Faust" (Berlioz)—and receiving the high compliment from the adjudicator—Mr. Ricketts (of "Colonel Bogey" fame)—"that their playing was well-nigh perfect."

Mr. Watson was early associated with bands, for at the age of nine years he was a playing member of the band

which won the "A" grade championship of Australia at South Street, Ballarat in 1906, and at the age of 15 years he rehearsed and conducted a boys' band at public performances in Geelong, Victoria. In 1914, at the age of 17 years, Mr. Watson enlisted for the war. After service in France and Egypt he was selected conductor of the Australian Band that played before the then Princess Mary and other members of the Royal household, when the Princess, on behalf of the women and children, presented a shield and colours to the Australian Imperial Forces. At the conclusion of the war Mr. Watson availed himself of the opportunity of further study of music at the great English Military School of Music—Kneller Hall.

After he returned from the war Mr. Watson was appointed conductor of the Lithgow Band, New South Wales, and at the Sydney Contest in 1923, he swept the boards, winning the "A" grade selections, open quickstep, and "B" grade selection contest. At South Street, Ballarat, this band was again a prize-winner. Mr. Watson has not confined his sole attention to bands, for he has had many notable successes in the choral world as a conductor. At the Bathurst Bistedfodd in 1922-23 he conducted the Lithgow Orpheus Society to success in every choral section, Grand Choral (80 voices), Ladies' Choral (30 voices), Male Choral (30 voices) and defeated, among others, Sydney's leading choirs.

### Organisation.

THE broadcasting of the Band's Honorary Members' Concert will be welcomed by bandmen throughout Australia and New Zealand. The popularity of the band was evidenced when it secured first place at the Dunedin Exhibition Contest, over 100 telegrams of congratulation being received from all parts of Australasia, and even as far afield as the Islands.

The band still retains in its ranks such well-known bandmen as: W. Hichman, W. Francis, J. J. Collins, R. Boyd, J. Farrell, C. Brown, J. McGrath, O. Williams, R. Burt, W. Miller and H. Hall (secretary).

# CUT IT OUT !!!

that unwanted station, by using an

## Empire Wavetrap

"Rejecta" Crystal Set parts

Obtainable from—

## Thos. Ballinger & Co. Ltd.,

58-62 VICTORIA STREET, WELLINGTON.

"WHERE THE QUALTY GOODS ARE SOLD."



## Of Success and Happiness

OF doctors it has been said they do not take their own medicine. Mrs. Albert Russell's talk on "The Principles of Success in Everyday Life" left me with the thought that, as a pragmatic psychologist, she might fittingly have made more practical application of the principles of psychology in "putting her message across." With the general tenor of what she is hoping to achieve by these talks I have no manner of complaint; but I strongly believe she would increase their efficiency tremendously by a slightly different presentation. If there is one thing more than another which the average human being hates, it is being preached at; good advice is the worst possible kind of advice unless very skilfully administered, just as that little boy takes his pill more easily who absorbs with it the tastiest kind of jam. Her very title made me nervous: "The Principles of Success in Everyday Life." Would she not have intrigued her listeners better if she had asked "Is it Possible to Succeed and be Happy?" And on that peg have chatted brightly? Then her talk lacked illustration, the power of example. There was no break in her steady exposition of high principles, no little quip, no small illustration, no good or even bad example by which to profit. Albert, you let your wife down! And you, who know so well the value of a joke!

With Mrs. Russell's teaching I agree heartily. Financial and material success is not sufficient, she says, without happiness achieved by the fullness of intellectual and spiritual life. But why not have cited a case or two? Miss Hetty Green, in her day the world's richest woman, won by persistent shrewdness and greed served by financial genius: was she happy? Then those other poor souls mentioned in the cables recently. Two maiden ladies with forty millions: forbidden marriage by their father to hoard the family wealth. Where is the success of lives with never a man about the house, or a baby on the porch—starved in the happy field of domesticity?

"A man's power to achieve increases in the same ratio as his belief in that power increases"; "Whatever is held in the mind must eventually come forth"; "No one limits you but yourself"; "You can overcome heredity, environment and every obstacle if you so will"—these are familiar texts, but to their expression Mrs. Russell brought vigour, clarity, enthusiasm, and perhaps a trifle too much of melodrama and soothing syrup in her voice. While agreeing that he is happiest who finds play in his work, I distrust her advice to change that work forthwith to find the proper balance of playfulness. Not in these days. But I endorse and commend her statement that the capacity for success lies in us all. Within the measure of the talents given us we can all achieve success: it is not limited to the few. A more intriguing title, so as not to frighten the timid; a few examples to point the moral; a little lightness to gild the pill; and this series of talks would be increasingly effective in achieving success. In conception they are admirable, and in execution of a good standard—but one that might be bettered.

## The VOICE of MICHAEL By "CRITIC"

### To Bed or To Dance?

EXPECTING acidity and the healthy tang of lemons, I was given on Thursday the somnolent quiet of a flock mattress—evidently a last-minute change in the excellent series of industrial talks



TE ARITAUUA PITAMA.  
A noted Maori lecturer, whose address, "My People," from 3YA last week was both enjoyable and instructive.

from 1YA. But I was not thrilled. The gentleman was a little heavy, and his subject evidently not too conducive to gaiety. I do not dispute the importance of beds, for do we not spend from a quarter to a third of our lives there? Further, the majority of mankind dies in bed; so that from first to last the bed is fundamental to modern civilisation. But really the humble mattress is one of those things we do take for granted. That the provision of our beds constitutes a flourishing local industry pleases me, and I sincerely hope, in the national interests as well as in those of the bed-makers, that there will be a steady maintenance of this essential home industry.

FOR cheer I turned to 2YA to listen to Miss Inez Connop discourse on American ball-room dancing. Here was vigour and vitality, a woman who knew her subject, of good voice and incisive speech. I listened to her every remaining word with pleasure and interest regretting what I had missed. I heard

her effective description of the night club life and night clubs of American cities, and thank her in advance for the tips given. A mystic Indian cup-reader has predicted my departure shortly for the States, so I shall be able to check up! I have already bought an extra boiled shirt, and am having the necessary structural alterations made in my unmentionables to accommodate the inevitable flask. Pleased to hear that on the ballroom floor Britain rules the waves: rhythm, bearing, demeanour, all perfect, to carry off all world championships and seek vainly for fresh worlds to conquer. For the expert dancer I entertain the most profound jealousy—green-eyed and rabid. I would love to be a striking figure on the ball-room floor; but how vain an ambition! Still, in the mental picture she gave me of beauty and rhythm, of poetry and vitality. Miss Connop afforded me a little thrill, for which I thank her.

### "Books of the Month"

MR. WILTSHIRE, in his talk on books, given from 3YA on Monday evening, proved most salutary, for it was only last week that I appended to my notes a pat on the back to speakers in general, and, in a misguided moment, allowed myself a place in their reflected glory. It was foolish and presumptuous, and Monday evening's speaker reminded me quietly, but forcibly, of several of those old saws to the tune of "Pride goes before a fall," until, more in sorrow than in anger, I dejectedly cut the speaker off in search of something a little less trying. He reviewed, quite tonelessly and equally dispassionately, three or four books which he assured us will suit the taste of the "ladies." If men are men, why are women ladies? The speaker's English requires careful watching; his enunciation is weak and unfinished, and the delivery is unimpressive.

### "Books Grave and Gay"

SEARCHING the air for further talks, I was fortunate enough to chance on Mr. H. C. South, giving a lecture on "Books Grave and Gay," from 2YA. This, to a great degree, restored both my equanimity and faith in speakers. First, however, did I or did I not hear ardent instrumentalists tuning up in preparation for their appearance before the microphone? This is a nuisance which must be checked. No one has the least quarrel with plenty of practice, but

it would seem to be the essence of bad manners thus to overshadow another artist. Mr. South possesses an admirable radio voice and the arrangement of the subject matter of his talk was excellent. He began with an interesting review of a book by V. H. L. Serle, M.Sc., entitled "Everyday Marvels of Science." The man in the street must not be put off by this somewhat awesome title, for I am satisfied by what I heard that there is much of intense interest to all of us in this work. Briefly the book describes what has been accomplished in the world of science and invention during the last thirty years insofar as it affects the comfort and well-being of the average layman.

As the speaker said most aptly, "From the time when flying was merely a picturesque method of courting disaster, to the time when a young lady successfully flew a second-hand machine from England to Australia in three weeks," is roughly the period covered. In addition, the following received honourable mention: "Susan Spray," by Sheila K. Smith, whose latest book again has its setting on the borders of her beloved county of Sussex; "Seen Unknown," by Naomi Jacob, in which the writer once more cleverly portrays Jewish life and character; "Into the Land of Nod," by H. A. Vachell, wherein the writer delves into the question of heredity, and which sounds interesting, and cannot fail to be worth while in view of its authorship; and last, but certainly not least, for those who like their books full of action, Edgar Rice Burroughs' "Tarzan and the Lost Empire."

Almost by way of postscript, as it were, Mr. South quoted some excerpts from "The Book of Howlers," by H. Cecil Hunt. If the samples given are typical, there should be many laughs and chuckles hidden away between the covers of this book.

### Farmer Brown and Fertilisers

FROM 3YA on Wednesday I heard Messrs R. B. Tennant and L. W. McCaskill in an interesting discussion. This talk was relayed from Dunedin. While I am compelled to criticise the delivery of both gentlemen, still I have no fault to find with the general idea, nor with the quality of the actual matter. Mr. McCaskill took the part of Farmer Brown, who is in doubt about the correct use of lime and various artificial fertilisers. He approaches a fields instructor (impersonated by Mr. Tennant) from the Department of Agriculture. Evidently the two are close personal friends, otherwise I can hardly imagine an independent, full-blooded New Zealand farmer remaining calm and unperturbed beneath the waves of sarcasm and raillery poured over him by a Government official appointed to assist in agricultural conundrums. Nor can I imagine a Government official opening the discussion with an invitation to partake of refreshment from his bag. Mr. Tennant overdid the slow, heavy and paternal manner. Had I been a farmer, however ignorant, in search of information, I should have taken strong exception to the very obvious air of patronage on the part of my tutor. This leads me to my criticism of Mr. McCaskill in the farmer's part. He seemed to be altogether too meek and mild to

be genuine. In fact I was reminded in part of "The Two Black Crows," without their humour. There was a wealth of information in the dialogue; all of it was, quite naturally, news to me, but I should imagine even farmers must have picked up many points. For instance, that when a farmer is in doubt he need not play trumps, but can send along a sample of the good old farm to the Department of Benevolence (that is to say, Agriculture) and be told, from analysis, whether or not to invest in lime. The true function of lime in neutralising over acidity in soils and in making clay ground more friable; the need for solubility of fertilisers to enable plant life to absorb the nourishment they find lacking in the ordinary soil; the difference in solubility between Nauru phosphate and "super," and the consequent preference for the latter.

The true function of sulphate of ammonia in giving nitrogen to plant life and the need for care and knowledge when best to apply this grass-forcer—all the technical data, in fact, was excellent and given in simple language, which must have been understood even by those with no knowledge of chemistry whatsoever. But "phosphate" is not pronounced "pharsphate," excepting in American back-chat.

### Silage!

MR. W. J. McCULLOCH'S talk on ensilage to "the man on the land" was enjoyable. Unlike some of his departmental conferees, this speaker possesses a good radio voice, and if he could overcome his tendency to gabble sentences more rapidly than can be absorbed by his hearers, would improve in effectiveness. Perhaps I am a trifle pedantic, but expressions such as "ensilage can be double useful" rather jarred. Maybe they are due to nervousness. The subject matter was good, and the points well and clearly made. Without attempting a history of ensilage, he pointed out that it had been made successfully in New Zealand for several decades, although its present popularity is of recent growth, coincident with the remarkable increase in top-dressing contributing so wonderfully to our output of produce in recent years. The angle impressed upon farm listeners was the simplicity of ensilage-making, together with its advantages as a saver during a bad season. Ensilage is as important to the farmer as reserves are to the business man, and the extent to which ensilage-making has now become popular is in itself a measure of the improvement effected in farming practice in recent years. Both sheep and dairy farmers profit by ensilage. This address was of outstanding value, and should contribute to farming recovery from current depression.

### Disarmament Conference

WHETHER or no one agrees with the principles of disarmament, one could not but be impressed by Dr. Gibbs' talk on the subject from 2YA on Friday. His delivery was very impressive, albeit a trifle slow. Incidentally I should have recommended a little more distance

from the microphone to neutralise the hiss of his sibilants. These are small points, however, which in no way offset the value of the Doctor's talk. We were reminded of the overwhelming catastrophe that another world war would bring about, and, in the Doctor's opinion, should the all-important Conference of Nations next February fail, then such a war becomes inevitable. Great Britain, as usual, is expected to lead the way, and, if she does so, it is claimed that the rest of the world will follow suit. I wonder! Past experience does not endorse this optimism, and one cannot but fear the boldness of such a policy unless we have more definite guarantees from the other nations than we have had up to now. That we must back up our British statesmen in their stupendous efforts to secure world peace is unquestioned; but I, for one, trust that we shall



## Around GREAT BRITAIN and IRELAND in two hours

A  
Descriptive  
Programme  
of  
ENGLISH,  
SCOTTISH  
and  
IRISH  
Elements  
From 4YA  
Tuesday, May 26.  
presented by  
The KAIKOURA  
BAND.

be equally insistent that the British Empire be not allowed to play a lone hand in the matter. A world war, even if we are fully prepared, will mean chaos of an unprecedented nature; but world war with Great Britain unprepared and disarmed would lead to our total effacement. Our Empire statesmen have before them a task of such magnitude as has never before confronted the statesmen of any country.

### "My People"

SHORTAGE of space compels me to make but brief reference to a most entertaining talk from 3YA on Thursday by Te Ari Pitama entitled "My People." It would be a pity not to give details of

## 1YA Musical and Dramatic Committee

### Monthly Meeting

ON Friday, May 8, the 1YA Musical and Dramatic Advisory Committee met at the studio in France Street.

There were present: Mr. A. B. Chappeil (in the chair), Dickens Fellowship; Misses G. Bertram, New Zealand League of Penwomen, and J. Parker Auckland Piano Students' Association. Messrs. L. B. Lambert, Bohemian Orchestra; V. Trask, Athenian Club; F. M. Price, Aeolian Orchestra; B. H. Colman, Royal Auckland Choir; E. B. Elbern, Leys Institute; O. Jensen, Society of Musicians; E. D. Robins, University Students' Association; C. Tucker, Auckland Radio Dealers' Association; Earl Atkinson, H. C. Trim, L. C. Barnes.

Before commencing the business of the evening the chairman spoke in feeling terms of the loss Auckland had sustained in the passing of Mr. Harry Hemus, and a motion of sympathy was carried with his widow and relatives, the members standing.

A welcome was given to Mr. Karl Atkinson, who attended the meeting on behalf of the administrative staff of the company. Considerable discussion took place with reference to the company's subsidy to the local musical societies, and it was reported that three of the societies had accepted the subsidy. Further consideration of this matter is being held in abeyance until definite advice is received from the fourth society.

It was reported by the station director that special features in forthcoming programmes would include the production of the radio adaptation of Stevenson's "Treasure Island" on June 3; a concert by the Society of Musicians on June 4; a mystery play entitled "The White Owl," written by Dr. George de Clive Lowe, on June 12; a rendition of Mendelssohn's "Hymn of Praise" by the 1YA Broadcasting Choir and Orchestral Octet on June 28. It was also reported that special speakers would be engaged for the international programmes.

An interesting discussion took place regarding the broadcasting of such sports, on relay, as Rugby, wrestling and boxing. Although this may appear somewhat outside the scope of this particular committee, it is not, as it deals with entertainments to the public. It was decided to ask the company to negotiate with these bodies in order that the fullest co-operation may be obtained.

It was also announced that interesting talks to farmers would shortly be arranged, and that a committee would be appointed to go further into this matter.

An interesting suggestion was that illustrated talks should be given on the instruments of the orchestra and bands, and also on the grand organ, together with talks on the technical side of transmission and receiving. A definite plan is being brought forward at the next meeting of the committee.

a lecture which was as enthralling in subject matter as it was masterly in delivery. Accordingly I purpose devoting more space to this item in next week's "Radio Record." A photograph of this gifted young Maori orator appears in these columns.



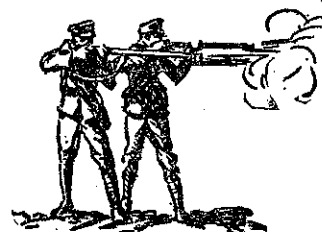
### MARGHERITA ZELANDA

The eminent coloratura soprano who will be heard from 1YA during the Radio Exhibition, and subsequently from other New Zealand stations.

### 2YA Church Service Committee

THE 2YA Church Service Committee met on Tuesday, May 5, there being present: Revs. O. V. Rooke (chairman), R. J. Howie (Presbyterian), E. N. Goring (Baptist), Pastor W. G. Carpenter (Church of Christ), and Mr. J. Ball (station director). The business transacted was of a routine nature.

# KILL



**HUM**  
in your set

**ARCTURUS**  
BLUE A.C. VALVES  
LONG LIFE

for **FLAWLESS RECEPTION**

For **SCREEN GRID** and  
**ALL OTHER A.C. Sets**

Obtainable at all good Radio Dealers.

Factory Representatives:

**RADIO LTD.,**

Commerce Building, Anzac Avenue,  
**AUCKLAND.**

## Identification Wanted

**STATION** heard at 2.30 a.m. on May 10 on approximately 840 k.c. (357 metres). Orchestral recordings were played, one number being "Entry of the Gladiators." Station just under 3AR on 620 k.c. approximately (483 metres), heard several times after 3AR closes down. Soprano items and orchestral numbers. Station on 2BL's frequency heard several times in the early evening. J.P.B. (Invercargill) inquires re station on 600 k.c. (500 metres). I hear this station almost every evening on approximately 1290 k.c. (232 metres). Speech only is heard, and sounds like Chinese. Would this be XOW, Nanking? —"Nurihiku" (Invercargill).

**AT 5.20 p.m.** on the 10th, American station heard playing a number entitled "Memories." Person speaking made reference to their announcer, Mr. Paul Manning. Concluding number was "I Love You in My Dreams." The station then signed off at 1 a.m. Eastern Time [5.30 p.m., New Zealand time]. Station was operated on about 1050 k.c. (285 metres).—"Big Boy" (Timaru).

**STATION** on approximately 254 metres (1130 k.c.) heard on Wednesdays and Saturdays. 4ZP obliterates it at other times. Calls "Hullo, hullo, 1, 2, 3, 4," etc. Would this be 4ZI, Invercargill.—W.S.K. (Nelson).

## Stations Identified

**L. I. (Gisborne):** 1ZQ, Auckland, broadcasts on Sunday afternoons and evenings, but his frequency is 1190 k.c. (252 metres). His call commences with "Hullo, hullo, hullo!" "Keen" (Waipukurau): You heard the twin of JOAK, Tokio, on 870 k.c. (345 metres). J.P.C. (Palmerston North): I was listening to 4BC, Brisbane, and heard his call distinctly. N. Jenkins (Masterton), D. McA. (New Plymouth): Probably KMJ Hollywood, Cal. I have often heard them at approximately 5.30 p.m. on Saturdays describing boxing matches. "Bellvue" (Christchurch): Probably WBBM, Chicago.—"Uncle Sam" (Hastings).

**SINCE** writing last week I have identified the station on 600 k.c. (500 metres) as a Jap. When closing down at 12.30 p.m. on May 9 he announced JOAK, so he was undoubtedly a relay station. Latest verifications are: 2MO, Gunnedah, 1330 k.c. (225 metres); KFBB, Great Falls, Montana, 1280 k.c. (234 metres); and KTAT, Fort Worth, Texas, 1240 k.c. (242 metres).—C. Aitken (Dunedin).

**R. J.P. (Palmerston North):** Have heard station 360 metres (880 k.c.) on 3YA's silent night and have taken it to be some harmonic of 2FC.—W.S.K. (Nelson).

**L. I. (Gisborne):** Canadian stations just above 1YA are CFQO—CNRS, Saskatoon; CHNS, Halifax; and CJGC—

CNRL, London, Ontario. They all use 500 watts. I have logged nine Canadians, but none on the frequency you mention.—R. J. Russell (Palmerston North).

## DX Topics

## 1ZR, Auckland.

**HAS** station 1ZR, Auckland, changed its frequency? I usually receive him on 1150 k.c. (260 m.), but on the 12th he came in on 1105 k.c. (275 m.).—"Red Bird" (Wellington).

[Your log for the set you are using is fair, but probably your locality is not too favourable.—Ed.]

## Particulars of Chinese Stations.

**N. JENKINS** (Masterton): COMK. Mukden, China, is on 425 m. (710 k.c.) and I have heard him close down at 2.15 a.m. Other Chinese stations are: COTN, Tientsin, 475 m. (629 k.c.); COHB, Harbin, 445 m. (675 k.c.); XOW, Tientsin, 480 m. (625 k.c.); GEC, Tientsin, 280 m. (1070 k.c.); and GOW, Shanghai, 300 m. (1000 k.c.). The latter, I think, is now off the air. J.P.C. (P.N.): On May 9, at 8.35 p.m., I heard the call of the transmitter at Oxley given as 4BC, Brisbane, so it must now be on a regular schedule.—R.J.R. (P.N.).

## Recent Loggings.

**RECENT** American loggings include KTBB, Portland, WSUL, Iowa City, WDAG, Amarillo, WCAU, Philadelphia, WHO-WOC, Davenport, Des Moines, WSUL, which is run by the University of Iowa, commenced broadcasting in 1919, and when transmitters were licensed was allotted its present call. Transmitter is crystal control with high percentage of modulation. Output power 500 watts. Frequency 880 k.c. (340 m.).—W.S.K. (Nelson).

## The DX Competition.

**ACCORDING** to rules governing DX competition, "any verification providing that the station referred to is still operating on the frequency indicated on the card, will be accepted for the competition." Some American verifications recently received are in letter form and no mention of frequency is made. How would these stand in the DX competition? Re daylight reception of Australian stations: Would any of these heard before sunset count as being received in daylight?—"Candidus" (Timaru).

[The frequency of such a station is found by reference to the latest Call Book, and compared with that in last

year's edition. If the same, credit is given for the station. If different, the date of the letter is noted, and an attempt made to ascertain the date of the change. If any doubt arises, the competitor is given the benefit. Australian stations received before sunset are counted as being received in daylight.—Ed.]

## Battery-set DXers.

**M. A.A.H. (Morrinsville):** A battery set using a "B" eliminator may be entered for the DX competition for battery-set owners.

## Airline Distances

Between Auckland and Various Cities of the World (in miles).

## Europe.

Oslo, Norway	10,837
Stockholm, Sweden	10,634
Berlin, Germany	11,220
London, England	11,817
Paris, France	11,809
Rome, Italy	11,406
Lisbon, Portugal	12,465

## Asia.

Moscow, Russia	10,109
Vladivostok, Russia	6,275
Kharkov, Russia	10,199
Bombay, India	7,613
Calcutta, India	6,965
Hong Kong, China	5,749
Tokio, Japan	5,669
Manila, Philippine Islands	5,071

## North America.

Los Angeles, California	6,641
New York, N.Y.	8,904
Mexico City, Mexico	6,923
Montreal, Quebec	8,904

## Africa.

Cape Town	7,209
-----------	-------

## Australia.

Perth, W.A.	3,401
Sydney, N.S.W.	1,457

## Daylight Reception of WOAI.

**WOAI**, San Antonio, is received here at good strength before 5 o'clock any evening. He gives a news session before closing every evening. On May 12 I heard 2ME, Sydney, calling VJNM "Oorama." Strength R7. On May 7 I heard KGA, Spokane, Washington, 1470 k.c. (204 m.), on a special programme relayed from Seattle. Very gushy, but at R5-R6. The Lewis Eady station, 1ZR, Auckland, and 1ZQ are heard well here in their daylight transmissions. 2ZJ Gisborne is the best B-class station received here at the present time.—N. Jenkins (Masterton).

[Your log is an excellent one.—Ed.]

## Formation of DX Club.

**L. REEVES** (Ashburton): At present the DX Club has no constitution, and anyone contributing notes of interest automatically becomes a member. It has been decided, however, to establish the club on a constitutional footing, and to this end suggestions have been invited from readers. It is not intended, however, to devote the columns of the DX pages

to the contributions of those who become members of the DX Club. While it is hoped that every DX-er will become a member, nevertheless non-members may as in the past still continue to contribute notes. For your benefit, and for those similarly placed, we are republishing this week the rules governing the DX competition, which closes on June 30.—Ed.

## Verification News.

**RECENT** verification from WTIC states that they broadcast in synchronisation with WEAJ on each Tuesday, Thursday, and Saturday evening. The broadcast starts at 4.15 p.m. and continues until 1 a.m., E.S.T. If any listeners happen to hear him on 660 kc. notice at the customary fifteen-minute announcement period if you are able to hear the call of WEAJ as well as WTIC for each station, at that time identifies itself in turn. KDYL states that they operate on 1290 kc. (232.6 m.), with a power of 1000 watts. Offices and studios, 6th floor, Ezra Thompson Building, in Salt Lake City, while transmitting terminal is located in Murray, Utah. KYW-KFKX is owned by the Chicago "Herald and Examiner," and operated by Westinghouse.—"Uncle Sam" (Hastings).

## 2ZW, Wellington.

**ON** May 14 I heard 2ZW, the new Wellington "B" class station, at excellent loudspeaker strength. Their opening is to be on Thursday night, May 21. Latest American loggings are KVOO and WTAM.—M.F.F. (Thorpe).

[Anyone contributing to the D.X. Club column, irrespective of whether any stations have been logged, automatically becomes a member of the D.X. Club. Your log is quite a good one.—Ed.]

## DX Club Competition

**D.X.-ERS** are reminded that the next period in the D.X. Club competition closes on June 30, by which time all logs should be in our possession. The actual cards to be sent only when asked for by the judge. This time certificates will be presented to the winners in each of the following six districts: Auckland, Taranaki, Hawke's Bay, Wellington, Nelson-Westland, Marlborough-North Canterbury, South Canterbury, and Otago. For the convenience of new entrants to the D.X. fields, the following are the conditions governing the competition:—

1. The listener who can, within six months, collect the greatest log of stations and comply with the conditions set forthwith, will have his name inscribed on the "Radio Record" Cup. This will remain the property of the "Radio Record," but the winner will be presented with an inscribed miniature.

2. The stations counting for the competition must have frequencies not exceeding 1500 kilocycles nor less than 545 kilocycles per second (200-550 metres).

3. All stations must be verified. The enthusiast should listen to the items and note sufficient of them so that the station officials can recognise the broadcast. A letter, card, or Ekko stamp to this effect must be in possession of the listener before he can claim credit for a station. Such phrases as "You probably heard our station" must not be taken as a verification. All cards sent in will be carefully treated and returned when the decision is arrived at.

4. Stations received during one period of six months can count for the ensuing one, providing their frequencies

## PARTS FOR

## The "Rejecter" Crystal Set

1 .00035 Variable Condenser and dial	9/6	2 yards 30 d.s.c. Wire ..	Gratis
1 Crystal, semi-permanent, 2/6		4 Terminals	10d.
3in. of 2in. Former	9d.	Midget Clip	4d.
4lb. 24. d.s.c. Wire	2/4	Panel 4 x 5 1/2 in.	1/9

## G. G. MacQUARRIE LTD.

Licensed Radio Dealers,  
120 WILLIS STREET, WELLINGTON.

# An Easily Built Wavetraps

## Discriminating Between 2YA and 2ZW

WITH the opening of the new private station 2ZW in Wellington, many local listeners who possess crystal sets of the simpler type are experiencing interference between this station and 2YA.

This trouble lies solely, however, with the receivers, and not with the stations, as these operate on frequencies sufficiently remote from each other to preclude the possibility of interference on any but the most unselective of sets. And now for a cure.

Three courses are open: Firstly, adaptation of the present receiver to give greater selectivity; secondly, installing a wavetraps; and third, building a new receiver. These three remedies will be dealt with in turn.

The first, that of adopting the present receiver to give greater selectivity, is of doubtful use, for if the set is to be dismantled the listener may as well build the specially-designed crystal set to be described later. This will sharply separate the two transmissions, bringing in either with no trace of the other.

However, the effect of placing a variable or semi-variable compression type condenser of the order of .001 mfd. max. in the aerial may be tried. In localities where the interference is not very acute this will probably sharpen tuning sufficiently to allow of a clear separation of the two stations.

The next solution, that of using a wavetraps, is scarcely an economic one, for with the exception of the crystal detector the receiver is duplicated.

However, for those who have the parts on hand, or prefer to build a wavetraps rather than rebuild their sets, the following description of a simple but efficient trap is published.

### Building a Wavetraps.

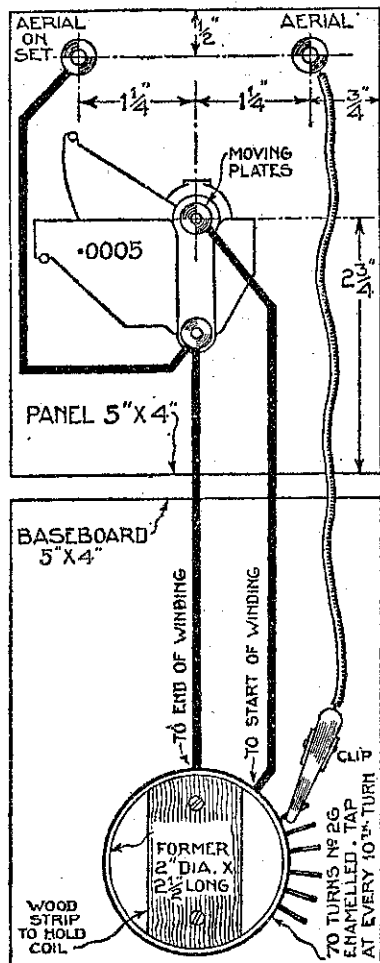
ONE of the simplest of wavetraps consists of a coil tuned by a condenser. The whole is placed between the aerial and the set (in series with the aerial lead), and the condenser

remain the same (unless they are recognised experimental stations). In other words, the station verified must have operated on the frequency shown on the verification card on or after the first day of the period. In this case, January 1. All logs for the second period must be in our possession by July 1, 1931.

5. The following stations are not included in the competition:—All New Zealand and the following Australian stations:—2FC, 2BL, 4QG, 3LO, 3AR, 2BE, 2UE, 2GB, 2NC, 3DB, 3UZ, 5CL, 6WF, 7ZL, 7LA. These Australian stations can be accepted if logged in New Zealand daylight, but the verification must clearly admit this fact. This is to prevent possible interference with the programmes that are enjoyed by non-D.X.-ers.

6. The right is reserved to add further conditions or alter existing ones as unforeseen circumstances demand.

7. The decision of the judge in all matters will be final.



It has been designed particularly to enable those owners of crystal sets who are experiencing difficulty in separating 2YA and 2ZW, to eliminate completely one or the other.

The materials needed are one variable condenser, capacity .0005,  $\frac{1}{4}$  lb No. 26 enamelled copper wire, 1 three-inch length of cardboard former, 2in. in diameter, 2 terminals, 1 crocodile clip, baseboard 4in. x 5in., and panel (wood or ebonite) 4in. x 5in.

### Winding the Coil.

THE coil consists of 70 turns of No. 26 enamelled wire, close wound, and tapped every tenth turn, making six tapings in all.

Commence winding operations by piercing two small holes, about  $\frac{1}{4}$ in. apart, with a bradawl or knitting needle, about  $\frac{1}{4}$ in. from the end of the coil. Thread the wire through these holes, leaving two or three inches for connecting purposes, and wind on ten turns. At the tenth, keeping the wire taut, make a twist in the wire, forming a small loop about  $\frac{1}{4}$ in. long.

Proceed thus, making a tapping at every tenth turn, until the 70 turns are wound on. The seventieth turn is, of course, not tapped, but the wire is threaded through two small holes similar to those used at the beginning, and broken off, again leaving two or three inches for connecting purposes. At each tapping scrape the loop of wire bare of enamel. The coil is now complete, and may be mounted on the baseboard, either upright by means of brackets or on its side, fastened with two wood screws to the baseboard.

### Completing the Trap.

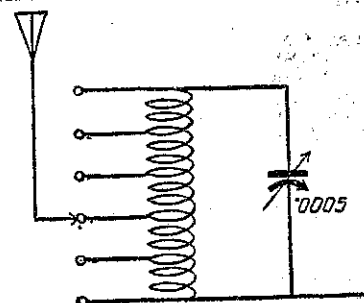
THE condenser and terminals may now be mounted on the panel, and the latter screwed to the baseboard. Everything is now ready for wiring up. This may be performed with the aid of the layout diagram, or by following these instructions.

A piece of flexible wire is attached to the terminal on the left, and a crocodile clip fastened to its free end. This clip is taken to the most suitable tapping, to be determined by experiment. One end of the coil is taken to one

terminal of the variable condenser, and the other end to the other terminal. A wire is then run from one of the condenser terminals—either is suitable—to the terminal mounted on the right of the panel. The trap is now ready for operation.

### Using the Wavetraps.

TAKE the aerial off the receiver and attach to the left-hand terminal of the trap. Join with a length of wire the right-hand terminal and the aerial terminal of the receiver. Now tune to



Theoretical diagram

the loudest point of the station it is desired to eliminate. Then, by varying the wavetraps condenser and attaching the clip to different tapings in turn, a position will be found where the station signals fade into inaudibility. The trap is then left so adjusted, and the wanted station tuned in.

Use Our Booking Offices in Advance

**S-O-S**

TRAVEL IN COMFORT BY  
CAR

WELLINGTON — PALMERSTON  
NEW PLYMOUTH

**NO UNEMPLOYMENT  
IN THIS CAREER!**

There's remunerative employment waiting for qualified wireless men on shore and ship. Johnson's Wireless School takes you up to 1st or 2nd Certificate Examination Standard by easy progressive stages.

Day and night classes for Professional Certificates. Correspondence classes for Professional Certificates. Amateurs and others. Write for Particulars to Department A.

JOHNSON'S WIRELESS  
SCHOOL

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



## LYRATONE

### The World's Best Midget

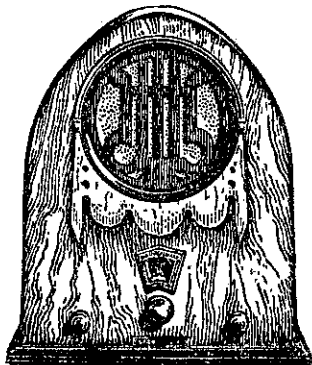
Owing to certain misrepresentations by an overseas representative in radio, we wish to publish cablegram from factory as under:—"Lyratone 62 absolutely manufactured under R.C.A. license by Gillman Bros. Stop Condensers and transformers greatly improved. Phono jacks fitted."

NEXT 100 SHIPMENT—

S.S. WAIRUNA, DUE JUNE 1.

CRAWFORD & FINLAYSON LTD.

Box 675, Wellington.





## Australian Programmes

Times Corrected for N.Z.

Thursday, May 21.

STATION 2FC.—9.40 p.m., 10.23 p.m., and 10.55 p.m.: The Sydney Madrigal Society. 9.57 p.m. and 11.13 p.m.: Rene Birkett, violinist. 10.4 p.m., 11.10 p.m., and 11.30 p.m.: Eileen Boyd, contralto.

2BL.—9.30 p.m.: "Dorothy," a three-act comedy.

3LO.—9.30 p.m.: "Fifteen Minutes of Period Music." 9.45 p.m.: Dance items, interspersed with vaudeville numbers.

3AR.—9.45 p.m.: Programme of selected recordings.

Friday, May 22.

STATION 2FC.—9.37 p.m. and 10.3 p.m.: The Cavaliers. 9.44 p.m.: Ellis Price, entertainer. 9.58 p.m.: Dot Browne, popular vocalist. 10.5 p.m.: Alard Maling, bell solo. 10.30 p.m.: Clive Amadio, saxophonist. 10.45 p.m.: Relay from 3LO, Melbourne.

2BL.—9.30 p.m.: Concert programme arranged by the Musical Association of New South Wales. 10.30 p.m.: "A.B.C.—B.C.," a sketch on broadcasting in the days of Ancient Rome.

3LO.—9.30 p.m.: An orchestral concert by the A.B.C. Wireless Symphony Orchestra. 10.45 p.m.: "Antarctic Tales."

3AR.—9.50 p.m.: Community singing transmitted from the Central Hall, Geelong.

Saturday, May 23.

STATION 2FC.—9.30 p.m.: The A.B.C. Players present the Third Edition of their 1931 Revue.

2BL.—9.30 p.m. and 11.14 p.m.: The Popular Three, instrumentalists. 9.33 p.m. and 11.7 p.m.: Marjorie Skill, soprano. 9.40 p.m.: "Vernon and His Valet." 9.52 p.m. and 11.28 p.m.: Rowell Bryden, baritone. 10 p.m.: Description of boxing contest at Sydney Stadium. 11.21 p.m., 11.35 p.m., and 12.0 p.m.: "The Syncopaters," in dance music.

3LO.—9.38 p.m. and 10.2 p.m.: Nora O'Malley in songs at the piano. 9.44 p.m.: Gordon Craig presents marimba solos. 9.48 p.m. and 10.15 p.m.: "Master Four" Quartette. 10.30 p.m.: "David Garrick," a comedy in three acts.

3AR.—9.31 p.m., 10.2 p.m., and 10.28 p.m.: Harry Shugg's Band. 9.47 p.m., and 10.45 p.m.: Freda Jones, pianiste. 10.10 p.m. and 11.10 p.m.: "Australian Comedy," by Cecil Ramsdale. 10.18 p.m. and 11.23 p.m.: "The Harmony Three."



While we welcome the expressed views of listeners on topics pertaining to radio, we ask that these communications be kept to minimum length, as heavy demands are made upon space. Mere reiteration of arguments cannot be accepted for publication, and we cannot take responsibility for views expressed. Address communications to the Editor, and sign all correspondence, though a nom-de-plume might be used for publication.

### 2YA's New Series of Recordings.

I WAS very disappointed with the opening number of the second series of 2YA international programmes. In my opinion they are not nearly up to the standard of the previous ones, and I think, for the first time, I was tempted to tune in to another station on Wednesday night, but I hung on hoping they would improve, but they didn't. Not only was there a series of interruptions, such as the needle running over the same piece about half a dozen times, but, apart, from one or two items, the whole programme lacked interest. It seemed to me that there was a deplorable lack of care taken in the transmission of these items, long silences, sounds of the pick-up running on blank record at the end, dialogue repeated and such-like, which properly marred one's enjoyment of the programme. Adam and Eve, while good, are not in the same street as the Lockharts and the "Golden Hour" is very second-rate. Surely we are not going to be inflicted with thirteen weeks of this?—English Mother (Masterton).

### Howling Nuisance.

WOULD you advise us of what steps to take to bring a howler in our district to account? We have advised the postmaster on several occasions, and have also put in a petition signed by all listeners, but no steps have been taken to do anything in the matter. I think that it is time we got a little consideration for our money. In fact, a few of the listeners here are not going to renew their licenses till something is done. I am very sorry that I paid mine now, as one has to get off the station that has a good programme on and the Wednesday's programme we cannot listen to it for this chap chirping away all the time. You have no idea what it is like (distorts

all the music, and, in fact, takes it right away at times). In fact, I think that it is a transmitter that he has instead of a receiver. So trusting you can advise us on what we can do to get this nuisance stopped.

[Your best plan would be to get into touch with the radio inspector of your district.—Ed.]

### Hauraki By-election

Progress reports in connection with the Hauraki by-election, to take place on Wednesday, May 27, will be broadcast by all stations.

### Wrestling Relays.

I, IN common with many others in this district, would very much like to know if, when the wrestling season commences, more of the bouts could be broadcast? Last season when matches were held in Wellington we were very disappointed to learn they would not be relayed. As you have already stated in the "Radio Record," the broadcasting of a description of these matches always creates considerable interest and has a favourable effect on the attendance.—E.B.L. (Blackball).

### Good Music.

THE excellent concert by the Wellington City Salvation Army Band and artists, transmitted on Thursday, May 7, from 2YA, was listened to with much pleasure, not unmingled with surprise on account of the absence from it of jazz and American nasal singers. Every item in the programme was acceptable, notably the piano playing of Mr. Haydn Rodway, which was a decided musical treat. One wonders why, with the abundance of good music available, that such a programme is not more often put on the air. I do not know who are the individuals responsible for the selection of items, but one assumes that they cannot be judges of what constitutes good music. One can understand that a high order of instrumental and vocal talent is not abundantly available locally, but surely that is no excuse for the introduction so frequently of American gramophone recordings of the debased music of fox-trots, etc., and the occasional introduction of untrained soprano singers with high-pitched, ear-piercing voices,

when there are so many beautiful records available.

Of course it is necessary to cater for all tastes, but unfortunately modern taste in music seems to have degenerated, and it should be the endeavour of a broadcasting company to make an effort in attempting to educate its public to the appreciation of a higher standard.—W. S. Roberts (Waimate).

## Radio Round the World

A MUSICAL comedy, written expressly for television, was broadcast recently from Chicago by the Western Television Company. It is reported that figures 2ft. high were reproduced on the laboratory screen, and that the programme was picked up by approximately one thousand television receivers in the Middle West.

PROBABLY no country has derived greater benefit from broadcasting than the Argentine, for, with an area of over a million square miles and a scattered population of only ten millions, wireless is the only quick and reliable means of communication in times of emergency.

THE chief engineer of WHAM broadcasting station, Rochester, United States, has applied to the Federal Radio Commission for a test permit for the "useless frequencies" between 50,000 and 100,000 k.c. (6 to 3 metres). His object is to develop lightweight transmitting and receiving equipment for aircraft.

CONSTANTINOPLE'S famous Mosque of St. Sophie, one of the most historic monuments in the world, is to be turned into a Mahomedan transmitting station. The four minarets will serve for aerial masts, and the nave will be transformed into a studio.

A DETERMINED effort to combat clandestine listening is being made by the Polish authorities. It is said that in a period of two months, 10,000 unlicensed sets were located, and the owners punished. The cost of a receiving license in Poland approximates 7/- a month.

THE French Postmaster-General recently stated that the shortwave station at Vincennes, which has been built for colonial broadcasting, will be ready to come into operation when the International Colonial Exhibition opens there in May.

## 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.

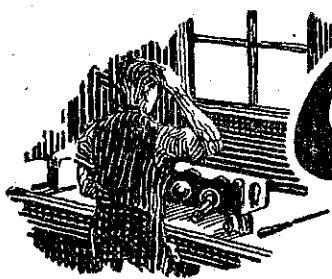
## A. J. PARK & SON

Patent Attorneys

Routh's Buildings,  
Featherston Street,

WELLINGTON





# Questions and Answers



**L. E.H. (Taradale):** What kind of valves should I use in the Sparrow Hawk One?

**A.:** One of the 221 or 415 type. The new 280 valve would also be suitable, but it is more expensive.

**DISTANCE (Wellington):** What type of short-wave adapter should I build for the set mentioned?

**A.:** We suggest the differential adapter from the "Radio Guide."

2. What results should I get?

**A.:** This is a good adapter, and with your set should give excellent results.

3. About what would the cost of such an adapter be?

**A.:** You would get it probably for about £3/10/-.

**H.B. (Woodville):** I am building the Diff. Four and a little at sea about winding the coils. Is this correct for a .00035 condenser: 65 turns of 22 d.s.c. wire on a 2in. former? If so, how many must I use for the aerial?

**A.:** 20 for aerial, 78 for the secondary.

2. Using a .00035 condenser for the detector stage, would 9 turns on the 2in. former be correct? If so how many should I use for the tickler with a .0002 differential condenser?

**A.:** You require 87 turns for a .00035 condenser, with 25 turns on the reaction winding. The tickler is usually the top winding on the detector coil.

3. In winding the five-prong coil socket for a detector coil should not the wire from the cap of the s.g. valve go to "G" instead of "F," as in the layout diagram in the "Radio Record" of April 2?

**A.:** No; the plate terminal is taken to the top of the primary, which is "F."

**CORRESPONDENTS** must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington). Limit three questions, unless letter is accompanied by 1/- fee.

Name of set .....

Number of valves .....

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.

The tickler is connected one side to each set of plates.

4. Have you any suggestions for improvement?

**A.:** For broadcast use a special coil wound on a 2in. former. You will find it better. Your valves are quite in order.

## Notice to Correspondents.

**SOME** correspondents are not clear about our fee. We make a charge of 1/- for any series of questions more than three in number, but do not thereby bind ourselves to reply by post as several correspondents are intending us to do. Postal inquiries must be limited to three questions. It must be noted that the service is, as before, intended to be a free one. We regret having to impose a fee, but this is only because a few people have been sending in a large number of queries which take much more time than we can afford on the service.

**REGULAR READER (Auckland):** My a.c. set splutters a great deal between 850 and 1500 k.c. It is minimised but not done away with by removing the aerial.

**A.:** What happens when you remove the aerial altogether? It seems to be outside interference and this you can do nothing to overcome other than communicating with the district radio inspector. Your aerial and earth appear to be quite good though it would be better if you could get the aerial a little higher.

**L.A.D. Colac Bay.**—Is there any difference in using an electric set off a range from using the set off a light socket?

**A.:** Not unless there are separate metres, as in all probability there are. You cannot do any damage no matter from what point you take the electricity for your wireless set, but if you have separate meters it will be cheapest to draw the current from the range. The next best will be ironing point, and lastly the lighting socket.

**G.C.C. (Nelson).**—I have constructed the double push-pull amplifier described in the "Guide," and it is working wonderfully. I now wish to use a.c. on the filament of the valves. What ones do you recommend in the first and second stages? They must be English.

**A.:** Either the American type Osram valves or Mullard's PM104V in the first push-pull stage, and PM104V in the preceding stage.

**W.E.A. (Dunedin).**—What are the best values of condensers to cut out 4YA?

**A.:** Use those specified for 2YA in the "Guide."

2. The condenser to cut out the local "B" station?

**A.:** If you wish to eliminate both stations, you had better use formodensers as described.

3. Would the wavetrap as described by "Megohm" in last week's "Record" be more suitable?—No.

**K.N. (Auckland):** I believe manufacturers are this year marketing superheterodyne receivers. Can they be used on an aerial?

**A.:** Yes, new models incorporate the improved circuit which is allowed on the aerial.

2. Will you publish a circuit of a super het. that can be used from an aerial?

**A.:** While not making any promises, we shall see what can be done in this regard.

**LAME DOG (Petone).**—I have constructed the knife-edge rejector from the 1931 "Guide," but not being able to obtain the specified condenser used the .0021 compensation type, and although I shielded the whole outfit I could not get the wavetrap to work.

**A.:** If the .002 condenser will adjust to a .001 capacity, as it probably will, we cannot help you. Hundreds of constructors have built the rejector, and been perfectly satisfied, but it is impossible to do anything other than tinker around with it until it works. Are you quite certain that because of the shielding you are not short-circuiting the wavetrap?

2. About what would a filament transformer cost?

**A.:** We should imagine about £3.

**C.H.W. (Invercargill):** I have added an r.f. amplifier to my set, but it will act only as a wavetrap.

**A.:** Your circuit is quite satisfactory, but it would be better if your transformer-

**Mr. Radio Fan**  
*Puzzled. Want the latest?*  
*"Tune in" on these publications at*

## N.Z.'S OWN RADIO BOOKSHOP

THE TE ARO BOOK DEPOT, WELLINGTON.

(Read this advt. weekly, as new stocks arrive every overseas mail, which prevents us issuing a stationary catalogue.)

We have the largest stocks of radio literature south of the line. We cater for engineers, wireless colleges, amateurs, broadcasters and beginners. Your money returned if books sent are unsuitable and sent back promptly in good condition.

LOOK AT THIS LIST:—

- The following by Ralph Stranger, 1/8 each:—
- "Modern Valves,"
  - "Selection of Wireless Signals,"
  - "How to Understand Wireless Diagrams,"
  - "Wireless Valves,"
  - "Wireless Communication Broadcasting,"
  - "Seeing by Wireless" (Television).
- "Practical Radio Telegraphy," by Nilson and Hornung, 18/-.
- "Radio Music Merchant" (formerly "Talking Machine World"), monthly, 2/- per copy.
- "Practical Radio Repairing Hints," by Rider, 13/- (Don't miss it.)
- "Principles of Radio," by Henney, 21/9.
- "Modern Sets, 1931," consisting of 2, 3, 4-Valve Battery and A.C. Sets, L-W Ampfr. and Special S-W Set, designed N.Z. conditions, by A. K. Box. 1/8.
- "Radio Str." 72 pages—Don't miss this. 8d. posted. Great value.
- "Practical Radio Construction and Repairing," by Moyer and Westrel, 15/6.
- "Radio Times" (English weekly), 4d. per copy.
- "Radio Retailing" (U.S.A.), monthly, 1/9 per copy.
- "Radio Manual," by Sterling and Kruse, 26/-.
- "All About the All-Electric," 1/9.
- "Practical Testing Systems," by Rider, 6/8.
- "Radio Operating Questions and Answers," by Nilson and Hornung, 14/-.
- "Radio Amateur Handbook" (Handy's) latest edition, 5/3.
- "Radio Amateur Call Book," latest quarterly, 5/3 (March, 1931).
- "Theory of Radio Communication," by Fligate, 12/-.
- "Principles of Radio Communication," by Morecroft, 41/6.
- "Elements of Radio Communication," by Morecroft, 19/-.
- "Direction Finding," by Keen, 27/-.
- "Radio Physics Course," by Ghirardi, 14/-.
- "Technical Telegraphy: Answers and Solutions," by Roberts and Burrow, 2/3.
- "Thermionic Vacuum Tubes," by Van der Bijl, 26/-.
- "Radio Receiving Tubes," by Moyer and Westrel, 14/-.
- "How Radio Receivers Work," by Roberts, 8/-.
- "Radio Design," 1/- per copy.
- "Radio Engineering" (a monthly issue), 21/- per annum.
- "Projection Engineering" (monthly) 21/- per annum.
- "N.Z. Radio Guide and Call Book, 1931," 2/10.
- "1931 N.Z. Radio Handbook," 2/10 posted.
- 6-Valve Neutrodyne Blue Prints and instructions with one transformer and 2 resistance coupled audio stages, 1/8.
- "Batteryless Neutrodyne" Blue Print, etc., 2/9.
- 3-Valve Browning-Drake Blue Print and instructions, 1/8.
- "Selective Crystal Set with 2-stage Audio" Blue Print and instructions, 1/8.
- "Radio Record" D.X. Forms, 1/8 two doz., posted.
- D.X. Clock, 10d.

WRITE US NOW.

**TE ARO BOOK DEPOT**  
64 COURTENAY PLACE, WELLINGTON.

coupled the first stage to the next one. The transformer will consist of a separate primary of about 20 turns on a slightly smaller former placed inside the low potential end. One side would go to the plate of the valve and the other to B+. This would be by-passed with the condenser shown.

2. By neutralising the s.g. valve would all carrier waves, etc., be eliminated?

A.: No, it is not worth while neutralising the s.g. valve. It is perfectly stable without any extra aids.

N.D.B. (Tologa Bay): I have built the Outspan Five and now want a short-wave set to use with it. I am inclined toward a d.c. version of the super het. adapter. Would A409 or A415 do as detector with A409 as oscillator?

A.: Either A409 or A415 will be suitable for the first detector with A409 for oscillator.

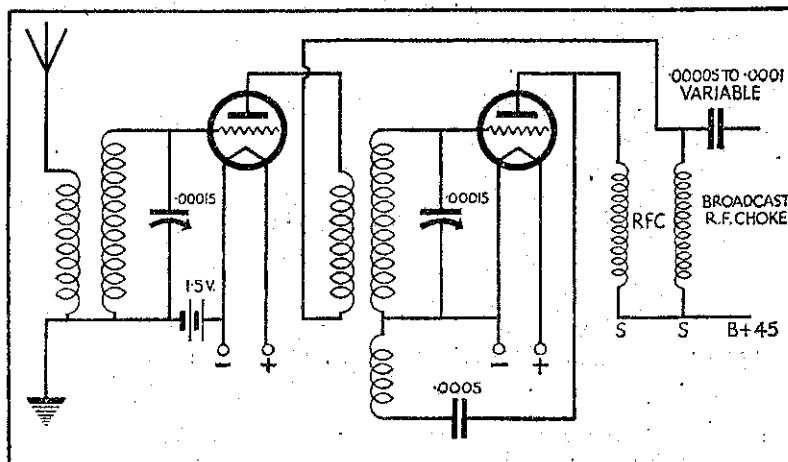
2. Is C3 fixed or variable? It is called a tuning condenser.

A.: C3 is a .0005 mfd. fixed condenser.

3. Are L5 and C4 required when the Outspan follows.

A.: L5 and C4 are not required when the adapter is used in a set having a tuned input stage, such as the Outspan. Do not short the output of the adapter right out, as you have done in the diagram. The inclusion of L5 and C4 will always improve the selectivity of the set, but if they are to be omitted the connections will be as is shown in the accompanying diagram.

4. Is the negative return in both cases best, and would the ordinary grid leak work as well with a plus or potentiometer return?



Theoretical sketch of superheterodyne short-wave battery adapter.  
The coils will be as before.

A.: A grid detector may be used if desired instead of a plate bend detector. The grid return should then be to A+, or, better still, to the slider area of a potentiometer connected across the "A" battery.

5. The two stages of s.g. do not appear to give the lift they should. For efficient working with the s.g. valve should there not be more turns on the primary of the following coil?

A.: You could experiment with a large number of turns. The numbers we gave were as high as we found practicable.

Beyond that the set begins to become unstable. Have the s.g. valve tested and we presume you have tried varying the screen voltage.

6. Is it safe to go up as high as 180 volts on the plate? You give it in the "Guide," but the directions with the valve give 150 maximum.

A.: Valves are rapidly improved and we have given the specifications of the latest valves imported by Philips. Yours is probably a little older.

ION (Christchurch): I have obtained improved results with the Loftin Four by paying particular attention to the output stage using radio frequency choke between the primary of the output transformer and the plate of the 245 valve and the B plus supply. I have taken the leads to the speaker in metal armoured flex, but I cannot adjust the trimmer to the optimum position without squealing. If the earth connections to the shields on transformer and loudspeaker is broken the set begins to squeal. I have not tried a choke in the plate lead of the detector or r.f. valve. I have reduced the primary turns without avail. The sensitivity of the set is quite equal to a well-known a.c. set using the same number of s.g. valves.

A.: Try, as you suggest, chokes in the plate leads of the r.f. valve and a separate earth for the shielding and the aerial coil itself. Run the plate and grid leads of the amplifier in earthed armoured flex. Have you adhered to the layout carefully, as if this is not followed instability must result? From the rough sketch you have sent us it appears that you have the 245 valve and the power pack too close together. The radio portion must, as shown in our diagram, be kept well away from the amplifier.

2. In the meantime I am constructing the super het. adapter described in the "Guide." I do not see any mention of the value of the tuning condensers C1, C2. As I want to use .0025 condensers to make .0001 condenser, is it safe to take the number of turns for the detector coil from the list in the "R.R."?

A.: The tuning condensers specified for the super het. are .0001 and .00014. You can quite well use .00025 tuning condensers without any change in the coil, but you will find that best results will be obtained by using only the lower part of the tuning range of the condenser. The tuning, particularly of the oscillator, will be very sharp indeed, and you will receive the same station on two different sets of coils. If you make the adjustment in the number of turns referred to this difficulty should be overcome.

3. Would a .25 mfd. condenser be suitable for the values C3 and C5, and is the tuning circuit L5C4 necessary in connecting the adapter to the Loftin Four?

A.: C3 should be a .0005 mfd. fixed condenser, C5 a fixed condenser .0001 mfd. or smaller, or a 'midget' variable may be

used. The tuned circuit L5C4 is not absolutely essential with the set employing a tuned input such as the Loftin Four, although it is of advantage in improving selectivity. The Loftin Four has insufficient r.f. amplification to give really satisfactory results with a super het. adapter. Furthermore, you may have trouble with instability.

W.A.R. (Martinborough): I have constructed the super het. adapter, or rather a battery version of it, taking the grid return to "A-." Could you give the necessary modification for battery operation?

A.: You appear to be working along the right lines in returning the grid to the potentiometer in the d.c. In the absence of the potentiometer the return should be made to A+. The 1875 k.c. coil is designed to cover the 180 metres band where there is very little to be heard.

2. The parts are not named in the "Guide." What is C3?

A.: They have since been published and appear in the second edition of the "Guide." C3 is a .0005 mfd. fixed condenser.

3. Is the choke a shortwave or broadcast?

A.: It should be shortwave, but a good broadcast one will usually operate satisfactorily.

4. Should a super het. howl when brought into resonance? If not, why does it do this and how can be suppressed?

A.: A super heterodyne should never howl unless the receiver is oscillating. This trouble can almost invariably be cured by the adjustment of the B voltage on the oscillator and the detector. Reduce these progressively until the howl ceases. Where a potentiometer is used for the grid return adjustment, of this will often result in a cure.

5. Could the windings L2, L3, and L4 be made more clear?

A.: Since the 80 metre coil is operating so well copy the connections exactly

### Data for Moving Coil Speaker Voice Coil

Valve or Impedance	Turns for H.R. Coil	Turns for 25-1 Step-down Transformer
2500 ohms	1000	50
2750	1300	55
3500	1650	65
5000	2100	105

for the coils for the other band. The coupling coil L2 sometimes requires variation when an oscillator valve having an unusually high or low output is used. Try varying the number of turns on this.

M.G.H. (Gisborne): Using 26 d.s.e. for the secondaries and 32 for the primaries, what would be the coil specifications for the Outspan using 2in. formers with .0005 condensers?

A.: This information has been published in the "Radio Guide."

You will require 72 turns on the secondary with about 25 on the primary and 35 regeneration.

2. Would it be better to use .00035 condensers to control the detector coil?

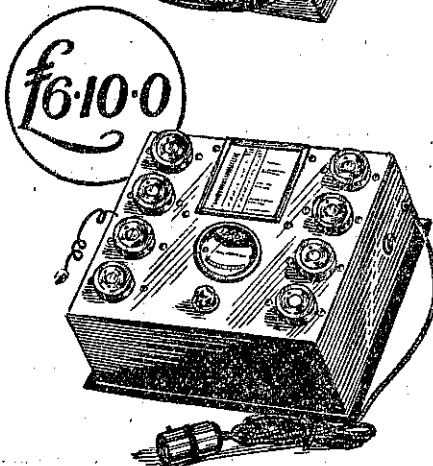
A.: It is unnecessary. You could use all three condensers the same.

3. Would .0002 reaction condenser be suitable for .0005 condensers?—Yes.

4. By mounting a detector coil in the valve base could I use a detector and two audio for shortwave?

A.: Yes, providing you used a high-grade broadcast choke.

5. My first audio valve gets fairly hot. I am using M4 in both first and second audio stages.



EVERY  
Radio Dealer  
needs this  
SET  
TESTER

and this new style

VALVE  
TESTER

(Takes all makes)

Made and Guaranteed  
by

STEWART HARDWARE

Limited.

COURTENAY PLACE, WELLINGTON.

A.: You should not use power valves in both audio stages. By not suitably biasing PM4 you are placing a heavy drain upon it, and this causes it to heat.

6. What ampere load will a Columbia 4486 battery stand?

A.: About 20 mas.

**BONSPEO (C. Otago):** I have adapted my receiver to use pushpull in the last stage, but it now goes into oscillation with a loud grunting noise when previously it slipped in and out quite easily.

A.: Try reversing the connections to the primary of the audio transformer, and experiment with voltages on the detector. You might try double biasing the power valves.

**A. B.C. (Timaru):** Will an earth wire connected to a water main cause the set to pick up interference from other sets which are also connected to the main?

A.: It is possible that such will happen.

2. As an earth I have an electric power cable connected to a buried motor-car radiator. The earth wire passes close to a water main and could easily be tapped to same. Would it be advantageous to do so?

A.: The experiment would be worth trying. Normally it would be better to do so, but if you are likely to be troubled with interference, no.

**RATS (Hastings):** Could you give me the number of turns and gauge of wire for the voice coil of the dynamic speaker?

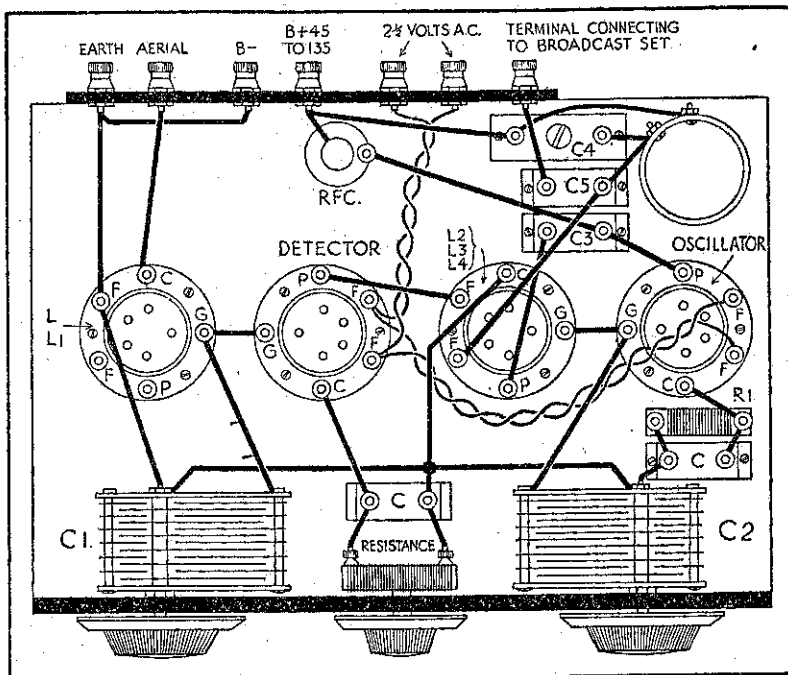
A.: Published this week is a complete table that should assist you.

**H. F.E. (Wainoni):** I am troubled with interference, apparently from leaky tramlines. What can I do?

A.: You must consult the District Radio Inspector. If more than you are troubled have them sign a petition. If any difficulty is encountered, communicate with us again.

**CURIOUS (Te Aroha):**—Would another make of valve give me better results than the ones in my set? They are the same as the make of the set.

A.: Probably not. It is always wise to use the valves specified by the manufacturers. The ones you are using are first grade.



Several correspondents have requested a layout diagram for the a.c. super-het. s.w. adapter. A suitable layout is shown above.

A.: It is not essential but preferable.  
3. Can raw a.c. current be used upon the filaments of the pentode?—Yes.

**HOPELESS (Wellington):**—My horn speaker has developed a loud crackling noise when loaded with a strong signal.

A.: This is due probably to your speaker being about done.

2. Which is the better earth, a water-pipe 3/4 in. in diameter, 8 ft. long, or one 1 in. wide and 6 ft. long?

A.: There is very little difference, certainly none worth bothering about, although theoretically, the latter is the better.

3. How many distant stations have been received in Wellington city on a three-valve set?

A.: We don't know. Perhaps some ardent DXer seeing this will take the matter to heart and let you know.

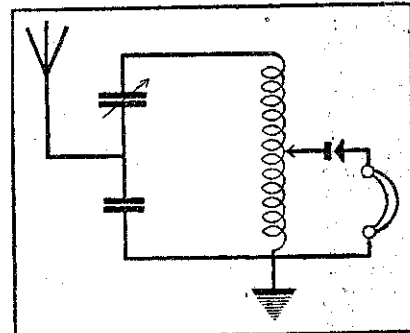
## Advertising by Radio

**AN** American business man recently tested the results to be obtained from advertising over the air and through the medium of the Press. He invested 4000 dollars in each. For half-an-hour's advertising over the air on Saturday evening the results were sixteen replies and two telegraphic communications. The advertisements in the leading journals of New York, Chicago, Philadelphia, Boston, and Cleveland drew a quarter of a million inquiries.

## The "Knife-Edge" Crystal Set

**A** CORRESPONDENT, signing himself "Light, Christchurch," sends in an adaptation of the "Knife Edge Receptor" which was described in the 1931 "Radio Guide." This very efficient and popular wavetrap has been converted into an equally efficient crystal set, the circuit of which is shown herewith.

He states that it is very sensitive and selective. He is living in Christchurch, and both 3Z0 and 3YA can be tuned out in favour of the other. It is being used transformer coupled to a Loftin-White r.f. choke between the transformer secondary and the grid of the screen-grid valve



and the set. With this and one or two other precautions it works splendidly, with plenty of volume, and is "clear as a bell."

### Simplify DX-ing.

**DX CLOCK** ..... 9d.  
**DX VERIFICATION FORMS**—  
1/6 for 2 doz.; 8d. doz. over 6 doz.  
Booksellers, Dealers, or Box 1032,  
Wellington.

## Table of Wire for Field Coil of M.C. Speakers

Volts (d.c.)	S.w.g. Gauge.	Lbs.	Layers.	Turns.	Resistance Ohms.	Current.
6	18 d.c.c.	4 1/2	15	1,000	2.9	2.1 amps
12	20 d.c.c.	4 1/4	20	1,700	8.4	1.4 amps
120	34 enamelled	3 1/2	67	19,000	1500.	67. m.a.
230	38 enamelled	3	92	37,000	6500.	30. m.a.

**NEW READER (Newtown):**—Is the above circuit of a Trinadyne correct? It gives me rather too much volume on 66P speaker.

A.: Yes, it appears to be correct. If you are getting such good results, why wonder if there is anything wrong?

**EMI-DLL (Dunedin):**—I have constructed a crystal and two-valve amplifier in the 1931 "Guide," but cannot get satisfactory results. There is a very loud crackling in the phones.

A.: This no doubt is a defective component. Either a transformer or your phones. It may possibly be a resistance. Have these components tested.

**T.F.B. (Roslyn):**—I propose to install a pentode valve in the last socket of a two-valve all-wave combination. Will it be satisfactory?

A.: It should be, but read the comments made by Mr. Dawson in our paper a few weeks ago.

2. Is an output filter a necessity?

## Canadian Broadcasting

### In the Melting Pot

**SEVERAL** Canadian provinces have united with Quebec to contest the Dominion Government's jurisdiction in radio matters. They claim that broadcasting is an "instrument of education," and point to the British North America Act, which is said to constitute education the exclusive business of the provinces. In the meantime, there is a Radio Bill before the Canadian Parliament, which will add 25 cents to listeners' fees, and will make them take out two licenses each—one from the Federal, and one from the Provincial, Government.

# RADIO DIRECTORY

## What to Buy and Where

### CITIES.

**ACE & HAMMARLUND SETS, Johns, Ltd.**  
**WESTINGHOUSE Rectifiers** Chancery Street, Auckland.

**BURGESS RADIO BATTERIES, All Radio Dealers.**

**LOFTIN-WHITE AMPLIFIERS** **Stewart Hardware Ltd.,**  
Courtenay Place, Wellington.

**MULLARD VALVES** ..... **All Radio Dealers.**

**N.Z. DISTRIBUTORS PILOT** **Harrington's, N.Z., Ltd.**  
**PARTS AND RECEIVERS,** 40-42 Willis St., Wellington.  
INCLUDING PILOT SUPER-WASP AND 142 Queen St., Auckland.  
GILFILLAN ELECTRIC RECEIVERS

**RADIOLA RECEIVERS and** **Farmers' Trading Co., Ltd.,**  
**Expert Radiola Service** ..... Hobson Street, Auckland.

**STEINITE RADIO** ..... **G. G. Macquarrie, Ltd.,**  
120 Willis St., Wellington.

### COUNTRY TOWNS.

**PHILIPS VALVES AND**  
**APPARATUS** ..... **All Good Radio Dealers.**

# Select Your Local Programme



THE crystal sets of the Wellington listeners have, for the greater part, become obsolete over-night. With the opening of the new and relatively powerful 2ZW it has become a problem to isolate it from 2YA, and literally hundreds of listeners have communicated with both stations and asked them how it is possible to separate the stations.

Right from the onset, let us say that it is no easy task. For some sets it is impossible, and it will need nothing less than rebuilding the set, for it must be constructed along entirely different lines. It must be made "selective" and in considering selectivity another problem crops up, for when our sets are made selective they usually become less sensitive than they were before. Where we have only a limited amount of signal voltage available and no means of amplifying or strengthening it, we must take care of every atom of power that the aerial collects.

We must confess that we have had little time to delve thoroughly into the problem. Within a few days it has been necessary to devise a circuit, and a simple one at that, to differentiate between the stations.

The necessity of providing a sufficiently selective circuit was brought home to us forcibly one evening last week. We were listening to 2YA who had just announced the speaker for the evening when the familiar tune of "Colonel Bogey" burst in. It was no good trying to cut him out, he came in at all parts of the dial, for we were using the standard "Radcord"

## The "Rejecta" Crystal Set

circuit, with an amplifier, and the set was operated in the "Record" office, which is next door to the new station.

### The Ideal Set.

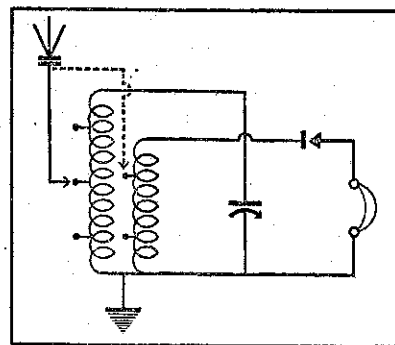
SO we attacked the problem the next day and worked out details of the new circuit. Making up a suitable set from components already on hand we brought it to the office and, lo and behold, we could separate the stations—right under the shadow of 2ZW at that. It could be tuned out in a few degrees of the dial.

On communicating with the traders a day or so later, it was found that the parts could not be had. They had all been sold out through their being specified for the differential receivers—"Would not something else do?" So in a very short time we had to make a set, from not what we wanted but from what we could get. However, the set has now been made and we are satisfied with it. From our rather hurried experiments we derived several facts that should help listeners who cannot separate the station.

The first line of defence, or we suppose, attack, is to put a .0003 condenser in the aerial. These cost only 1/6 and if they do not remedy the trouble will certainly improve matters, and if the "Rejecta" circuit is later made up this component will already be in the junk box. If a small aerial is used this component will most likely be unnecessary, but as we work with a long one it is an essential.

Strangely enough the condenser has little or no effect on the volume.

Unless the set is of the type using a variable condenser there is little hope of it ever cutting out one station in favour of the other, and the set will have to be scrapped. Most unfortunately this applies to certain types of commercially-made sets. However do not discard them, as it is possible to make them more selective with a certain type of wavetrap that we hope soon to describe. But when the parts of the wavetrap have been bought the price of the components necessary for the "Rejecta" has been paid, so where



is the gain? Furthermore, the parts for this trap are not in the country at present and will not be for some considerable time.

On investigation we have found that in Wellington, at least, there is a dearth of 2-inch former and .00035 condensers, the parts we used in the original model. There appears to be plenty of 3in. former and .00025 condensers so we have used these. However, specifications are given for both combinations, just in case anyone happens to have a crystal set of the "Radcord" type on hand and wishes to convert it.

Our experience has been that in this hook-up at least, the .0005 condenser is not suitable. There is not enough separation between the stations unless volume is sacrificed to attain selectivity. An undesirable state of affairs. For this reason it seems that the best condenser for the job is the smaller .00025, but the coil must be designed with care else one of the stations will be pushed off the dial. With a well-designed coil, it is possible to put one station at either end of the dial and that is the ideal when stations are to be separated.

The first job in commencing the construction of this set is to decide upon the components to be used and obtain what is not on hand. Look over the accompanying lists and fill in the blanks; it will be found that the parts are not expensive. Do not pay fancy prices for extra special quality goods; they are not worth it in a crystal set of this type.

### The Coil Construction.

THE coil is by far the most important part of the business, so we shall deal with it first. Upon a 4-inch length

of tubing, drill two holes about 1in. from the bottom. These are only small holes to accommodate the ends of the wire and need be of no greater diameter than 1/32in. On the 3in. former measure off 2 1/2in. and drill another two similar holes. This will be for the top end of the wire that goes to the condenser.

If you have or can borrow a coil winder, winding the coil will be simple. If one is not available it will be more difficult, but by no means impossible.

Thread the 24 dsc. through the hole and commence winding, and for thirty turns allow a space between the wire. Not much, just enough to accommodate the 30, lying alongside. It will be found that it is better to err by leaving too much space than by leaving too little, as the wires can be pushed up tighter later, but it is a difficult business to pull them out to take in the finer wire. At the 30th turn clean about an inch of the wire and twist it about itself. It will be found easier if a sharp twist is made first at the base of what is to be the tap, and then twist the wire until all the bared part is twisted together. By making a sharp twist at the bottom, the tap will not pull out when the winding is recommenced.

Winding is now recommenced, this time there is no spacing. This is easy and it will take very little time to complete the coil. If a .00035 condenser is to be used, take a tapping at the 25th turn, after the close winding has been commenced. Finish off through the holes provided. If the winding has panned out as it should, this coil will end at the holes provided. If not, finish off through them in any case.

To complete the coil, the 30-gauge wire must be wound in the spaces between the turns of the lower half of the coil. When finished there is to be one thick wire and then one thin, and so on.

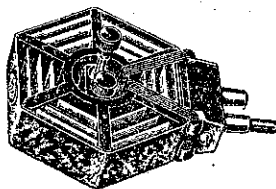
The lower end of the 30 wire is twisted with the end of the 24 wire, and threaded through the same hole. At the 12th turn make a tap as before, but be careful not to break the wire, as it is very thin. Make another tap at the 22nd turn. This latter will be the one most used, the first being the most suitable where extreme selectivity is desired. It is unnecessary to use this in most cases. When the tap in the main winding is encountered, give the fine wire a turn round this and cut off from the reel, leaving some 6in. of slack. Now liberally coat the last few turns of both windings with seccotine or other adhesive, and while this is drying set about laying out the remainder of the components.

### The Lay-out.

ABOUT this part of the job there is little need to make comment, as the lay-out diagram shows all clearly. The terminals are arranged on the front panel, and the coil is to be mounted horizontally. This is easily the most satisfactory method.

THE crystal may be one of many different types. Experience has shown the variable cartridge type to be the best, although the catwhisker and galena is slightly more sensitive and the carborundum, less trouble than

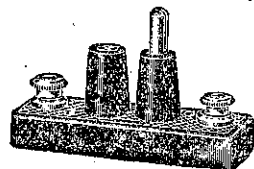
## MORE NEW LINES AND ALL BRITISH



Wearite 30 ohm. Rheostats .....2/6  
Wearite .5 meg. Potentiometers,.....6/-  
Wearite 600 ohm. Decoupling Resistances, 2/6  
Pyrex Insulators .....1/6

Edison Bell X Coils, 5/-  
Edison Bell Plug-in Coils, 40, 50 and 60 plain centre tapped and double tapped.

3/6, 4/- and 5/-  
Siemens 60-volt Popular Batteries ....11/-  
Siemens 60-volt Special .....10/6  
Siemens 9-volt Batteries .....2/6



Edison Bell Coil Holder.

Formo .00015 Double Spaced S.W. Condenser .....7/6  
DIFFERENTIAL CONDENSERS, J.B. .00015, .00025 .....6/6  
Lotus .....8/-

### PARTS FOR THE "REJECTER" CRYSTAL SET:

1 .00035 Variable Condenser and dial .....7/6  
1 Crystal, semi-permanent, Red Diamond .....2/6  
3in. of 2in. Former .....6d.  
1lb. 24 d.s.c. Wire .....2/-  
4 Terminals .....1/-  
Midget Clip .....3d.  
Panel, 4in. x 5 1/2in. 2 yards of 30 d.s.c. Wire .....2/-

**F. J. W. FEAR & CO.,**

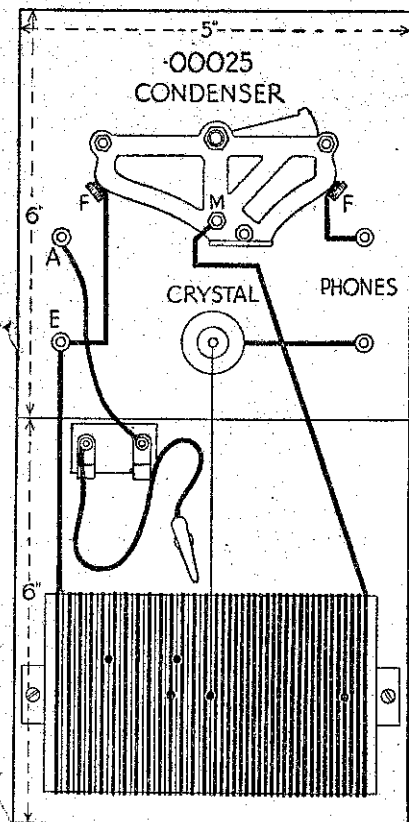
63 WILLIS STREET, WELLINGTON.

'Phone 41-446



either. The layout has provided for a semi-permanent cartridge type. To the aerial terminal is attached a piece of flexible wire, or for all practical purposes, a piece of the 24 wire will do.

To the other end is fastened the midget clip, and this is joined to the



upper tapping on the 30 wire. However, different conditions demand different placement of the clip, and for one station only probably the best results will be obtained by bringing the aerial on to the thirty-fifth turn on the main coil and joining the top of this coil to the crystal instead of the finer wire. This is the familiar "Radcord" hook-up. Frankly, we found it not worth making the change for results were just as good with the set connected up in the intended manner.

The coil ends and taps are distributed as follow:—The bottom of both coils goes to earth. The top of the fine wire goes to the crystal, and that end of the

## The Superheterodyne Receiver

IN the special trade forecasts last week mention was made of the superheterodyne receiver. In order to make clear the meaning of the term we reproduce below an excerpt from the "1931 Radio Guide" entitled "The Superheterodyne Receiver."

IN the design of any receiver the three most important factors are selectivity, sensitivity and fidelity. A high order of selectivity makes it possible to tune in one station without interference from another operating on an adjacent frequency, the sensitivity determines the ability of the receiver to pick up distant stations or to operate on a small aerial and yet deliver the volume desired. The fidelity indicates the quality of the speech and music as delivered by the set in analysing the superhet (as it is usually called) we shall see how these factors are obtained.

There are eight essential parts, quite often nine. It will be remembered that in the broadcast set there are six. In comparing both sets it will be seen that the aerial, the power-supply, the loud-speaker, and the audio amplifier are common to both, so we shall leave them out of the discussion. In the superhet there are two detectors, an intermediate amplifier and an oscillator.

The engineer can design a set that will amplify best at one frequency only, at the others it is more or less of a compromise. If the stations in the world could operate on one frequency and share the ether, we should have good reproduction, but since they cannot, we have either to make the set variable or to reduce them to one frequency in the first stages. In other words, we use a frequency

main wire to the fixed plates of the condenser. The aerial is brought in to the second tapping on the small coil. The others can be tried for results.

It is best to obtain a fixed condenser with grid leak clips and place a small length of 1/4 in. tubing or rod in the place of the grid leak when only one station is on the air. This will bring up the signals slightly, but will spread them over a much greater part of the dial.

And so we come to the end of our crystal set. If it has been made to specifications, there is no doubt that it will eliminate one station in favour of the other. There may be a trace of cross-talk, but that happens in the best of valve sets. By cross-talk we mean that although there is a dead spot between the stations, one can be heard faintly on the background when the other is tuned in. However, it is not nearly enough to cause any worry.

For a .00035 Condenser and 2in. Coil.

HERE are the specifications for this combination, for which we have more than a sneaking regard, though probably it has no justification. Space out the first 23 turns of 24 gauge wire, putting in a tap, then tight wind for 48 turns. Put in a tap at the twenty-fourth turn from the tight wound end. Wind in the 30 gauge tapping at the eighteenth turn for the aerial. This combination will be found very sharp cut in tuning.

changer. Let us now see how this is done.

### Beat Frequencies.

When two high-frequency currents are combined in a detector circuit a third or beat frequency results. There are really two beat frequencies, the sum and the difference of the two. Thus if a 1000 kilocycle carrier is combined with another frequency of 100 we should have two new ones at 100 and the other at 1100. Now it is very much more simple to amplify a low frequency than a high one. Those who have built sets and have been troubled with oscillation and feedback on the lower wavelengths will agree on this point. Our plan, then, in designing the best set possible will be to make it amplify at the 100 kilocycles, and we can now design our amplifier to work at this low frequency. Every incoming wave must be combined with a suitable frequency to give the required 100 kilocycles. Thus a frequency of 720 (that of

### PARTS FOR THE "REJECTA" CRYSTAL SET.

- 1—.00035 (or .00025) Variable Condenser and Dial.
- 1—Crystal, semi-permanent.
- 3in. of 2in. Former.
- 1lb. 24 d.s.c. Wire.
- 2 Yards 30 d.s.c. Wire.
- 4 Terminals.
- Midget Clip.
- Panel 4 x 5 1/2 in.

2YA) will be combined with one of 620 and that of 2YB (1090 kcs.) with 990.

In practice these two currents are mixed in the first detector of the superheterodyne, and the station's frequency may or may not have been amplified by previous radio stages. The source of the second frequency is the oscillator, which, as it has been explained, must provide a note 100 kilocycles below or above the station's carrier. The 100 kilocycle note is now amplified by the intermediate stages, passed to the second detector,

which strips away the high-frequency element and passes the audio signal on to the low-frequency amplifier which adds power and sends the signal on to the speaker.

In the present discussion we shall not stop to consider just how selectivity is more pronounced with this type of set; it would involve certain elementary mathematics and the reader has been inflicted with enough of them already. Sufficient to say that as the intermediate frequency is raised the distance between adjacent stations is increased, but it cannot be raised too high or oscillation troubles will be encountered. The superheterodyne, then, is sensitive, selective and true toned.

### CRYSTAL PARTS posted same day as ordered:—

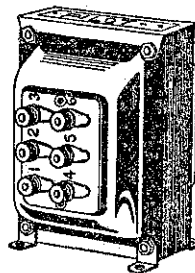
Condensers, .0003 or .00035 at 5/6, .00025 at 6/-; Semi-permanent Crystals, 3/6; 5ins. of 3in. dia. Ebonite, 1/8; 9ins. of 2in. Former, 6d.; 1lb. 24 d.s.c. Wire, 1/10; 2yds. 30 d.s.c. Wire Free with other parts; 4 Terminals, 1/-; Midget Clip, 3d.; Panel, 5 1/2 in. x 4 in. at 9d.

**VALVES.** Very Special Prices. Condor d.c. 4-volt 1 amp. UX base, 6/6 each, post free.

**Bond A.C.**  
 281 Were 45/-. Now 38/6  
 280 Now 16/6  
 226 Were 13/-. Now 10/-  
 227 Were 18/-. Now 14/6  
 245 Were 17/6. Now 13/6  
 224 Were 27/-. Now 19/6

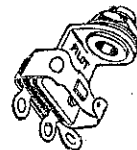
**BOB HORROBIN,**  
 Flashlight Corner, 2 Courtenay Place, WELLINGTON.

## For Highest Efficiency use PILOT 1931 Parts



Your receiver demands the best if you expect 100% efficiency in Life, Tone, Quality and Distance. There is a Pilot part to meet every radio requirement.

20-page (illustrated) Price List of Parts and Receivers—FREE



Wholesale and Retail Distributors for Pilot:

**Harringtons** N.Z. Ltd.

40-42 WILLIS STREET (P.O. Box 738), WELLINGTON.  
 142 QUEEN STREET (P.O. Box 1484), AUCKLAND.  
 148 LICHFIELD STREET, CHRISTCHURCH.

## CHEAP GOODS

at a

## LOW PRICE

That is NOT our Policy

Nor do we advocate High-Price extra Special Goods.

We sell GOOD Goods at MODERATE Prices and GUARANTEE Satisfaction. We are radio engineers and understand your requirements.

Remember—We Pay Postage.

—THE—  
**C. A. S.**

29 VENTNOR STREET, SEATOUN, WELLINGTON.



# FEATURE PEEPS

... at ...

## FUTURE PROGRAMMES

### SUNDAY

#### From 1YA

DURING the afternoon a portion of the organ recital to be given in the Town Hall by the city organist, Mr. Maughan Barnett, will be relayed. The evening service in the Beresford Street Congregational Church will be broadcast, following which a relay of the Municipal Band concert, to be given in the Auckland Town Hall, will be carried out.

#### 2YA Notes

THE evening service from St. Thomas's Church will be broadcast. The preacher will be Rev. C. V. Rooke, organist and choirmaster Mr. W. A. Gatheridge. At 8.15 p.m. (approximately) a recital by the Royal Naval Volunteer Reserve Band, under the conductorship of Mr. Harry Baker, will be relayed from the De Luxe Theatre.

#### 3YA Sessions

THE Salvation Army service in the Citadel will be broadcast. A studio concert will follow.

#### Items from 4YA

THE service in the Salvation Army Citadel will be broadcast, Adjutant Tong being the preacher, with Mr. A. Millard as band conductor. A relay of 3YA's after-church concert will follow.

### MONDAY

#### Wellington Notes

Featured on 2YA's programme will be Margherita Zelanda, coloratura soprano.

To-night also, a series of "Petites Periodes" with favourite masters of music will be inaugurated. These will be somewhat on the lines of the famous "Foundations of Music" series on the B.B.C. programmes. Ernest Jenner, pianist, has undertaken the first of these "Musical Moments," and with Arthur Clark, tenor, will give "Twenty Minutes with the Music of Beethoven."

A soprano from Auckland in the person of Gwenda Weir will sing the "Waltz Song," from "Romeo and Juliet," and two other songs, and Hilda Chudley, contralto, with Ernest Short, will sing Liza Lehmann's charming duet, "Snowdrops," besides solo numbers. Mr. Short will also sing excerpts from "Hiawatha" and from Lehmann's "In a Persian Garden." The Orchestrina, under Signor A. P. Truda, has chosen some interesting items, one being Mendelssohn's beautiful "Overture in C."

#### Items from Christchurch

THE series of dialogues on "The Story of the Garden," will be continued by Messrs. E. D. Wiltshire and F. C. Fairclough.

The Woolston Band, under Mr. J. Estall, will present the concert programme.

#### Notes from 4YA

TO-NIGHT listeners will hear the next instalment of the international programmes. Do not forget to tune in with the Lockharts and Hywide and Handsome—they are going to be really enjoyable.

### TUESDAY

#### 1YA Topics

THE international programme will be featured, Sir James Parr, ex-High Commissioner for New Zealand,



MRS. NELSON KERR,  
a 3YA contralto and popular concert performer.  
—Steffano Webb, photo.

speaking on "Impressions of the League of Nations."

#### Wellington Features

The concert session will include many interesting features, in addition to marking the second appearance of Margherita Zelanda. Noho Toki, Maori tenor, whose delightful renditions of his own native songs are always acceptable, will be heard in two numbers with orchestral accompaniment—"Home, Little Maori, Home," and "Pokare Kare." He will also sing two modern songs with violin obligato—"Maire, My Girl," and "Serenade" (by Romberg).

Dorrie and Laurie, a novelty combination well above the average, will again delight listeners in song and story.

## Featurettes

Margherita Zelanda (soprano)

2YA, Monday.

Moho Toki (Maori tenor)

2YA, Tuesday.

Professor Zimmerman

(violinist)

3YA, Wednesday.

University Debate

2YA, Friday.

"Rent Free"

1YA, Saturday.

#### 4YA Items

A W.E.A. talk at 4YA by Mr. A. Salmond will be on "Modern Methods of Education."

The Kaikorai Band, under Mr. T. J. Kirk-Burmand, with assisting 4YA artists, will present a special programme entitled "Around Great Britain and Ireland in Two Hours—from Cork to Dublin, from Belfast to London."

The programme will be composed of Irish, Scottish and English elements, and should prove a very popular entertainment.

### WEDNESDAY

#### Auckland Notes

FROM 12.30 p.m. to 1.30 p.m. there will be a relay community singing, to be held in the Auckland Town Hall. At 7.40 p.m. there will be a book review.

The studio concert will be given by the Salvation Army Congress Hall Band, under the direction of Bandmaster Paice. The programme will conclude with a gramophone recital by Miss Molly Atkinson, entitled "Schubert, Master of Melody." During the evening the results of the Hau-raki by-elections will be broadcast.

#### Items from 2YA

AT 7.40 p.m., from 2YA, Mrs. Albert Russell will give another of her interesting talks, entitled "The Art of Successful Living." The speaker for the international programme to be presented to-night will be Dr. Guy H. Scholefield, O.B.E.

#### 3YA Programmes

PROFESSOR R. C. Zimmerman, the violin virtuoso who has delighted 3YA listeners on two previous occasions, will be heard again this evening. He will be accompanied by the orchestra in his playing of "Viennese Melody," "Mazurka Obertass," and Bach's "Air on the G String."

Sketches acted by Mr. and Mrs. J. W. Bailey will be additional features on the evening's programme, while Myrtle Wright (mezzo contralto), and David McGill (tenor) will contribute solos. The programme by the

## RADIO REPAIRS



The Radio Trade and Private Owners throughout New Zealand are assured of a quick and efficient Radio Service by sending all their work to

**L. B. SCOTT LTD.**

MANCHESTER AND WORCESTER STS.,  
CHRISTCHURCH.

SERVICE AND SATISFACTION.



Studio Octet, under Harold Beck, will include the march, "Flag of Victory," the overture "Four Ages of Man," Pin-suti's "Bedouin Love Song," the "Second Sullivan Selection," and the ballet music from "La Source."

### Broadcast from 4YA

**AFTERNOON** talk by the Home Science Extension Department of Otago University, will be on "Use More Cereals." At 7.15 p.m., Mr. C. V. Daynes will speak on "Veterinary Matters." Both talks will be under the auspices of the 4YA Primary Productions Committee.

A concert to be given in the Town Hall by the Dunedin Returned Soldiers' Choir, under Mr. John T. Leech, will be broadcast.

The accompanist will be Mr. Chas. A. Martin, Mus.Bac., L.A.B. The choral works will include "Songs of the Fleet," "Hunting Song," "On the March," "Sweet and Low," "Hallelujah Power and Glory," "The Minnensingers," Funiculi, Funicula," and "Laughing Chorus."

## THURSDAY

### Good Habits

**FROM 1YA, 2YA and 3YA** the Home Science talk, prepared by the Home Science Extension Department of Otago University, will be on "Good Food Habits for Children."

### 1YA Notes

**AT 7.40 p.m.** there will be a talk, under the auspices of the New Zealand Manufacturers' Association, entitled "Bedsteads and Bedding." From the Town Hall the first of the 1931 concerts to be given by the Royal Auckland Choir, under the conductorship of Dr. A. W. Thomas, will be relayed.

This male choir was formed some thirty years ago and has an unbroken record during this long period. The fine part-singing has always been a delightful feature of the choir's pro-

grammes. This will be the first time that the choir has broadcast, and listeners will welcome the opportunity of hearing the singing of eighty voices. Dance music will follow and continue from the studio until 11 p.m.

### Items from 2YA

There will be a relay from Wanganui of a concert to be given by the Wanganui Garrison Band.

### 3YA Jottings

**A SERIES** of dialogues on the subject of "Orchard Work" will begin at 3YA. The speakers will be Messrs. B. G. Goodwin and J. D. Carolin, of the Department of Agriculture.

**3YA** will relay from the Civic Theatre the demonstration concert to be given by the prize-winners at the twenty-first annual festival of the Christchurch Competitions Society.

## FRIDAY

### From 1YA

**A NEW** boy soprano in the person of Ivan Dunn will make his first appearance this evening. A well-trained boy's voice has a singular beauty, and this young lad possesses a voice that will please listeners. He will be heard in three numbers. Mister Ree will broadcast radio magic. This gentleman is a delightful entertainer, and his appearances are always eagerly looked forward to. The popular bass-baritone, Albert Gibbons Taylor, will sing several numbers, also Frank Campbell, another one of Auckland's outstanding broadcasters, will be heard again.

### Wellington Notes

**THE** programme will consist of the broadcast on relay from the Victoria University College, Wellington, of a debate entitled "That Democracy is a Failure."

### Christchurch Items

**UNDER** the auspices of the Sunlight League, a talk will be given by Professor Shelley. Mr. J. A. East, under the auspices of the Canterbury Manufacturers' Association, will speak on "Making Modern Boots and Shoes." In the concert programme Margherita Zelanda will be featured.

### From Dunedin

**FROM 3.30 p.m.** a children's concert held in the Dunedin Town Hall, under the auspices of the Otago Education Board, will be broadcast. The concert will be directed by Mr. J. Crossley Clitheroe, lecturer of music, Teachers' Training College, Dunedin.

In the evening the popular Select Four will be heard in some well-known concerted numbers.

## SATURDAY

### Items from Auckland

**IN** the evening there will be a relay of a concert by the Municipal Band, under the direction of Mr. George Buckley.

### Features from Wellington

**A LECTURETTE**, under the auspices of the W.E.A., will be given by Professor C. A. Cotton, Professor of Geology, Victoria University College, on "Causes of Earthquakes."



**EVELYN HILL**, a Christchurch soprano, who will appear from 3YA shortly.  
—Steffano Webb, photo.

**A feature** of the concert session will be a one-act comedy, "Rent Free," to be played by Mr. and Mrs. J. W. Bailey.

This clever couple needs no introduction to listeners, and should prove a welcome addition to 2YA programmes. The Melodie Four, in quartets and solos, will supply the vocal portion of the programme.

### 3YA and 4YA Notes

**FOR** the variety programme from 3YA (relayed to 4YA) some of the best Christchurch talent has been engaged, and a bright concert should be forthcoming.

## Broadcasts for Schools

### 2YA's Schedule

**THE** special educational session conducted every Tuesday afternoon from 2YA, under the auspices of the Department of Education, is proving of interest not only to the teachers and scholars of the primary schools, for whom it is intended, but to many of the great body of listeners, young and old. For the information of those specially concerned, full information is published in the "Education Gazette," and we give the list of appointments below for the information of listeners generally:—

May 26.—Miss M. J. Thornton, Lecturer Wellington Training College, "Making Figures to Illustrate the Return of Persephone."

June 2.—Miss M. Magill, Thorndon Normal School, "A Travel Talk—Australia": Mr. N. T. Lambourne, M.A., Chief Inspector of Primary Schools, "Children of Other Days."

June 9.—Mr. G. H. Stubbs, M.A., Inspector of Schools, Wellington; Mr. R. Hopkins, A.R.C.A., Lecturer Wellington Training College, "Potato Printing."

June 16.—Mr. T. A. Fletcher, Editor School Journal and Education Gazette. Also an additional lecture to be arranged.

June 23.—Mr. H. W. Hesse, Chief Instructor in Agriculture, Wellington Education Board; Miss A. R. Paterson, M.A., Lecturer Wellington Training College, "A Nature Story—The Land of the Blue Flower."

June 30.—Dr. A. Paterson, Director School Hygiene Division. Also a lecture to be arranged.

At every session Mr. E. Douglas Taylor, Supervisor of School Music, will broadcast an illustrated talk on music.

## Radio In Russia

### Extensive Plans

**A REPORT** recently issued by the United States Department of Commerce states that by 1932 Soviet Russia plans to place in operation twenty-two additional stations of 100 kilowatts power, as well as 133 smaller-powered stations. The total cost of construction has been placed at approximately £10,000,000.

The report estimates that there are now 2,764,000 receiving sets among the Russian population. Of these, 2,100,000 are in rural districts. Russian progress in wireless development may be judged from the fact that in 1929 there were only 400,000 receiving sets in use. The industry is working to capacity and unable to cope with the demand from all parts of the country for receiving sets. The Soviet Government is doing its utmost to stimulate the industry, both from the standpoint of station installations and the manufacture of receiving sets. According to the current report, 1,800,000 sets will be produced in 1931, which would then give one set to every thirty-five of the population.

Popular interest in wireless is fostered by the formation of civic radio clubs, the best known being "The Friends of Radio," with 300,000 members. Magazines and pamphlets containing information and programmes are distributed to all persons interested. Hitherto little information has been available, but the report just released by the Department of Commerce shows that an intensive development of the wireless industry and broadcasting activities is an important part in the Five Year Plan, now being pushed to completion.

## Thousands upon Thousands of Men have Risen to Better Jobs and Bigger Salaries as a Result of I.C.S. Instruction.

What did they have, that you haven't? Better minds? More education? More money? More Courage? Not for a minute. All that they have done, you can do. You CAN. But WILL you?

It costs nothing to find out how the I.C.S. can train you, in spare time, for a well-paid position in the work you like best. Write us to-day or call with reference to the subject you are interested in.

### The International Correspondence Schools (N.Z.) Ltd.

1822 WAKEFIELD ST., WELLINGTON

## Radio Needs

Tone Controls - Easily Fitted  
Laker Aerial Masts  
Diamond and Columbia Batteries  
Radio Valves - Aerial Equipment  
ROYDS-HOWARD CO., 553 COLOMBO ST., CHCH.



**AGNES CUNNINGHAM**, a 3YA soprano, well known in Christchurch musical circles.

—Steffano Webb, photo.

# Full Programmes for Next

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

## Sunday, May 24

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

- 3.0 : Selected recordings.  
Relay of portion of organ recital from the Auckland Town Hall by the City Organist, Mr. Maughan Barnett.
- 6.0 : Children's song service, conducted by "Uncle Bert."
- 7.0 : Relay of divine service from the Beresford Street Congregational Church. Preacher, Rev. Albert V. Whiting. Choirmaster, Mr. Wm. Gemmell. Organist, Mr. Arthur Cherry.
- 8.30 (approx.) : Relay of Municipal Band Concert from the Auckland Town Hall, under the conductorship of Mr. George Buckley.
- 10.0 : God save the King.

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

- 3.0 : Afternoon session of selected gramophone recordings.
- 6.0 : Children's song service, conducted by "Uncle George," assisted by the Children's Choir from St. John's Presbyterian Church.
- 7.0 : Relay of evening service from St. Thomas's Anglican Church. Preacher, Rev. C. V. Rooke. Organist and Choirmaster, Mr. W. A. Gatheridge.
- 8.15 (approx.) : Relay of band recital by the Royal Naval Volunteer Reserve Band from the De Luxe Theatre (Conductor, Mr. Harry Baker).  
God save the King.

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

- 3.0 : Gramophone recital.
- 5.30 : Children's song service.
- 6.15 : Hymn chimes from studio.
- 7.0 : Relay of Salvation Army Meeting from The Citadel, Victoria Square.
- 8.15 (approx.) : From the studio.  
New Light Symphony Orchestra, "Peer Gynt Suite, No. 2" (Grieg):  
(a) "Ingrid's Lament," (b) "Arabian Dance."
- 8.23 : Contralto—Miss Nellie Lowe, (a) "Little Holes in Heaven" (Hope);  
(b) "Love's Coronation" (Aylward).
- 8.29 : Violin—Miss Irene Morris, "Air" (Schweirs and Haake).
- 8.32 : Tenor—Mr. Jas. Shaw, (a) "Adelaide" (Beethoven); (b) "Life and Death" (Coleridge-Taylor).
- 8.37 : The Dulcet Quartet, "It was the Time of Roses" (Robertson).
- 8.40 : Instrumental—Studio Trio, "Allegro" (Bache).
- 8.50 : Soprano—Mrs. W. B. Harris, (a) "The Old Refrain" (Kreisler); (b) "Only the River Running By" (Hopkins).
- 8.56 : New Light Symphony Orchestra, "Peer Gynt Suite, No. 2" (Grieg);  
"Return of Peer Gynt."
- 9.1 : Weather forecast and station notices.
- 9.3 : Baritone—Mr. A. G. Thompson, (a) "The Grey House" (Messenger);  
(b) "Crossing the Bar" (Willeby).
- 9.8 : New Light Symphony Orchestra, "Peer Gynt Suite, No. 2" (Grieg);  
"Solveig's Song."
- 9.12 : Dulcet Quartet, "Hymn of the Homeland" (Sullivan).  
Contralto—Miss Nellie Lowe, "If I Can Live" (Stephenson).
- 9.19 : Violin—Miss Irene Morris, "From the Canebrake" (Samuel Gardina).
- 9.22 : Tenor—Mr. Jas. Shaw, "In Native Worth" (from "Creation") (Haydn).
- 9.26 : Dulcet Quartet, (a) "Here a Pretty Baby Lies" (Gordon); (b) "The Day is Gently Sinking" (Congregational Hymnal).
- 9.32 : Soprano—Mrs. W. B. Harris, "Orpheus with His Lute" (Sullivan).
- 9.36 : Instrumental—Studio Trio, (a) "Pastel Minuet" (Paradis); (b) "Serenade" (Arensky); (c) "Scherzo" (Schubert).
- 9.48 : Tenor and baritone—Dulcet Duo, "Now We Are Ambassadors."
- 9.50 : Baritone—Mr. A. G. Thompson, (a) "Best of All" (Leslie); (b) "I Gave You Roses" (Aylward).
- 9.55 : New Symphony Orchestra, "Nell Gwynn Dances, Nos. 1 and 2" (German).
- 10.0 : God save the King.

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

- 3.0 : Selected recordings.
- 5.30 : Children's song service, conducted by "Big Brother Bill."
- 6.15 : Instrumental recordings.
- 6.45 : Relay of evening service from Salvation Army Citadel, Dowling Street, Dunedin. Preacher, Adjutant Tong. Band Conductor, Mr. A. Millard.
- 8.15 : Relay of concert programme from Station 3YA, Christchurch.
- 10.0 : God save the King.

### 2XB, NEW PLYMOUTH (1230 KILOCYCLES)—SUNDAY, MAY 24.

- 6.0 to 6.45 : Children's Sunday Service.
- 8.15 to 10.0 p.m. : Concert programme.

## Monday, May 25

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

SILENT DAY.

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

- 10.0 : Chimes. Selected recordings.
- 11.0 : Talk—Miss Christian, "Cooking."
- 12.0 : Lunch hour music.
- 2.0 : Miscellaneous.
- 3.0 : Selected gramophone recordings.
- 3.30 and 4.30 : Sports results to hand.
- 5.0 : Children's session, conducted by "Uncle Jeff."
- 6.0 : Dinner music session (Polydor)—  
Dajos Bela Orchestra, "Fantasie Orientale" (Lange).  
Ilja Livschakoff Orchestra, "Somewhere a Voice is Calling" (Tate).  
Paul Godwin String Quartet, "A Fragile Spring has Blossomed Forth."
- 6.11 : Paul Godwin's Orchestra, "Fritzel Dolls" (Rauls) (21712).  
Bereny's Hungarian Gipsy Symphony Orchestra, "Tales from the Vienna Woods" (Strauss) (23691).  
Great Symphony Orchestra, "Edmund Eysler's Operettas" Selection.
- 6.28 : Ilja Livschakoff Orchestra, "Volga—Russian Medley" (Livschakoff).  
The Pozniak Trio, "Three Miniatures Elegie" (Juon) (62549).  
Ilja Livschakoff Orchestra, "The Rosary" (Nevin) (23648).  
The Paul Godwin Dance Orchestra, "Little Birds Evening Song."
- 6.38 : Edith Lorand Orchestra, "After the Ball" Waltz (Harris).  
Bereny's Hungarian Gipsy Symphony Orchestra, "Original Hungarian Dance" (Bereny arrgt.) (23691).  
Paul Godwin Trio, "Largo" (Handel) (23374).
- 6.48 : Ilja Livschakoff Orchestra, "Troika Russian Medley" (Livschakoff).  
Balalaika Orchestra, "Auf Dem Wege Nach Petersburg" (R40090).
- 7.0 : News session, market reports and sports results.
- 7.40 : Lecturette—Mr. H. C. South, "Books—Grave and Gay."
- 8.0 : Chimes. Overture—State Opera Orchestra, Berlin, "The Magic Flute."
- 8.9 : Bass-baritone with orchestra—Mr. Ernest Short, two numbers from  
"Hiawatha" (Coleridge-Taylor); (a) "Farewell to Minnehaha";  
(b) "True is All Iago Tells You."
- 8.19 : Soprano with orchestra—Miss Gwenda Weir, "Waltz Song" (from  
"Romeo and Juliet") (Gounod).
- 8.23 : Twenty minutes with Beethoven—Mr. Ernest Jenner (pianist) and  
assisting artist, piano, "Waldstein Sonata" Op. 53; Tenor, "Songs  
to the Distant Beloved."
- 8.45 : Instrumental—2YA Orchestra (Conductor, Signor A. P. Truda),  
"Overture in C" (Mendelssohn).
- 8.55 : Soprano with orchestral accompaniment—Margherita Zelanda, (a)  
"Prelude" (Landon Ronald); (b) "The Tell Tale Stars" (Tcherp-  
nin); (c) "Cavatina Come Si Pno Sorridere" (Petrella) (from  
"Carnival of Venice").
- 9.4 : Weather report and station notices.
- 9.6 : Soprano—Miss Gwenda Weir, (a) "Rose Softly Blooming" (Spohr);  
(b) "Down in the Forest" (Landon Ronald).
- 9.12 : Bass-baritone with trio accompaniment—Mr. Ernest Short, "Myself  
When Young"; (b) "Then as the Tulip" (Lehmann).
- 9.18 : Selection—2YA Orchestra, "Tannhauser" (Wagner).
- 9.28 : Soprano with orchestral accompaniment—Margherita Zelanda, (a)  
"Mare D'Incanto" (Morasca); (b) "Missing" (Fraser-Simpson);  
(c) "Voi Che Sepete" (Mozart) (from "Le Nozze di Figaro").
- 9.36 : Violin—Erica Morini, "Gavotte" (Lully) (Polydor 68519).
- 9.39 : Contralto with violin obbligato—Miss Hilda Chudley, (a) "The Dove";  
(b) "As a Dream"; (c) "A Love Serenade"; (d) "A Song of  
Rest" (Landon Ronald).
- 9.48 : Duet—Miss Hilda Chudley and Mr. Ernest Short, "Snowdrops."
- 9.53 : Instrumental—2YA Orchestra, (a) "Valse des Alouettes" (Drigo);  
(b) "Pas des Amphores" (Chaminade).
- 10.0 : Dance programme (Brunswick)—  
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 Orchestra,  
"Singing a Song to the Stars" (Johnson) (4830).  
Jack Denny and His Mount Royal Hotel Orchestra, "Girl  
Trouble" (Fisher) (4789).

# Week-all Stations-to May 31

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

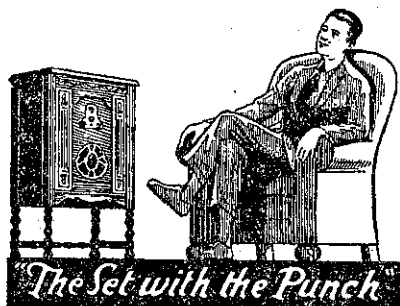
- 10.12: Waltz—Castlewood Marimba Band, "Old New England Moon" (Vance).  
 Foxtrots—Isham Jones' Orchestra, "Not a Cloud in the Sky" (Jones).  
 Jesse Stafford and His Palace Hotel Orchestra, "I Like to Do Things For You" (Yellen) (4822).
- 10.21: Vocal—Chester Gaylord, "When I'm Looking at You" (Grey) (4729).
- 10.24: Foxtrots—Ben Bernie and His Orchestra, "Black Eyes" (4725).  
 Jesse Stafford and His Palace Hotel Orchestra, "To-night."  
 Ben Bernie and His Orchestra, "Sharing" (Davis) (4837).
- 10.33: Waltzes—Castlewood Marimba Band, "If You Can't Have the Girl of Your Dreams" (Young) (4841).  
 Ben Bernie and His Orchestra, "The Kiss Waltz" (Dubin).  
 Foxtrots—Colonial Club Orchestra, "My Future Just Passed" (Marion).  
 Jack Denny and His Mount Royal Hotel Orchestra, "Leave it That Way" (Rice) (4789).
- 10.45: Vocal—Chester Gaylord, "Under a Texas Moon" (Perkins).
- 10.48: Foxtrots—Frank Sylvano and His Orchestra, "So Sweet" (Gillespie).  
 Hal Kemp and His Orchestra, "I Remember You From Somewhere" (Warren) (4805).  
 Frank Sylvano and His Orchestra, "After Sunday Afternoon."  
 Colonial Club Orchestra, "With My Guitar and You."
- 11.0 : God save the King.

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

- 3.0 : Gramophone recital.  
 4.25 : Sports results.  
 5.0 : Children's hour.

## WHY SHOULD YOU?

YOU WILL BE WILLING TO BUY A STEWART-WARNER RADIO IF YOU SEE WHY YOU SHOULD.



Some humans have a much higher sensitivity than others. So have some instruments. This is immediately evident when one hears a Stewart-Warner Radio. Here you have a Radio which plays for you just as the artist himself plays. Every tone that he calls from his instrument is reproduced for you with absolute natural fidelity.

Gone are the difficulties you have associated with the "picking up" of distant stations. They now come in with all the punch and life of locals, and with such vivid clearness. Stewart-Warner Radio's many modern improvements give you a perfected powerful musical instrument, with its wonderful performance, right in your own home.

Own a Real Radio yourself and be proud it is a Stewart-Warner. In justice to yourself—to your home—ask your dealer for a demonstration.

**STEWART  
WARNER  
RADIO**  
 Screen-Grid Circuit

KNOWN THE WORLD OVER AND SOLD IN NEW ZEALAND BY A HUNDRED DEALERS

Radio

*Hope Gibbons Ltd*

Division

AUCKLAND

CHRISTCHURCH

WELLINGTON.

- 6.0 : Dinner music session (Parlophone)—  
 Edith Lorand Orchestra, "Johann Strauss" Fantasia (Strauss).  
 Grand Symphony Orchestra, "Tales of Hoffman" Barcarolle.  
 Edith Lorand Orchestra, "The Flowers' Dream" (Translateur) (Parlo. E10570); "Faust" Fantasia (Gounod) (E10579); "Wedding of the Winds" (Hall) (A4189).  
 Blackstone Trio, "Silver Threads Among the Gold" (Danks).  
 Berlin State Opera Orchestra, "Italiana in Algeria" (Rossini).  
 Cello—Orabio de Castro, "Nocturne in E Flat" (Chopin) (E10581).  
 Grand Symphony Orchestra, "Fra Diavolo" (Auber) (A4022).  
 Blackstone Trio, "Love's Old Sweet Song" (Molloy) (Bruns. 4933).  
 Grand Symphony Orchestra, "Tales of Hoffman—Entr'acte and Minnet."  
 Edith Lorand Orchestra, "Song of Autumn" (Waldteufel) (E10570).
- 7.0 : News session.
- 7.30: Dialogue—Messrs. E. E. Wiltshire and F. C. Fairclough, "The Story of the Garden."
- 8.0 : Chimes. Band Programme by the Woolston Brass Band (Conductor, R. J. Estall), and assisting Artists. March—Band, "Song of the Guards" (Ord Hume); Selection, "Martha" (Flotow).
- 8.13: Baritone—Mr. Percy A. Caithness, "The Dover Patrol" (Carrington).
- 8.16: Orchestral—Debroy Somers Band, "Barn Dance" (Everett).
- 8.19: Mezzo-soprano—Miss Sylvia Marshall, (a) "Love Sends a Little Gift of Roses" (Openshaw); (b) "All Roads Lead Home" (Tate).
- 8.24: Euphonium solo—Soloist and Band, "Star of Eve" (Wagner).
- 8.30: Humour—Mr. J. Darragh, "A Tale of a Dog."
- 8.35: Balalaika Orchestra, Gorskaja, (a) "Zwei Gitarren"; (b) "Habe Miledit Mit Mir" (Tradl (Polydor 20589)).
- 8.41: Contralto—Miss Frances Butterworth, (a) "A Song of Waiting" (Wright); (b) "Winds in the Trees" (Goring Thomas).
- 8.46: Characteristic dance—Band, "The Squirrel Dance" (Ketelby).
- 8.53: Tenor—Mr. H. J. Francis, "Lord Randal" (Scott).
- 8.57: Male chorus—The Border Singers, "Sir Harry Lauder Songs."
- 9.5 : Weather forecast and station notices.
- 9.7 : Patrol—Band, "Turkish Patrol" (Ord Hume).
- 9.12: Baritone—Mr. Percy A. Caithness, (a) "The Two Grenadiers" (Schumann); (b) "The Last Milestone" (Pontet).
- 9.18: Trombone solo—Bandsman E. Williams, "Quicksilver" (Sutton).
- 9.24: Mezzo-soprano—Miss Sylvia Marshall, (a) "The Little Green Balcony" (Coates); (b) "So Little Time" (Lohr).
- 9.29: Orchestral—Debroy Somers Band, "Polka" (Col. DO284).
- 9.32: Humour—Mr. J. Darragh, "Cohen Rings His Solicitor."
- 9.38: Overture—Band, "Raymond" (Thomas).
- 9.46: Contralto—Miss Frances Butterworth, (a) "Persian Love Song" (Rubenstein); (b) "If My Songs Were Only Wined" (Hahn).
- 9.51: Steel guitars—Palakiko and Paahui, (a) "O Sole Mio"; (b) "Maria Mari" (Di Capua) (Brunswick 6039).
- 9.57: Tenor—Mr. H. J. Francis, (a) "To a Rose" (MacFadyen); (b) "Thy Hand Beloved" (Manney).
- 10.1 : March—Band, "Australasian" (Rimmer).
- 10.5 : God save the King.

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

- 3.0 : Selected recordings.
- 5.0 : Children's hour, conducted by "Big Brother Bill."
- 6.0 : Dinner music session—  
 Dajos Bela Orchestra, "Gipsy Love" (Lehar) (Parlo. A4080).  
 Edith Lorand Orchestra, "La Boheme" (Puccini) (Parlo. E10558).  
 New Light Symphony Orchestra, "The Waltzing Doll" (Poldini).  
 Dajos Bela Orchestra, "Mon Reve" (Waldteufel) (Parlo. E10560).  
 Organ duet—Mr. and Mrs. Jesse Crawford, "The Moonlight Reminds Me of You" (Kahn) (H.M.V. EA763).  
 Dajos Bela Orchestra, "I Love You" (Waldteufel) (Parlo. E10560).  
 National Symphony Orchestra, "The Barber of Seville" (Rossini).  
 Dajos Bela Orchestra, "You and You" (Strauss) (Parlo. A4080).  
 Mandoline Concert Society, "Echoes of the Volga" (Ritter) (H.M.V.).  
 New Light Symphony Orchestra, "At Dawning" (Cadman) (H.M.V.).  
 Band of H.M. Coldstream Guards, "Les Cloches de Corneville" Selection (Planquette) (H.M.V. C1880).  
 Dajos Bela Orchestra, "Vienna Bon Bons" (Strauss) (Parlo. 4056).
- 7.0 : News session.
- 8.0 : Chimes. Specially recorded International Programme.  
 Dr. Ormaudy and His Salon Orchestra.  
 International Singers Male Quartet.  
 Ambassadors of Melodyland.  
 Abroad with the Lockharts.  
 Weather report.  
 International Talk—Dr. Merrington, Master of Knox College, "The International Mind."



Hy-Wide and Handsome.  
Nat Brusiloff and His Lido Venice Orchestra.  
God save the King.

## 2YB, NEW PLYMOUTH (1230 KILOCYCLES)—MONDAY, MAY 25.

8.0 to 10.0 p.m.: Concert programme.

## Tuesday, May 26

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

- 3.0 : Selected recordings.  
3.15: Talk—Mrs. Leslie Crane, "Beauty of Mind and Body in Relation to Diet."  
5.0 : Children's session, conducted by "Uncle Dave."  
6.0 : Dinner music session (Polydor)—  
Symphony Orchestra, "Die Fledermaus" (Strauss) (Polydor 27178).  
Paul Godwin Orchestra, "Japanese Cherry Blossom Festival" (Yoshitomo) (19747); "Egyptian March" (Strauss) (19647); "The Circus Princess" (Kalman) (19640).  
Ilja Livschakoff and His Orchestra, "Estrellita" (Ponce) (23047).  
Paul Godwin Orchestra, "Japanese Lantern Dance" (Yoshitomo).  
State Opera Orchestra, Berlin-Charlottenburg, "La Gazza Ladra."  
Paul Godwin Orchestra, "Spring's Awakening" (Bach) (19647).  
Ilja Livschakoff and His Orchestra, "Pas des Echarpes" (Chaminade).  
Paul Godwin and His Orchestra, "Third Waltz Medley" (Robrecht).  
7.0 : News and market reports.  
8.0 : Specially recorded International Programme.  
Dr. Ormandy and His Salon Orchestra.  
International Singers (male quartet).  
Ambassadors of Melodyland.  
Abroad with the Lockharts.  
Weather report.  
International talk by Sir James Parr, ex-High Commissioner for New Zealand, "Impressions of the League of Nations."  
Hy-Wide and Handsome.  
Nat Brusiloff and His Lido Venice Orchestra.  
God save the King.

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

- 10.0 a.m.: Chimes.  
11.0 : Miscellaneous.  
12.0 noon: Lunch hour music.  
2.0 : Educational session.  
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 (Columbia)—  
Band of H.M. Grenadier Guards, "Sir Harry Lauder Medley" (Col.)  
J. H. Squire's Celeste Octet, "Second Movement from Symphonie Pathétique" (Tchaikowsky, arr. Robertson) (02937).  
Modern Dance Players, "Amoretten Tanze" (Gungl) (Regal G20588).  
Court Symphony Orchestra, "The Windmill Man" (Col. 02909).  
Organ—Stanley MacDonald, "The Rosary" (Nevin) (Regal G20391).  
Symphony Orchestra, "When the Lemons Bloom" (Strauss) (02529).  
Plaza Theatre Orchestra, "The Three Bears" (Coates) (02744).  
Symphony Orchestra, "Doctrinen" (Strauss) (02529).  
Continental Novelty Orchestra, "Las Lagarteranas" (Guerrero and Foulkes) (G20552).  
New York Symphony Orchestra, "Entrance of the Little Fauns."  
B.B.C. Wireless Military Band, "Le Reve Passe" (Krier and Helmer).  
J. H. Squire's Celeste Octet, "Scene de Ballet" (De Berriot, arr. Sear).  
Organ—Stanley MacDonald, "La Rosita" (Dupont) (Regal G20391).  
Continental Novelty Orchestra, "Los Claveles de Sevilla" (Guerrero).  
7.0 : News session, market reports and sports results.  
7.40: Lecturette by a Representative of the Agricultural Department, "For the Man on the Land."  
8.0 : Chimes. Overture—Salon Orchestra (Conductor, Mr. M. T. Dixon), "Crown Diamonds" (Auber).  
8.10: Soprano with violin obbligato—Miss Gwladys Edwardes, (a) "The Red Sarafan" (Varlimoff), (b) "Sacrament" (McDermid), (c) "Because of You" (Liddle).  
8.18: Accordion—Medard Ferrero, (a) "A Rare Bird" (Damarie), (b) "Torrent" (Capatani) (Polydor 23301).  
8.24: Tenor with violin obbligato—Mr. Noho Toki, (a) "Maire, My Girl" (Aitken), (b) "Serenade" (Romberg).  
8.30: Novelty duo—Dorrie and Laurie, (a) "Croon a Little Lullaby" (Meyer), (b) "The Good Little Boy and the Bad Little Boy."  
8.37: Saxophone with orchestra—Mr. W. J. Haines, "Love's Old Sweet Song" (Molloy).  
Novelty—Salon Orchestra, "Coquettish Mood" (Barratt).  
8.45: Soprano—Margherita Zelanda, (a) "In Quelle Trine Morbide" (Puccini), (b) "I Wish I Were a Tiny Bird" (Lohr), (c) "Killarney."  
8.53: Novelty—Salon Orchestra, Russian folk song, "Black Eyes" (Horlick).  
Violin with orchestra—Mr. W. Haydock and Salon Orchestra, "Chanson Meditation" (Cottenet).  
9.3 : Weather report and station notices.

- 9.5 : Soprano with orchestra—Miss Gwladys Edwardes, (a) "At Nightfall" (Woodforde-Finden), (b) "Eyes That Used to Gaze in Mine."  
9.11: Novelty trio—Grinzing Schrammel Trio, (a) "Jolly Alpine Larks" (Dietrich), (b) "Gay and Jolly" (Dietrich) (Polydor 23477).  
9.17: Tenor with orchestra—Mr. Noho Toki, (a) "Home, Little Maori, Home" (Hill), (b) "Pokarekare" (arr. Archie Don).  
9.23: Novelty duo—Dorrie and Laurie, (a) "Where the Golden Daffodils Grow" (Archer), (b) "Fiction Versus Fact" (Grey).  
9.31: Selection—Salon Orchestra, "Bric a Brac" (Monckton).  
9.41: Soprano—Margherita Zelanda, (a) "Nel Lasciar la Normandia" (Meyerbeer), (b) "The Piper of Love" (Crew), (c) "Parla."  
9.48: Instrumental—Salon Orchestra, "Latest Dance Novelties."  
10.0 : God save the King.

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

SILENT DAY.

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

- 3.0 : Selected recordings.  
5.0 : Children's hour, conducted by "Big Brother Bill."  
6.0 : Dinner music session (H.M.V.)—  
Selection—Kaufman's Orchestra, "The Gipsy Baron" (Strauss).  
Waltz—La Vittoria Orchestra, "Wedding of the Winds" (Hall).  
Polydor String Orchestra, "Italiana in Algeria" (Rossini) (Polydor).  
Piccadilly Orchestra, "If Only I Had You" (Davies) (B2713); "Lolita" (Ferrete) (B2718); "Charmaine" (Rapee) (H.M.V. 2528).  
Philharmonic Orchestra, Berlin, "Songs of Love" Waltz (Strauss).  
Selection—New Mayfair Orchestra, "This Year of Grace" (Coward).  
Waring's Orchestra, "Ah! Sweet Mystery of Life" (Herbert) (BB37).  
Polydor String Orchestra, "Les Dragons des Villars" (Maillart).  
Victor Concert Orchestra, "Minuet in G" (Paderewski) (H.M.V. EA240); "Amaryllis" (Thys).  
Piccadilly Orchestra, "Bird Songs at Eventide" (Coates) (B2528).  
Waltz—International Concert Orchestra, "Blue Danube" (Strauss).  
7.0 : News session.  
7.40: Talk—Mr. A. Salmond, W.E.A., "Modern Methods in Education."  
8.0 : Chimes. Kaikora Band (Conductor, Mr. Thos. J. Kirk-Burnnand) and 4YA artists, "Around Great Britain and Ireland in Two Hours—  
from Cork to Dublin and Belfast to London." Concert march—  
Band, "Knights of the Air" (Kirk-Burnnand).  
8.4 : Mixed quartet—The Harmonists, "Love's Young Dream" (Moore).  
Contralto—Miss Margaret S. Green, "Killarney" (traditional).  
8.11: Selection—Band, "Ireland" (Godfrey-Douglas).  
8.24: Irish comedy sketches—Jimmy O'Dea and Harry O'Donovan, "The Waiter" (O'Donovan); "Sixpence Each Way" (Parlophone).  
8.30: Tenor—Mr. H. A. Johnston, (a) "The Harp That Once Through Tara's Halls" (traditional), (b) "Believe Me, If All Those Endearing Young Charms" (Moore).  
8.33: Mixed quartet—The Harmonists, "The Dear Little Shamrock."  
8.37: Selection—Debroy Somers' Band, "Scottish Medley" (Somers) (Col.).  
8.41: Soprano—Miss Mae Matheson, "Loch Lomond" (traditional).  
Quartet—The Harmonists, "Hame, Hame, Hame" (traditional).  
8.46: Selection—Band, "Scotland" (Godfrey-Douglas).  
8.57: Baritone—Mr. Stuart Falconer, "Border Ballad" (Cowen).  
9.0 : Weather report and station notices.  
9.2 : Trio—Messrs. A. H. Pettitt, K. Hunter, and T. Law, (a) "Scottish Patrol" (arr. Williams), (b) "Thistle-down" (Kennessey).  
9.16: Scottish humour—Mr. B. Brown, (a) "Bella, the Belle of Dunoon," (b) "Saturday Night," (c) "She's Ma Rosie" (Lauder).  
9.26: Quartet—The Harmonists, "Britons, Strike Home" (Purcell).  
9.29: Selection—Band, "England" (Godfrey-Douglas).  
9.41: Soprano—Miss Mae Matheson, "Cherry Ripe" (traditional).  
9.44: Trio—Messrs. A. H. Pettitt, K. Hunter, and T. Law, "The Rose."  
9.54: Mixed quartets—The Harmonists, (a) "Now By Day's Retiring Lamp" (Bishop), (b) "Drink to Me Only With Thine Eyes."  
9.59: March—Band, "Colonel Bogey" (Alford).  
10.3 : God save the King.

## Wednesday, May 27

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

- 12.30: Relay of Community Singing from the Auckland Town Hall.  
3.0 : Selected recordings.  
3.15: Literary selection.  
5.0 : Children's session, conducted by "Uncle Reg."  
6.0 : Dinner music session (Columbia)—  
Royal Italian Band, "Marcia Reale" (Gabetti) (Col. 01182).  
Court Symphony Orchestra, "In Venice" (Sellars) (896).  
Organ—Stanley MacDonald, "Was It a Dream?" (Coslow).  
Royal Italian Band, "Garibaldi's Hymn" (Olivieri) (Col. 01182).  
Columbia Symphony Orchestra, "Idilio" (Lack) (01076).  
Ketelbey's Concert Orchestra, "Sanctuary of the Heart" (Ketelbey).  
Cello—W. H. Squire, "Melody in F" (Popper) (04178).  
New Queen's Hall Orchestra, (a) "Un Sonnet D'Amour"; (b) "La Tarantelle" (from "Petite Suite de Concert" (Coleridge-Taylor).  
W. H. Squire's Celeste Octet, "Mignon," (1) "Introduction and Romance"; (2) "Polonaise" (Thomas) (02749).



'Cello—W. H. Squire, "Silver Threads Among the Gold."  
Columbia Symphony Orchestra, "Spring Song" (Mendelssohn) (01076).  
H.M. Grenadier Guards, "Turkish Patrol" (Michaelis) (4111).  
Organ—Stanley MacDonald, "Nicolette" (Batten) (Regal G20401).  
Jacque Jacobs Ensemble, "Weiner Blut" (Strauss) (Col. 02556).  
H.M. Grenadier Guards Band, "Smithy in the Woods" (Michaelis).

7.0 : News and market reports.

7.40 : Talk—Mr. H. H. Driver, "Book Review."

8.0 : Chimes. Studio Concert by the Auckland Salvation Army Congress Hall Band, assisted by IYA Artists. (The results of the Hauraki By-election will be broadcast during the performance of this programme). March—Band, "Maple Leaf" (Coles); Selection, "Over Jordan" (Coles).

8.13 : Soprano—Miss Gwladys Payne, "The Carnival" (Molloy).

Vocal—Miss Gwladys Payne and Mr. J. Ainsley Daglish, "Whisper and I Shall Hear" (Piccolomini).

Tenor—Mr. J. Ainsley Daglish, "Waiata Poi" (Hill).

8.25 : Selection—Band, "Rejoice" (Marshall).

8.32 : Humour—Mr. Trevor Binns, "How We Saved the Barge" (Clarke).

8.39 : Baritone—Mr. D. Edgar Thomas, (a) "Pinacel Anrhydded" (Welsh trad'l); (b) "A Sail in a Piping Breeze" (Petrie).

8.45 : Selection—Band, (a) "In Immanuel's Praise" (Coles); (b) "Adoration" (Ball).

9.0 : Evening weather forecast and announcements.

9.2 : Vocal—Miss Gwladys Payne and Mr. J. Ainsley Daglish, "A Night in Venice" (Lucantoni).

9.6 : Meditation—Band, "Dennis" (Dockerill); Hymns, "Colne"; "Nearer My God to Thee."

9.17 : Humour—Mr. Trevor Binns, "Memories of Waterloo" (Clarke).

9.21 : Baritone—Mr. D. Edgar Thomas, (a) "Invictus" (Huhn); (b) "For You Alone" (Geehl).

9.25 : March—Band, "Quest" (Scotney).

9.30 : Gramophone Lecture-recital—Miss Molly Atkinson, "Schubert—Master of Melody."

10.0 : God save the King.

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

10.0 : Chimes. Selected recordings.

11.0 : Talk—Miss Flora Cormack, "Hollywood at Home."

11.30 : Miss Mann, "Fashions."

12.0 : Lunch hour music.

2.0 : Miscellaneous.

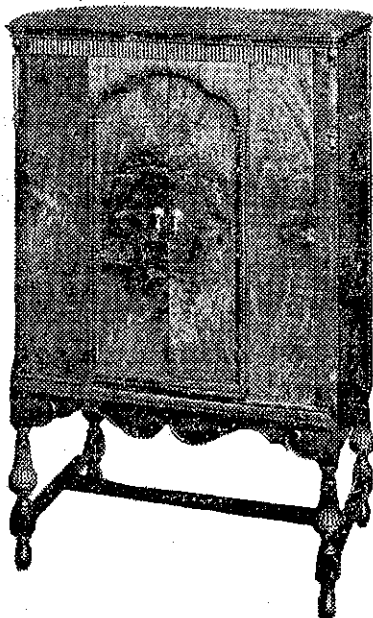
2.0 : Selected gramophone recordings.

# GULBRANSEN

**Famous in the Music World for  
24 Years**

The Gulbransen Radio is made by the manufacturer of Gulbransen pianos. This organisation for a quarter of a century specialised in the manufacture of pianos and cabinets and is to-day conceded to be the world's largest producer of quality pianos. Naturally, with its excellent manufacturing facilities and competent engineering staff, the Gulbransen Company is ideally situated to make fine radio receivers—fine, not only in tone and performance, but also in the design and craftsmanship of their cabinets. There is a Gulbransen Radio for every home and every purpose. The Combination Radio and Gramophone Model is fitted with the Short-wave unit which enables owners to reach all parts of the world. Other models: The Champion Highboy, Champion Lowboy, and the Minuet—a large radio receiver in a compact form.

Ask your local Gulbransen dealer to demonstrate.



**Ne Zealand H. W. CLARKE Ltd.**  
Distributors: WAKEFIELD STREET, WELLINGTON.

3.30 and 4.30 : Sporting results to hand.

5.0 : Children's session, conducted by "Aunt Daisy."

6.0 : Dinner music session (Polydor)—

Paul Godwin Dance Orchestra, "Medley of Popular Student Songs."

Paul Godwin Quintet with Harp, "Extase—Reverie" (Ganne) (19928).

Paul Godwin's Orchestra, "Poranek" Waltz Intermezzo (Lindsay).

Organ—Leo Stin, "Chanson Hindoue" (Rimsky-Korsakov) (23165).

Polydor Orchestra, "Concou" Imitative Waltz (Jonasson) (23563).

The Paul Godwin Orchestra, "In the Rosary" (Bialezki) (21005); "Tin

Soldier's Parade" (Leon Jessel) (19659).

Berlin State Opera House Orchestra, "Introductions, Act 1, 2 and 3"

(from "Carmen") (Bizet) (27190).

Paul Godwin Quintet with Harp, (a) "Popular Song"; (b) "Tale."

Paul Godwin's Orchestra, "La Serenade" Waltz (Metra) (22372).

Organ—Leo Stin, "Werther" (Clair de Lune) (Massenet) (21365).

The Paul Godwin Orchestra, "Fairy Doll Waltz" (Bayer) (21005).

The Paul Godwin Dance Orchestra, "Siamese Parade" Fantasy.

Polydor Orchestra, "Valse Poudree" (Poppy) (23563).

7.0 : News session, market reports and sports results.

7.40 : Lecture—Mrs. Albert Russell, "The Art of Successful Living."

8.0 : Chimes.

Specially Recorded International Programme.

Golden Hour of Music.

Adam and Eve.

Ohman and Arden (two pianos).

Weather report.

International talk—Dr. Guy H. Scholefield, O.B.E.

High Spots.

Nat Brusloff and His Lido Venice Orchestra.

God save the King.

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

3.0 : Gramophone recital.

4.25 : Sports results.

5.0 : Children's hour.

6.0 : Dinner music session (Parlophone)—

Dajos Bela String Orchestra, "Andrea Chenier" Fantasia (Giordano)

(Parlophone E10521); "Morgen Blatter" (Morning Leaves).

Berlin State Opera House Orchestra, "Iris" Dances (Mascagni)

(AR1012); "Casse Noisette" Suite Miniature Overture.

Berlin State Opera House Orchestra with Karol Szreter, pianist,

"Hungarian Rhapsody No. 2" ((Liszt), (A4109); "Lohengrin,"

Introduction to Act 3 (Wagner) (A4030).

Edith Lorand Orchestra, "Vienna" Waltz (Drdla) (E10531).

Berlin State Opera House Orchestra, "Die Rantzau" Selection.

Edith Lorand Orchestra, "Prelude in C Sharp Minor" (Rachmaninoff)

Opera Comique Orchestra, "Scenes Pittoresques"—March and Fete

Boheme (Massenet) (A4057).

Berlin State Opera House Orchestra, "Casse Noisette" Suite—Dance

of the Sugar Plum Fairy (Tchaikowsky) (E10517).

Edith Lorand Orchestra, "Merry Vienna" Waltz (Ziehrer) (E10531).

7.0 : News session.

7.30 : Addington stock market reports.

8.0 : Chimes. Overture—Edith Lorand Orchestra, "Tales from the Vienna

Woods" (Strauss) (Parlophone E10624).

8.8 : Tenor—Mr. David McGill, (a) "If You Would Love Me" (McDermid),

(b) "Land of Long Ago" (Ray).

8.14 : 'Cello—Gaspar Cassado, "Arlequin" (Popper) (Polydor 95028).

8.18 : Instrumental—Studio Octet (Conductor Harold Beck): March, "Flag

of Victory" (Blon); overture, "Four Ages of Man" (Lachner).

8.29 : Sketch—Mr. and Mrs. J. W. Bailey, "Powder, Rouge, and Lipstick."

8.39 : Instrumental—Studio Octet, "Bedouin Love Song" (Pinsuti).

Violin and orchestra—Professor R. C. Zimmermann and Studio Octet,

(a) "Viennese Melody" (Gaerdner-Kreisler), (b) "Mazurka Ober-

tass" (Vienlawsky).

8.49 : Mezzo-contralto—Miss Myrtle Wright, (a) "Morning" (Speaks), (b)

"By Dimpled Brook" (Arne), (c) "The Woodpecker" (Nevin).

8.54 : Grand Russian Balalaika Orchestra, (a) "Snowflake" (Juggler's

Song), (b) "A Song of India" (Rimsky-Korsakov) (Polydor 22841)

9.0 : Weather forecast and station notices.

9.2 : Instrumental—Studio Octet, light selection, "Second Sullivan Selec-

tion" (arr. Godfrey).

9.14 : Tenor—Mr. David McGill, (a) "That's How the World Was Made"

(Nicholls), (b) "The Star of Bethlehem" (Adams).

9.21 : 'Cello—Gaspar Cassado, "Papillon" (Faure) (Polydor 95028).

9.25 : Sketch—Mr. and Mrs. J. W. Bailey, "Rolls and Salt" (N. Boyd).

9.36 : Violin and orchestra—Professor R. C. Zimmermann and Studio Octet,

"Air on the G String" (Bach).

9.46 : Mezzo-contralto—Miss Myrtle Wright, (a) "I Wonder If Ever the

Roses" (Slater), (b) "Little Lady of the Moon" (Coates).

9.51 : Male choir—Berger Liedertafel, (a) "Aufblick," (b) "Unsere Berge."

9.57 : Instrumental—Studio Octet, "Ballet Suite la Source" (Delibes), (a)

"Scarf Dance," (b) "Love Scene," (c) "Dance Circassienne."

10.6 : God save the King.

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

3.0 : Selected recordings.

3.15 : Talk—"Use More Cereals," prepared by the Home Science Extension Service of Otago University.

5.0 : Children's hour, conducted by "Big Brother Bill."

- 6.0 :** Dinner music session (H.M.V.)—  
Marek Weber and His Orchestra, "Cavalleria Rusticana" Selection.  
Vienna Philharmonic Orchestra, "Hungarian Dance No. 3" (Brahms).  
Trio—Fritz and Hugo Kreisler and Michael Rauchs, "Marche Miniature Viennois" (Kreisler) (DA961).  
Berlin Philharmonic Orchestra, "Tannhauser" March (Wagner).  
De Groot and His Orchestra, "I Love You" (Grieg) (B3184).  
Berlin Philharmonic Orchestra, "Hungarian March—The Damnation of Faust" (Berlioz) (D1498).  
Trio—Fritz and Hugo Kreisler and Michael Rauchs, "Syncopation" (Kreisler) (DA961).  
Berlin State Orchestra, "Oberon" Overture (Weber) (D1316).  
Vienna Philharmonic Orchestra, "Hungarian Dance No. 1" (Brahms).  
Band of H.M. Coldstream Guards, "Suite Francaise" (B2751).  
De Groot and His Orchestra, "Romance" (Rubinstein) (B3184).  
Marek Weber and His Orchestra, "Lehariana" (Geiger) (C1679).
- 7.0 :** News session.
- 7.15 :** Talk—Mr. C. V. Dayas, "Veterinary Matters."
- 8.0 :** Chimes. Relay of Dunedin Returned Soldiers' Choir concert, under the conductorship of Mr. John T. Leech, from the Concert Chamber of the Dunedin Town Hall. Accompanist, Mr. Chas. A. Martin. Mus. Bac, L.A.B.  
Choral works include: "Songs of the Fleet" (Stanford): (1) "Sailing at Dawn," (2) "The Song of the Sou'-Wester," (3) "The Little Admiral," (4) "Farewell."  
Choir soloists: Messrs. M. O'Sullivan and James McNaughton: "Hunting Song" (Bantock); "On the March" (Beckor); "Sweet and Low" (Barnby); "Hallelujah, Power and Glory" (from "Mount of Olives") (Beethoven); "The Minnesingers" (Schumann); "Funiculi Funicula" (Denza); "Laughing Chorus."  
Soloists for concert: Mr. Stan. Jeffs, tenor; Mr. Tom Harvey, baritone; Miss Agnes Guy, mezzo-soprano; Mr. Wm. Smith, solo horn; Miss Noni Davidson and Mr. John T. Leech, duet, with violin obbligato by Miss Eva Judd; quartet, Messrs. A. Chisholm, H. White, O. Holden, and J. Adair.
- 10.0 :** Dance music session—  
Foxtrots—Arcadians Dance Orchestra, "Dreamy Honolulu" (Gumble).  
New Mayfair Dance Orchestra, "The Doll's House" (Butler).  
Arcadians Dance Orchestra, "San Sebastian" (Levy).
- 10.9 :** Waltz—Alfredo's Band, "I Love You, I Hate You" (Edison Bell 1363).  
Foxtrots—George Olsen and His Music, "The Song of the Dawn."  
The Blue Jays, "Sing, You Sinners" (Coslow) (Edison Bell).
- 10.18 :** Vocal novelty—Walter Miller, "The Clatter of the Clogs" (Flynn).
- 10.21 :** Foxtrots—Harry Hudson's Melody Men, "The Woman in the Shoe."  
Alfredo's Band, "Watching My Dreams Go By" (Dubin).  
Harry Hudson's Melody Men, "The Harlequinade."
- 10.30 :** Waltzes—New Mayfair Dance Orchestra, "Eleanor" (Hanley).  
George Olsen and His Music, "It Happened in Monterey" (Rose).  
Foxtrots—The Blue Jays, "Why?" (Coslow) (Edison Bell 1387).  
Alfredo and His Band, "Puttin' on the Ritz" (Berlin).
- 10.42 :** Vocal novelty—Walter Miller, "Harmonica Harry" (Phil Baxter).  
Tango—Radio Melody Boys, "Here in My Heart" (Fields).
- 10.48 :** Foxtrots—Leo Reisman and His Orchestra, "Happy Feet" (Yellen).  
Radio Melody Boys, "Exactly Like You" (Fields).  
Leo Reisman and His Orchestra, "I Like to Do Things for You."  
Tom Gerun and His Orchestra, "Dream Lover" (Grey) (Brunswick).
- 11.0 :** God save the King.
- 2YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, MAY 28.**
- 10.0 a.m. :** Chimes. Selected recordings.
- 11.0 :** Talk—Miss Christian, "To-day's Dinner."
- 12.0 :** Lunch hour music.
- 2.0 :** Miscellaneous.
- 3.0 :** Selected gramophone recordings.
- 3.15 :** Lecture—Miss I. F. Meadows, "Good Food Habits for Children," talk prepared by the Home Science Extension Department of the Otago University.
- 3.30 and 4.30 :** Sporting results to hand.
- 5.0 :** Children's session, conducted by "Uncle George" and "Big Brother Jack."
- 6.0 :** Dinner music session (Polydor)—  
The Paul Godwin Orchestra, "Potpourri of German Folk Songs" (arr. Hannemann) (Polydor 19424); "The Girl of the Black Forest."  
Mandoline and Lute Orchestra, "Minuet in G" (Beethoven) (21622).  
Paul Godwin Orchestra, "Suite Orientale" (Popy): (1) Les Bajaderes, (2) Au Bord du Gange, (3) Les Almees, (4) Patrouille (19465-6).  
The State Opera Orchestra, Berlin, "La Muette de Portici" (Auber).  
Mandoline and Lute Orchestra, "Norwegian Dance" (Grieg) (21622).  
The Opera Orchestra, Berlin, "Hungarian March in C Minor" (27213).  
Paul Godwin Dance Orchestra, "From Ear to Ear" (Morena) (19623).
- 7.0 :** News session, market reports and sports results.
- 7.40 :** Lecture—Miss Inez Connop, "Dancing in Relation to Health."
- 8.0 :** Chimes. Relay of Concert by the Wanganui Garrison Band (under direction of Mr. J. M. Watson) and Wanganui Artists.  
Overture—Band, "Solennelle" (Tchaikowsky).  
Bass—Mr. Syd. Kendall, "I Am Fate" (Hamblen).  
Song—Miss T. Pepper, "Villanelle" (Dellaqua).  
Euphonium solo (with variations)—Soloist Owen Williams, Welsh melody, "Jenny Jones" (arr. J. M. Watson).  
Musical Monologue—Mr. Bob Howell, "Dr. McGregor and His Black Bag."  
Suite—Band, "The Severn" (Sir Edward Elgar).  
Song—Master Keith Lund, (aged 12), "The Swallows" (Cowan).  
Selection—Band, "Tolanthe" (Sir Arthur Sullivan).  
Contralto—Mrs. Stella Wills, "Where'er a Snowflake Leaves the Sky" (Lehmann).  
Instrumental—The Bridges Trio, "In a Persian Market" (Ketelbey).  
Selection—Band, "The Vagabond King" (Friml).  
God save the King.
- 2YB, NEW PLYMOUTH (1230 KILOCYCLES)—WEDNESDAY, MAY 27.**
- 6.30 to 7.30 p.m. :** Children's session.
- 7.30 to 8 p.m. :** Sports talks.

## Thursday, May 28

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

- 3.0 :** Selected recordings.
- 3.15 :** Talk—"Good Food Habits for Children," prepared by the Home Science Extension Service of Otago University.
- 5.0 :** Children's session, conducted by "Peter Pan."
- 6.0 :** Dinner music session (H.M.V.)—  
International Novelty Orchestra, "Emperor" (Strauss) (Zono. EF22).  
Organ—Sydney Gustard, "Poupee Valsante" (Poldini) (B3318).  
International Novelty Orchestra, "Gold and Silver" (Franz Lehar).  
Paul Godwin Orchestra, "The Modest Suzanne" (Gilbert) (Polydor).  
The Palladium Orchestra, "The Grasshoppers' Dance" (Bucalossi).  
Band of H.M. Coldstream Guards, "Morning, Noon and Night."  
The Rhythmic Eight, "Neapolitan Nights" (Zamecnik) (Zono. EF106).  
The Palladium Orchestra, "La Siesta" (Barcarolle) (Norton).  
Zonophone Salon Orchestra, "Love's Garden of Roses" (Haydn-Wood).  
Organ—Sydney Gustard, "Un Peu d'Amour" (Silesu) (B3318).  
Zonophone Salon Orchestra, "Mighty Lak a Rose" (Nevin).  
Marek Weber and His Orchestra, "Faust" Selection (Gounod) (C1511).  
Band of H.M. Coldstream Guards, "Pique Dame" Overture (Suppe).
- 7.0 :** News and market reports.
- 7.40 :** Talk under the auspices of the New Zealand Manufacturers' Association, "Bedsteads and Bedding."
- 3YA, CHRISTCHURCH (980 KILOCYCLES)—THURSDAY, MAY 28.**
- 3.0 :** Gramophone recital.
- 3.15 :** Home science—"Good Food Habits for Children," talk prepared by the Home Science Extension Service of Otago University.
- 4.25 :** Sports results.
- 5.0 :** Children's hour.
- 6.0 :** Dinner music session (Columbia)—  
Great Symphony Orchestra, "Vienna Operetta Revue" (Robrecht).  
Jacques Jacobs Ensemble, "Wiener Blut" (Strauss) (Col. 02556).  
Band of H.M. Grenadier Guards, "La Benediction des Poignards."  
Jacques Jacobs Ensemble, "Espana Waltz" (Waldteufel) (02560).  
Plaza Theatre Orchestra, "My Lady Dainty" (Hesse) (01438).  
Jacques Jacobs Ensemble, "Sobre las Olas" (Rosas) (02556).  
Symphony Orchestra, "Countess Mariza" Medley (Kalman) (Polydor).  
J. H. Squire's Celeste Octet, "Valse Bleue" (Margis) (Columbia 3643).  
B.B.C. Wireless Symphony Orchestra, "Il Trovatore" Selection.  
J. H. Squire's Celeste Octet, "Ameuruse Valse" (Verger) (Col. 3643).

Band of H.M. Grenadier Guards, "Lo! Here the Gentle Lark" (Bishop)  
Plaza Theatre Orchestra, "The Busy Bee" (Bendix) (01438).

7.0 : News session.

7.30 : Dialogue—Messrs. B. G. Goodwin and J. D. Carolin, Department of Agriculture, "Orchard Work."

8.0 : Chimes. Relay from the Civic Theatre of Prize-winners' Demonstration Concert Programme of the Twenty-first Annual Festival of the Christchurch Competitions Society (Incorporated).

10.0 : Dance music session (H.M.V.)—  
Foxtrots—Victor Arden, Phil Ohman, and Their Orchestra, "How Am I to Know?" (Parker) (H.M.V. EA700).

Arcadians Dance Orchestra, "Pepita" (Mascheroni) (Zono.)  
Bernie Cummins and His New Yorker Hotel Orchestra, "Livin' in the Sunlight—Lovin' in the Moonlight."

The Rhythmic Eight, "Figaro" (Mitchell) (Zono. EE211).

10.12 : Waltz—Jean Goldkette and His Orchestra, "Can You Blame Me?"  
Foxtrots—Henry Busse and His Orchestra, "I Came to you" (Conrad).  
Gus Arnheim and His Orchestra, "I'm Feathering a Nest."

10.21 : Vocal—Olga Albani, "It's You I Love" (Davis) (EA782).

10.24 : Foxtrots—New Mayfair Dance Orchestra, "There's Room in My Heart" (Gibbons) (EA698); "Cuban Nights" (Salvata) (B5808); "I'll Be Getting Along" (Gibbons) (EA693).

Waltz—Bob Haring and His Orchestra, "By and By, Sweetheart."

10.36 : Foxtrots—Nat Shilkret and His Orchestra, "Congratulations."

New Mayfair Dance Orchestra, "Cuckoo in the Clock."

George Olsen and His Music, "The Moon is Low" (Frederick).

10.45 : Vocal—Grace Hayes, "On the Sunny Side of the Street" (Fields).

10.48 : Foxtrots—The High-Fatters, "You Brought a New Kind of Love to Me" (Kahal) (EA761).

Nat Shilkret and His Orchestra, "Into My Heart" (Turk).

Herman Klenin and His Orchestra, "I'm Doing What I'm Doing for Love" (Yellen) (EA745).

Nat Shilkret and His Orchestra, "Dark Night" (Grey)

11.0 : God save the King.

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

SILENT DAY.

## Friday, May 29

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

3.0 : Selected recordings.

3.15 : Literary selection.

5.0 : Children's session, conducted by "Nod" and "Aunt Jean."

6.0 : Dinner music session (Columbia)—

Charles Ancliffe and His Orchestra, "Ancliffe Waltzes" (Ancliffe).

J. H. Squire's Celeste Octet, "Twilight on the Waters" (Squire).

Gil Dech Ensemble, "Italian Nights" (Roberts) (01923).

Regal Cinema Orchestra, "Sally" Selection (Burke, Kern).

Organ—Quentin Maclean, "Lily of Laguna" (Stuart) (DO24).

J. H. Squire's Celeste Octet, "Minuet Sicilienne" (Squire and Hart).

Band of H.M. Grenadier Guards, "Country Dance" (German) (01329).

Debroy Somers Band, "Mister Cinders" Selection (Ellis and Myers).

J. H. Squire's Celeste Octet, "The Piccaninnies' Picnic" (Squire).

Organ—Quentin Maclean, "Little Dolly Daydream" (Stuart) (DO24).

Albert W. Ketelbey's Concert Orchestra, "The Clock and the Dresden Figures" (Ketelbey) (DOX21).

J. H. Squire's Celeste Octet, "Minuet in D" (Mozart, arr. Willoughby).

Albert W. Ketelbey's Concert Orchestra, "Wedgwood Blue."

Gil Dech Ensemble, "Valse Parisienne" (Roberts, arr. Barry) (01923).

7.0 : News and market reports.

8.0 : Chimes. Overture—New Mayfair Orchestra, "Sons o' Guns."

8.9 : Boy soprano—Master Ivan Dunn, (a) "A Brown Bird Singing" (Coates); (b) "Rose in the Bud" (Forster).

8.16 : Selection—Orchestral Octet, under the direction of Mr. Harold Baxter, "Stephen Adams' Songs" (arr. Henley); Entr'acte, "Sous les Etoiles" (Coates).

8.28 : Novelty—Mister Ree, "Radio Magic."

8.43 : Accordion—Medard Ferrero, "Monte Christo" (Gabutti) (Poly. 27193).

8.54 : Bass-baritone—Mr. A. Gibbons Taylor, "Plymouth Hoe" (Lennard).

8.55 : Scene—Mr. J. M. Clark and Miss Joyce Hould, "Scene from 'The Honey-moon'" (Tobin).

9.2 : Evening weather forecast and announcements.

9.4 : Intermezzos—The Orchestral Octet, (a) "Fleuriste D'Amour" (Fletcher); (b) "Air de Danse" (Ambrosio).

9.10 : Boy soprano—Master Ivan Dunn, "Golden Pathway" (Gray).

9.13 : Organ—Archer Gibson, "The Old Refrain" (Kreisler) (Zono. EF35).

9.17 : Scene—Mr. J. M. Clark and Miss Joyce Hould, Scene from "Hamlet" (Scene between Hamlet and Ophelia and the Soliloquy, Act 3).

9.25 : Waltz—Orchestral Octet, "Dolores" (Waldtenfel).

9.31 : Tenor—Mr. Frank Campbell, (a) "I'd Rather Wait for Jane" (Lohr); (b) "Travlin' All Alone" (Johnson); (c) "Secret of the Tide."

9.40 : Selection—Orchestral Octet, "The Leek" (Middleton).

9.47 : Bass-baritone—Mr. Albert Gibbons Taylor, (a) "Simon the Cellarer" (Hatton); (b) "Because I Were Shy" (Lyell Johnston).

9.53 : Suite—Orchestral Octet, "The Purple Vine" (Ancliffe); (a) "The Vine"; (b) "The Vine"; (c) "Evening at the Inn."

10.3 : God save the King.

#### 2YA, WELLINGTON (720 KILOCYCLES)—FRIDAY, MAY 29.

10.0 : Chimes. Selected recordings.

11.0 : Talk—Mrs. Thomas, "Fashions."

12.0 : Lunch hour music.

2.0 : Miscellaneous.

3.0 : 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 (Columbia)—

Bohemian Orchestra, "Love and Life in Vienna" (Komzak, arr. Renard)

Organ—G. T. Pattman, "Alice, Where Art Thou?" (Trad'l) (DO146).

Bruno Walter and Berlin Philharmonic Orchestra, "Roses of the South."

Band of H.M. Grenadier Guards, "Ivanhoe" Selection.

Edith Lorand Orchestra, "Venetian Barcarolle" (Leoncavallo).

Bohemian Orchestra, "Destiny Waltz" (Baynes) (Regal G20775).

Edith Lorand Orchestra, "La Serenade" (Metra) (Parlo. E10522).

Plaza Theatre Orchestra, "A La Gavotte" (Finck) (Col. 01439).

Dajos Bela Orchestra, "Schatz Waltz" (from "The Gipsy Baron").

J. H. Squire's Celeste Octet, "La Serenata" (Braga) (Col. 9116).

Venetian Players' String Quintet, "Romanza" (Mozart, arr. Sear).

Dajos Bela Orchestra, "Moonlight on the Alster" (Petras).

Plaza Theatre Orchestra, "Minuet" (Finck) (Col. 01439).

Organ—G. T. Pattman, "Cinderella Waltz" (Pattman) (Col. DO146).

J. H. Squire's Celeste Octet, "Serenade" (Titl) (Col. 9116).

7.0 : News session, market reports and sports results.

8.0 : Chimes. Relay of a Debate from the Victoria University College, Wellington, "That Democracy is a Failure." Affirmative: Mr. W. J. Mountjoy, Junr. (mover), Miss Z. Henderson (seconder). Negative: Miss C. S. Forde (mover), Mr. C. G. Watson (seconder). Opening Speakers will speak fifteen minutes each. Seconders will speak ten minutes each. Members of the Society will speak seven minutes each during general discussion, after which the leaders will be allowed ten minutes each to sum up.

9.30 (approx.): Dance programme (Brunswick)—

Foxtrots—Jesse Stafford and His Orchestra, "I'm Sailing on a Sun-beam" (Dreyer) (Brun. 4630); "Ragamuffin Romeo" (De Costa) (4824); "A Bench in the Park" (Yellen).

9.39 : Waltzes—The Thematics Orchestra, "Giovanna" (Kountz) (4297).

Regent Club Orchestra, "The Moonlight Reminds Me of You."

9.45 : Vocal—Marion Harris, "Wasn't It Nice?" (Young) (4806).

9.48 : Foxtrots—Colonial Club Orchestra, "It's You I Love" (Davis) (4621).

Jack Denny and His Mount Royal Hotel Orchestra, "Whip-poorwill" (de Voll) (4794).

Waltz—Castlewood Marimba Band, "A Night of Love in Hawaii."

9.57 : Foxtrots—Meyer Davis' Hotel Astor Orchestra, "Blue is the Night."

Colonial Club Orchestra, "Why?" (Davis) (4621).

Jesse Stafford and His Orchestra, "I'm Following You."

Waltzes—Regent Club Orchestra, "Dancing With Tears in My Eyes."

Castlewood Marimba Band, "My Heart Belongs to the Girl Who Belongs to Somebody Else" (Sherman) (4821).

10.12 : Foxtrots—Hal Kemp and His Orchestra, "Give Yourself a Pat on the Back" (Butler) (4807).

Tom Gerun and His Orchestra, "Absence Makes the Heart Grow Fonder" (Lewis) (4829).

Bob Haring and His Orchestra, "I Still Remember" (Tobias).

Tom Clines and His Music, "Wasn't It Nice?" (Young).

Colonial Club Orchestra, "Stein Song" (Colcord-Fenstad).

Waltz—Castlewood Marimba Band, "Down the River of Golden Dreams" (Klenner) (4820).

10.30 : Foxtrots—Meyer Davis' Hotel Astor Orchestra, "Nobody Cares if I'm Blue" (Clarke) (4802).

Hal Kemp and His Orchestra, "If I Had a Girl Like You."

Meyer Davis' Hotel Astor Orchestra, "Ro-Ro-Rollin' Along."

10.39 : Vocal duet—Al and Pete, "That's Why I'm Jealous of You" (Rose).

10.42 : Foxtrots—Tom Clines and His Music, "You Darlin'" (Woods) (4814).

Jack Denny and His Mount Royal Hotel Orchestra, "Dream Avenue" (Tobias) (4788).

Tom Clines and His Music, "You For Me" (Jason) (4814);

"Be Careful With Those Eyes" (Woods) (4813).

10.54 : Waltzes—Castlewood Marimba Band, "My Reveries" (White) (4820).

Regent Club Orchestra, "Because There's a Change in You."

11.0 : God save the King.

#### 5YA, CHRISTCHURCH (980 KILOCYCLES)—FRIDAY, MAY 29.

3.0 : Gramophone recital.

4.25 : Sports results.

5.0 : Children's hour.

6.0 : Dinner music session (Polydor)—

Paul Godwin's Orchestra, "Musical Panorama Medley" (Läncke) (Poly-

dor 19832); "Birthday Serenade" (Läncke) (19777); "The Spider"

Intermezzo (Klose) (21297); "Tonerna" (Sjoberg) (21574); "Wed-

ding Serenade" (Klose) (19777); "Butterfly" Intermezzo.

Violin with orchestra—Paul Godwin's Orchestra, "Serenade" (Tosti).

- Paul Godwin's Orchestra, "Geisha" Medley (Jones) (19557); "La Poupée De Nuremberg" Overture (Adam) (19717).  
 Vienna Schrammel Quartet, "Firefly's Appointment" (Siede) (19980).  
 Paul Godwin's Orchestra, "Medley Memorial of Strauss' Waltzes."  
 Vienna Schrammel Quartet, "Serenade" (Heykens) (19980).  
 7.0 : News session.  
 7.30: Talk—Professor Shelley, "Mental Health" (under the auspices of the Sunlight League).  
 7.45: Talk—Mr. J. A. East (under the auspices of the Canterbury Manufacturers' Association), "Making Modern Boots and Shoes."  
 8.0 : Chimes. Overture—London Theatre Orchestra, "Lilac Time" Selection.  
 8.8 : Mezzo-contralto—Mrs. N. Bingham Puddey, (a) "The String of Pearls" (Lyall Phillips); (b) "A Summer Night" (Goring Thomas).  
 8.14: Entertainers in song and patter—At piano, Les Grummitt and Albert Carlisle (tenor), "Vaudeville Turn."  
 8.24: Instrumental—Studio Octet (Conductor, Harold Beck), March, "Stars and Stripes" (Souza); Overture, "Hungarian Lustspiel."  
 8.37: Organ—Quentin Maclean, "Rhapsody in Blue" (Gershwin, arr. Maclean) (Col. DOXSI).  
 8.45: Colaratura soprano—Margherita Zelanda, (a) "Quelle Fonte and Aria—Regnava Nel Silenzio" (from "Lucia de Lammermoor") (Donizetti); (b) "Sweet Marie" (Moore); (c) "A Fairy Went a Marketing" (Goodhart).  
 8.53: At piano—Miss Maisie Ottey, (a) "Bird of Paradise at a Waterfall" (Niemann); (b) "In a Chinese City" (Niemann).  
 8.57: Balalaika—Grand Russian Balalaika Orchestra, "Russian Reminiscences" (Tschalkowsky) (Polydor 22839).  
 9.3 : Weather forecast and station notices.  
 9.5 : Instrumental—Studio Octet, characteristic foxtrot, "Indian Dawn."  
 9.9 : Mezzo-contralto—Mrs. N. Bingham Puddey, (a) "Slave Song" (del Riego); (b) "One Fleeting Hour" (Dorothy Lee).  
 9.15: Entertainers in song and patter—At piano, Les Grummitt, tenor, Albert Carlisle, "In a Further Vaudeville Turn."  
 9.25: Instrumental—Studio Octet, Musical Comedy Selection, "Maid of the Mountains" (Fraser-Simson).  
 9.39: Colaratura soprano—Margherita Zelanda, (a) "Polly the Cows Are In the Corn" (Cole); (b) "Thema and Variations" (Proch); (c) "Philosophy" (Hummel).  
 9.47: At piano—Miss Maisie Ottey, (a) "Jazz Novelty—Jim Jams" (Roy Bargy); (b) "My Ray of Sunshine" (Adam).  
 9.53: Instrumental—Studio Octet, "Valse—Dolores" (Waldtenfel).  
 10.0 : God save the King.

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

- 3.0 : Selected recordings.  
 3.30: Children's Concert, under auspices of Otago Education Board, relayed from Dunedin Town Hall. Director: Mr. J. Crossley Clitheroe, Lecturer of Music Teachers' Training College, Dunedin.  
 5.0 : Children's hour, conducted by "Aunt Sheila."  
 6.0 : Dinner music session (H.M.V.)—  
 Royal Albert Hall Orchestra, "Carmen Prelude, Act 1" (Bizet).  
 National Symphony Orchestra, (a) "Sylvia Ballet—Cortege de Bacchus" (Delibes) (EB24); (b) "La Traviata" (Verdi).  
 Organ—Reginald Foort, "Schon Rosmarin" (Kreisler) (B2664).  
 Marek Weber's Orchestra, "Vienna by Night" (Komzak) (C1507).  
 Cello—Lauri Kennedy, "Hungarian Rhapsody" (Popper) (C1595).  
 New Mayfair Orchestra, "Sons o' Guns" Selection (C1982).  
 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).  
 Paul Godwin Orchestra, "Song of My Dreams" (Friml) (Poly. 22525).  
 Royal Opera Orchestra, "Hungarian Dance, No. 5" (Brahms).  
 Band of H.M. Coldstream Guards, "H.M.S. Pinafore" Selection.  
 7.0 : News session.  
 8.0 : Chimes. Overture—Paul Godwin Orchestra, "Lustspiel" (Keler Bela).  
 8.4 : Mixed quartet—The Select Four, (a) "Men of Harlech" (Trad'l); (b) "May Day."  
 8.14: Selection—Instrumental Sextet, (a) "Rigaudon" (Rameau-Winter); (b) "Home, Little Maori Home" (Hill); (c) "Northern Song."  
 8.22: Humour—Mr. Lester F. Moller, (a) "The Old Place" (Baughan); (b) "The Colonel's Earwig" (Thomas).  
 8.30: Cello—Edmund Kurtz, "Mazurka" (Werkmeister) (Polydor 21148).  
 8.34: Contralto—Miss Betty Hamilton, (a) "The Second Minuet" (Besly); (b) "Love's Old Sweet Song" (Molloy).  
 8.39: Selection—Instrumental Sextet, "Four Characteristic Waltzes."  
 8.53: Bass—Mr. E. Bond, "Travellers' All" (Loughborough).  
 8.56: Guitar—Segis Luvaua, (a) "Moonbeam Dance"; (b) "Lysistrata."  
 9.2 : Weather report and station notices.  
 9.4 : Marimba—Green Bros. Marimba Orchestra, (a) "A Bunch of Roses" (Chapli); (b) "Wedding of the Winds" (Hall) (Zono. EE203).  
 9.10: Mixed quartets—The Select Four, (a) "It Was a Lover and His Lass" (Morley); (b) "Dreaming" (Schumann).  
 9.16: Selection—Instrumental Sextet, Miniature Suite. (1) "Canzonetta"; (2) "Pizzicato"; (3) "Caprice" (O'Donnell).  
 9.28: Tenor—Mr. J. E. Davies, (a) "The Bard of Armagh"; (b) "Mary of Argyll" (Trad'l).  
 9.34: Male quartet—The Four Aces, (a) "You'll Never Know Sweetheart" (Colby); (b) "Moonlight on the Colorado" (King) (Regal G20898).  
 9.40: Selection—Instrumental Sextet, (a) "Marche Militaire" (Schubert); (b) "Heine, E Heine" (Te Ranzi Fai).

- 9.48: Humour—Mr. Lester F. Moller, "The Difference."  
 9.53: Mixed quartets—The Select Four, "Cradle Song" (Brahms).  
 9.56: Selection—Instrumental Sextet, (a) "Dance Piquant"; (b) "Dance of the Fairies" (Parker).  
 10.2 : God save the King.

## Saturday, May 30

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

- 3.0 : Selected recordings.  
 3.15: Literary selection.  
 5.0 : Children's session, conducted by "Cinderella."  
 6.0 : Dinner music session (H.M.V.)—  
 Paul Godwin Orchestra, "Marietta Fantasia" (Strauss) (Polydor).  
 Zonophone Salon Orchestra, "Evensong" (Easthope Martin) (Zono.).  
 New Symphony Orchestra, "Minuet" (Boccherini) (H.M.V. B3036).  
 National Military Band, "The Flying Dutchman" Overture (Wagner).  
 De Groot and Piccadilly Orchestra, "Waldteufel Memories" (B3084).  
 Marek Weber's Orchestra, "I Pagliacci" (Leoncavallo) (C1735).  
 Zonophone Salon Orchestra, "Eleanor" (Deppen) (Zono. 5574).  
 New Symphony Orchestra, "Neil Gwynn Dance No. 3" (German) (B3036); "Le Old Ballet Music" (Massenet): (1) Castillane, (2) Aubade, (3) Andalous, (4) Arragonaise, (5) Madrilene, (6) Navarraise (H.M.V. C1638-39).  
 7.0 : News and market reports.  
 8.0 : Chimes. Relay of Municipal Band Concert from the Auckland Town Hall, under the conductorship of Mr. George Buckley.  
 March—Band, "The Men of Mons" (Marechal); overture, "Fingal's Cave" (Mendelssohn).  
 Cornet—Mr. Fred Bowes, "A Dream of Love" (Millars).  
 Tenor—Mr. Leslie Belcher, "I Heard You Singing" (Coates).  
 Selection—Band, "Der Freischutz" (Weber).  
 Intermezzo—Band, "Starlight" (Zulueta).  
 Flute—Mr. Hal C. McLennan, "Idyl" (Krantz).  
 Tenor—Mr. Leslie Belcher, "The Star" (Rogers).  
 Band—No. 2 of "Symphonique Suite Scheherazade."  
 Clarinet—Mr. P. W. Eastoe, "Lucetta" (Luscombe).  
 Song—Miss Gladys Barton, "Ring, Bells, Ring" (Day).  
 Selection—Band, "Iolanthe" (Sullivan); ballet, "Ballet Russe."  
 10.0 : Programme of dance music from the studio (Polydor).  
 Foxtrots—Ilja Livschakoff Dance Orchestra, "And Swiftly the Days Pass By" (arr. Benedict) (Polydor 23482); "The Gipsy Princess" (Kalmon) (23610); "Munich Kiddy" (Stolz).  
 10.9 : Waltz—Ilja Livschakoff Dance Orchestra, "My Love Song Must Be a Waltz" (Stolz) (23649).  
 Foxtrots—Paul Godwin Orchestra, "Say That You Love Me" (Uher).  
 Ilja Livschakoff Dance Orchestra, "The Whole World is Sky Blue" (Stolz) (23649).  
 10.18: Vocal (Spanish)—Juan Llossas with His South American Orchestra, "La Cigarra" (Paredes) (P40488).  
 10.21: Tangos—Ilja Livschakoff Dance Orchestra, "Don't Leave Me" (arr. Benedict) (23482); "To-night I've Dreamt of You" (Kalman) (23610); "You Are My Morning and Night Prayer" (Krauss).  
 10.30: Waltz—Paul Godwin Dance Orchestra, "Under the Roofs of Paris." Foxtrots—Paul Godwin Dance Orchestra, "Fair Little Daisy" (23651).  
 Ilja Livschakoff Dance Orchestra, "Love and Wine Never Alone" (Krauss) (23569); "The Barrel Organ" (23481).  
 10.42: Vocal (Spanish)—Juan Llossas with His South American Orchestra, "Sonarse Abandonado" (Paredes) (P40488).  
 10.45: Tangos—Ilja Livschakoff Dance Orchestra, "A Love Letter" (arr. Michaeloff) (23481); "Just a Bit of Love" (Rosen) (23547); "And Once You Too Will Deceive Me" (Stolz) (23578).  
 10.54: Foxtrots—Ilja Livschakoff Dance Orchestra, "You Are My Greta Garbo" (Stolz) (23401).  
 Paul Godwin Dance Orchestra, "Mariner's Song" (Uher).  
 11.0 : God save the King.

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

- 3.0 : Chimes. Selected gramophone recordings.  
 3.30 and 4.30: Sporting results to hand.  
 5.0 : Children's session, conducted by "Aunt Molly."  
 6.0 : Dinner music session (Polydor)—  
 Paul Godwin Orchestra, "The Czarewitsch" (Lehar) (Polydor 19678); "Liliputian's Wedding" (Translatour) (19660).  
 Paul Godwin's Orchestra with organ, "Adoration" (Filijucci) (19978).  
 Great Symphony Orchestra, "The Gipsy Princess" (Kalman) (27172).  
 Paul Godwin's Orchestra with organ, "Invocation" (Ganne) (19978).  
 Paul Godwin Quintet, "Vision" (Drdla) (19533).  
 Opera Orchestra, Berlin-Charlottenburg, "Sf J'Etas Roi" (Adam).  
 Paul Godwin Dance Orchestra, "Little Butterflies" (Steinke) (19660).  
 Paul Godwin Quintet, "Chant d'Amour" (Franz Drdla) (19533).  
 Paul Godwin Jass Symphonians, "Lots of Fun" (Morena) (19761).  
 7.0 : News session, market reports and sports results.  
 7.40: Lecturette—Professor C. A. Cotton, Chair of Geology, Victoria University College, a W.E.A. lecturette, "Causes of Earthquakes."  
 8.0 : Chimes. Overture—Salon Orchestra (Conductor, Mr. M. T. Dixon), "Plymouth Hoe" (Ansell).



- 8.9 : Quartets—Melodie Four, (a) "Carry Me Back to Old Virginny" (Bland), (b) "Cornfields Medley" (arr. Holloway).
- 8.15: Accordion duo—Gellin and Borgstrom, (a) "Firefly," (b) "Snow Waltz" (Nicholls) (Polydor 22837).
- 8.21: Bass—Mr. W. W. Marshall, (a) "Roll On, Thou Dark Blue Ocean" (Petrie), (b) "Drinking" (Lennox).
- Quartet—Melodie Four, "Mammy's Gone Away" (Grey).
- 8.31: Selection—Salon Orchestra, "Waltz Dream" (Strauss).
- 8.40: Sketch—Mr. and Mrs. J. W. Bailey, "Rent Free" (Carlton and Manley).
- 9.2 : Weather report and station notices.
- 9.4 : Suite—Salon Orchestra, "Hyde Park Suite" (Jalowicz).
- 9.14: Tenor—Mr. Frank Bryant, "Love Lily" (Thomson).
- Quartet—Melodie Four, "While I Have You" (Tosti).
- 9.20: March—Polydor Brass Band, "Petersburger" (Polydor 23567).
- 9.23: Baritone—Mr. R. S. Allwright, "Betty and Johnny" (Coates).
- 9.26: The Sieber Choir—"Faust Waltz" (Gounod) (Parlo. A4264).
- 9.30: Saxophone with orchestra—Mr. W. J. Haines and Salon Orchestra, "The Lost Chord" (Sullivan).
- Bell solo with orchestra—Mr. L. W. Probert and Salon Orchestra, "Bells of Ouseley" (Hume).
- 9.39: Tenor—Mr. Sam Duncan, "Mignon" (D'Hardelot).
- 9.43: March—Polydor Brass Band, "The Old Hunter" (Polydor 23567).
- 9.46: Quartet—Melodie Four, "The City Choir" (Parkes).
- 9.50: Instrumental—Salon Orchestra, "Latest Dance Novelties."
- 10.0 : Dance music programme (Polydor)—
- Foxtrots—Marimba Original Excelsior de Guatemala, "Vamos al Merendon" (Jorga Vasquez Lanazabal) (Polydor 21903)
- Ben Berlin Dance Orchestra, "First the Right Leg" (Kollo-Wolff) (23394); "A Very Good Chum" (23534).
- 10.9 : Waltz—Ilja Livschakoff Dance Orchestra, "You've Been My Lucky Star" (Stolz) (23400).
- Foxtrots—Ben Berlin Dance Orchestra, "Just You" (Nelson) (23394).
- Paul Godwin Dance Orchestra, "Both You and Myself."
- 10.18: Vocal—Jack O'Hagan, "Rambling Down the Roadway" (O'Hagan).
- 10.21: Tangos—Jose M. Lucchesi and His South American Orchestra, "Alla Va El Caldo" (Pippo Rache) (Polydor 22060); "La Voz Del Viento" (Lucchesi) (22059); "Amargura" (Lucchesi) (22060).
- Waltz—Paul Godwin Dance Orchestra, "Good-bye" (Spoliarsky).
- 10.30: Foxtrots—Ben Berlin Dance Orchestra, "To Begin with a Big Question Mark" (Heymann) (23533); "Hallo Sweet Lady" (Heymann) (23534); "My Heart is Longing for You" (Heymann) (23533).
- 10.39: Vocal—Jack O'Hagan, "With My Guitar and You" (Harris) (DO130).
- 10.42: Tangos—Marimba Original Excelsior de Guatemala, "Nubes de Humo." Ilja Livschakoff Dance Orchestra, "The Tale of Good Fortune" (Stolz) (23400).
- Jose M. Lucchesi and His South American Orchestra, "Sole-dad."
- 10.51: Foxtrots—Marimba Original Excelsior de Guatemala, "Bomberos" (21903); "Mi Perrito" (Pearly Chagnon) (21905).
- 11.0 : Sporting summary.
- 11.10: God save the King.

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

- 3.0 : Gramophone recital.
- 4.25: Sports results.
- 5.0 : Children's hour.
- 6.0 : Dinner music session (Polydor)—
- Paul Godwin Orchestra, "Polish Temper" (Nedbal) (Polydor 19609).
- Paul Godwin Trio, "For You" (Czibulka) (21341); "Melodie" (Denza).
- Paul Godwin Orchestra, "Kismet" (Yamada) (V40261).
- Efim Schachmeister Orchestra, "Dark Eyes" (Schachmeister) (20453).
- Paul Godwin Orchestra, "Hearts and Diamonds."
- Paul Godwin Quartet, "Serenata" (Beccce) (21344); "Adoration."
- Polydor Orchestra, "Berlin as it Laughs and Weeps" (Conradi).
- Paul Godwin Orchestra, "Love in Idleness" (Macbeth) (V40261).
- Efim Schachmeister Orchestra, "Kasbeck" (Schachmeister) (20453).
- Paul Godwin Orchestra, "Short, But Delicious" (Schreiner).
- 7.0 : News session.
- 7.30: Sports results.
- 8.0 : Chimes.
- Overture—Debroy Somers Band, "The Desert Song" (Romberg).
- 8.8 : Baritone—Mr. T. D. Williams, (a) "The Storm Fiend" (Roedel); (b) "Devonshire Cream and Cider" (Sanderson).
- 8.15: Cornet—Mr. Norman G. Goffin, "Zanette" (Percy Code).
- 8.20: Spanish vocal novelty—Juan Llossas and His Orchestra, "Cuando Quieras Llorar" (Paredes).
- 8.24: Instrumental—Studio Trio, (a) "Mazurka" (Glinka); (b) "Nocturne" (Widor); (c) "Pierrette" (Chaminade).
- 8.34: Humour in song and story—Mr. Jock Lockhart, introducing (a) "Giris Past and Present" (Rutherford); (b) "The Carbolic Love Song."
- 8.43: Violin—Miss Irene Morris, "Chanson Gracieuse" (Barns).
- 8.46: Mezzo-soprano—Mrs. H. Turnbull, (a) "You Will Never Grow Old"; (b) "The Old Clock" (Drummond); (c) "A Kiss in the Dark."
- 8.51: Steel guitars and ukulele—Hilo Harmony Four, (a) "Underneath the Mellow Moon" (Wendall Hall); (b) "Yaka Hula Hiky Dula" (Goetz, Young, Wendling); (c) "Souvenirs" (Nicholas).
- 9.0 : Weather forecast and station announcements.
- 9.2 : Finck's Orchestra, "Gaiety Echoes" (Caryll-Monckton) (Col. 02014).
- 9.10: Baritone—Mr. T. D. Williams, "The Bandolero" (Stuart).
- 9.14: Cornet—Mr. Norman G. Goffin, "Wendouree" (Percy Code).

- 9.19: Two pianos—Wilhelm Gross and Walter Kauffmann, "Tango and Shimmy" (from "Baby in the Bar") (Gross) (Polydor 21957).
- 9.25: Instrumental—Studio Trio, (a) "Hungarian Dance, No. 5" (Brahms); (b) "Serenade" (Titi); (c) "Almond Blossom" (Williams).
- 9.35: Humour in song and story—Mr. Jock Lockhart, introducing "The Polar Bear's Come Back" (Wright).
- 9.41: Violin—Miss Irene Morris, "Hornpipe" (Mistowski).
- 9.44: Mezzo-soprano—Mrs. H. Turnbull, (a) "I Wonder if Love is a Dream" (Foster); (b) "Give Me a Youth and a Day" (Drummond); (c) "John" (Lohr).
- 9.49: Steel guitars and ukulele—Hilo Harmony Four, (a) "Springtime in the Rockies" (Sauer); (b) "Drifting and Dreaming" (Allstyn); (c) "Hilo Girl" (Smith).
- 9.58: Spanish novelty—Juan Llossas and His Orchestra, "Intip Raini."
- 10.0 : Dance music (Polydor)—
- Foxtrots—Marimba Original Excelsior de Guatemala, "Hula Tropical" (Polydor 21902).
- Ilja Livschakoff Dance Orchestra, "I Am So Happy" (May).
- Paul Godwin Dance Orchestra, "Just Such a Girl."
- 10.9 : Waltz—Paul Godwin Dance Orchestra, "Pardon Madame" (Abraham).
- 10.12: Foxtrots—Marimba Original Excelsior de Guatemala, "Llorando." Paul Godwin Orchestra, "Victoria and Her Hussar" (Abraham) (23399); "The Broken Record" (Howalt).
- 10.21: Vocal—Don and Ken, "Sunny Days" (Jason) (Parlophone A3106).
- 10.24: Tangos—Ilja Livschakoff Dance Orchestra, "O Miss Daisy." Paul Godwin Dance Orchestra, "Poor Little Mannequin." Ilja Livschakoff Dance Orchestra, "Queen of Dreams."
- 10.33: Waltzes—Paul Godwin Dance Orchestra, "Under the Roofs of Paris" (Moretti) (23644); "Good Night" (Abraham) (23398).
- 10.39: Vocal—Don and Ken, "Roamin' Thru the Roses" (O'Flynn).
- 10.42: Foxtrots—Ben Berlin and His Orchestra, "Fairy on the Clock." Paul Godwin Dance Orchestra, "Mickey Mouse" (Carlton). Ben Berlin and His Orchestra, "Clown Dolly" (Rust).
- 10.51: Tangos—Ilja Livschakoff Dance Orchestra, "Don't You Want a Friend Little Madam?" (Meisel) (23334).
- Paul Godwin Dance Orchestra, "Thus Spoke the Knowing Marabu" (Egen) (23397); "A Sweetheart as Sweet as You Are" (Meisel) (23334).
- 11.0 : God save the King.

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

- 3.0 : Selected recordings.
- 5.0 : Children's hour, conducted by "Aunt Anita."
- 6.0 : Dinner music session (Polydor)—
- Philharmonic Orchestra, Berlin, "Les Huguenots" Overture.
- Paul Godwin Quartet, "Beautiful Garden of Roses" (Schmid) (19532).
- State Opera Orchestra, Berlin, "German Dances" (Schubert) (65458).
- Polydor Symphonic Orchestra, "Hear You Again" (Medley).
- Association de Concerts Lamoureux, Paris, "Petite Suite" (Debussy).
- (1) En Bateau; (2) Cortège; (3) Menuet; (4) Ballet (66958/9).
- Paul Godwin Quartet, "Le Reve" (D'Ambrosio) (19532).
- Philharmonic Orchestra, Berlin, "Emperor Waltz" (Strauss) (19049).
- 7.0 : News session.
- 8.0 : Chimes. Relay of Vaudeville Programme from 3YA, Christchurch.
- 10.0 : Dance session (H.M.V.)—
- Foxtrots—Arcadians Dance Orchestra, "Always" (Ruby) (Zono. 5560).
- George Olsen and His Music, "Sweet Nothings of Love."
- Arcadians Dance Orchestra, "At the End of the Lonesome Trail" (Ruby) (Zono. 5560).
- 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) (EA727).
- 10.24: Foxtrots—New Mayfair Dance Orchestra, "She's My Slip of a Girl." Leo Reisman and His Orchestra, "Mia Cara" (Kahal).
- Victor Arden, Phil Ohman and Their Orchestra, "It's You I Love" (Davis) (EA774).
- 10.33: Waltzes—Regent Club Orchestra, "Dear When I Met You" (Brown).
- Rudy Vallee and His Connecticut Yankees, "Sweet Susanne."
- Foxtrots—New Mayfair Dance Orchestra, "Spread a Little Happiness." Nat Shilkret and His Orchestra, "May I Say 'I Love You'?"
- 10.45: Vocal—Johnny Marvin, "Lucky Me, Lovable You" (Yellen) (EA727).
- 10.48: Foxtrots—The High Hatters, "Singin' in the Bathtub" (Magidson).
- New Mayfair Dance Orchestra, "In An Old World Garden." Nat Shilkret and His Orchestra, "Cross Your Fingers." The High Hatters, "Duke of Ka-Ki-Ak!" (Leslie) (EA709).
- 11.0 : God save the King.

### 2YB, NEW PLYMOUTH (1230 KILOCYCLES)—SATURDAY, MAY 30.

- 2.30 to 4.30 p.m. (approx.): Sports relay.
- 6.30 to 7.30 p.m.: Children's session.
- 7.30 to 8.0 p.m.: Sports results and talks.
- 8 to 10 p.m.: Concert and dance programme, with sports results.

# Sunday, May 31

## 1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, MAY 31.

- 3.0 : Selected recordings.  
 3.15 : Literary selection.  
 6.0 : Children's Song Service, conducted by "Uncle Bert."  
 7.0 : Relay of Divine Service from the Unitarian Church. Preachers: Revs. Wilna L. Constable and Wm. A. Constable. Organist: Mr. John Tait.  
 8.30 : Selection—Orchestral Octet, under the direction of Mr. Harold Baxter, "Faust" (Gounod).  
 Baritone—Mr. Stan Pritchard, "The Lord is My Light" (Allitsen).  
 Piano—Mr. Cyril Towsey, "The Engulfed Cathedral" (Debussy).  
 Soprano—Miss May Bray, (a) "Mother I Love" (Drummond); (b) "The Starling" (Lehmann).  
 Waltz—The Orchestral Octet, "Stories of Vienna Forests" (Strauss).  
 Evening weather forecast and announcements.  
 Male choir—Ural Cossacks, (a) "Hej Hej"; (b) "Signal March."  
 Intermezzo—Orchestral Octet, "Valse Denseuse" (Miles); Selection, "Three Dances" (Finck); (a) "Proussionelle"; (b) "Valse des Adoratrice"; (c) "Danse Barbare."  
 Baritone—Mr. Stan Pritchard, (a) "Harbour Night Song"; (b) "O Night o' Life" (Sanderson).  
 Organ—Leo Stein, "Peer Gynt Suite, No. 2" (Grieg); (a) "Anitra's Dance"; (b) "Solveig's Song" (Polydor 23164).  
 Morceaux—The Orchestral Octet, (a) "Phantom Melody" (Ketelbey); (b) "Humoresque" (Dvorak).  
 Soprano—Miss May Bray, (a) "The Wood Pigeon" (Lehmann); (b) "The Fairy Pipers" (Brewer).  
 Male choir—Ural Cossacks, "Evening Bells" (Traditional).  
 Selection—Orchestral Octet, "Russian Fantasia" (Klein).  
 10.0 : God save the King.

## 2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, MAY 31.

- 3.0 : Selected gramophone recordings.  
 6.0 : Children's Song Service, conducted by Uncle George, and assisted by the Children's Choir from the Taranaki Street Methodist Church.  
 7.0 : Relay of Evening Service from the Vivian Street Baptist Church. Preacher: Rev. W. S. Rollings. Organist: Mr. Chas. Collins.  
 8.15 (approx.): Relay of Band Recital by the Wellington Municipal Tramways Band from St. James' Theatre (Conductor: Mr. E. Franklin).  
 God save the King.

## 3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, MAY 31.

- 3.0 : Gramophone Recital.  
 3.30 : Talk—Mr. T. E. Boddington (under the auspices of the Christadelphian Society) "Jewish Jerusalem of To-day."  
 3.45 : Gramophone Recital Continued.  
 5.30 : Children's Song Service by children of Presbyterian Sunday Schools.  
 6.15 : Chimes from Studio.  
 6.30 : Relay of Anniversary evening service from Knox Presbyterian Church, Bealey Avenue. Preacher: Rev. T. W. Armour. Choir Conductor: Mr. A. G. Thompson.  
 8.0 (approx.): Musical recordings from studio.  
 8.15 (approx.): Relay of 4YA, Dunedin, programme.  
 10.0 : God save the King.

## 4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, MAY 31.

- 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 Knox Presbyterian Church. Preacher: Rev. D. C. Herron, M.A. Organist: Mr. C. Roy Spackman.  
 7.45 : Selected recordings.  
 8.15 : Overture—Octet, under conductorship of Mr. Thos. J. Kirk-Burnband: (a) "Magic Flute" (Mozart); (b) "Meditation" (from "Thais") (Massenet).  
 8.27 : Bass with orchestra—Mr. W. J. Kershaw, "The Erl King" (Schubert).  
 8.31 : Selection—Octet, "Norwegian Rhapsody No. 1" (Svendsen).  
 8.40 : Coloratura Soprano with orchestral accompaniment—Margherita Zelanda: (a) "Sing, Break into Song" (Mallinson); (b) "Saper Vorreste" (from "Un Ballo in Maschera") (Verdi); (c) "Ay, Ay, Ay" (Spanish Serenade) (Freire); (d) "The Flutes of Spring" (Blane).  
 8.55 : Violin—Yelky D'Aranyi: (a) "Jota" (De Falla); (b) "Melodie" (Gluck-Kreisler) (Col. DO 160).  
 9.0 : Weather report and station notices.  
 9.2 : Suite—The Octet: (a) "La Caprice De Concert"; (b) "Demande et Response"; (c) "La Tarantelle Fretilante" (from "Petite Suite de Concert") (Coleridge-Taylor).  
 9.11 : Tenor with orchestral accompaniment—Mr. Alfred Walmsley, "Yes, Let Me Like a Soldier Fall" (from "Maritana") (Wallace).  
 9.16 : Piano—Mrs. C. Drake, "Caprice" (Paganini-Schumann).  
 9.19 : Coloratura soprano with orchestral accompaniment—Margherita Zelanda: Aria, "C'era Un Re Di Thule" (Gounod); (b) "Oh, Bother! Sang the Thrush" (Lehmann); (c) "Ave Maria" (Kahn).

# A Universe Built of Waves

## A Revolutionary Theory



SOMETHING of a sensation has been caused in the scientific world by an announcement made recently by an eminent English scientist to the effect that ether waves, such as light and wireless waves, are the foundation stones of the universe. He thinks that the universe is made of ether waves, of which matter is condensed or bottled-up waves, while radiation, such as wireless, light and all other waves of the ether, is free or unbottled waves.

The new theory is not precisely unexpected, for all the latest scientific discoveries, such as the presence of the ether wave in the electron, have been leading up to this point. And some time ago Sir Oliver Lodge suggested that matter was made of ether waves; in fact, he worked out a very similar theory in even greater detail, but, as was the case with his wireless inventions, the prophet hath not much honour in his own country.

When discussing ether waves it is natural to start with those we term wireless waves, and are so familiar with in their concert-producing properties; although we may now imagine that in view of their new importance Nature must regard it almost as blasphemy for us to use her foundation bricks, as it were, to sing and shout across the world.

### From 30,000 to 5 Metres.

HOWEVER, that is beside the point, and we can commence with wireless waves because they are the largest and longest ether waves for which we have any practical use. There are longer waves, such as those of an alternating current machine, and some day they may be of use for giving us light and heat without wires, but at present we start off with wireless waves.

The longest waves used commercially are from 15,000 to 30,000 metres in the case of such stations as St. Assise, Annapolis and Bordeaux. Longer waves than these are not practicable, although Marconi once built an experimental receiver which would tune up to 120,000 metres. With this receiver he is said to have heard natural signals which possibly came from outside the earth. Probably they corresponded to the wireless echoes heard nowadays.

Wireless waves find no difficulty in penetrating brick walls, stone, wood,

and earth. The longer the wave, the more easily will it penetrate any normal obstruction. Long waves also tend to cling more to the surface of the earth than their brethren the short waves, and for this reason the long waves were regarded in days gone by as being more reliable for long-distance communication. This, however, has now turned out to be something of a fallacy, and short waves are coming rapidly into their own.

Short wireless waves, i.e., those from 100 metres downward, are more at home when they have left the surface of the earth and are travelling in free air, and only when they come in contact with the earth do they lose their strength to any appreciable extent. They are more inclined to skim along the surface of the earth, than to penetrate deeply like the long waves.

Of the ultra short waves below five metres nothing very much is known. They do not appear to be able to penetrate any obstacles, and appear to be limited by the horizon, i.e., a distance of 13 miles at sea-level.

It is somewhere in the vicinity of the ultra short waves that the famous death-ray is thought to exist, and certain professors have claimed to be able to kill rats and stop machinery by waves of this variety.

### Heat and X-Rays.

BESYOND the ultra short waves we have the heat waves which keep us warm and which can pass through walls and steel and, indeed, most material objects, to a certain extent. After these come the infra-red rays by means of which we can take photographs in the dark.

Then there are the ordinary light waves, and after these the ultra-violet waves which make us sunburnt and are so useful for healing. Then follow some rays of no practical value at present, but closely on their heels come the X-rays of the surgeon which penetrate flesh and blood, but not bone, and therefore enable us to see a fracture.

Gamma rays of radium come next, and these are proving extremely useful as a cure for cancer; until finally we arrive at the smallest and most powerful wave known to science, the Cosmic ray, which comes from no one knows where, and by means of which we may some day accomplish undreamed-of wonders.—G. H. Daly, in "Popular Wireless."

- 9.33 : 'Cello—Hans Bottermund, "Adagio, from Concerto in D Major" (Haydn) (Polydor 23341).  
 9.41 : Bass with orchestra—Mr. W. J. Kershaw: (a) "Time to Go" (Sanderson); (b) Recitative—"Frondi Terere" and Aria, "Ombra Mai Fu" (Handel).  
 9.48 : Selection—Octet, "Waltz de Ballet" (Drigo).  
 9.54 : Tenor with orchestra—Mr. Alfred Walmsley, "The Promise of Life" (Cowan).  
 9.59 : March—Cavalry Band, "Alexander" (Leonhardt) (Polydor 21136).  
 10.3 : God save the King.

## 2YB, NEW PLYMOUTH (1230 KILOCYCLES)—SUNDAY, MAY 31.

- 6.0 to 6.45 : Children's Sunday Service.  
 8.15 to 10.0 p.m.: Concert programme.

# Short-wave Stations of the World

Compiled by Mr. F. W. Sellens, President N.Z. Short-wave Club

(And reprinted from the Radio Guide and Call Book, 1931.)

THE times given are based on standard time in the various countries, all shown in New Zealand standard time. Summer time is observed in Great Britain and parts of the United States, commencing during April and concluding in October. Allowance must be made for that period.

Abbreviations: M., Monday; T., Tuesday; W., Wednesday; Th., Thursday; F., Friday; S., Saturday; and Sun., Sunday.

THE times given are based on standard time in the various countries, all shown in New Zealand standard time. Summer time is observed in Great Britain and parts of the United States, commencing during April and concluding in October. Allowance must be made for that period.			Location.		Schedule: New Zealand Standard Time.	
Abbreviations: M., Monday; T., Tuesday; W., Wednesday; Th., Thursday; F., Friday; S., Saturday; and Sun., Sunday.						
Metres. Call.	Location.	Schedule: New Zealand Standard Time.		Location.	Schedule: New Zealand Standard Time.	
95 PK2AG	Samarang, Java.	From 11.10 p.m.	36.92 PLW	Bandoeng, Java.	Daily, from 11.10 p.m.	
70.1 RV15	Khabarovsk, Siberia.	From 7.30 p.m. daily.	34.68 W2XCU	Ampere, N.J., U.S.A.	Daily, 4.30 a.m. to 5.30 a.m.; T., 11.30 a.m. to 12.30 p.m.	
67.75 AFK	Doberitz, Germany.	Irregular.	34.68 W2XV	Long Island, N.Y., U.S.A.	Th. and S., 12.30 p.m. to 2.30 p.m.	
61 Radio LI.	Paris, France.	Irregular.	32.5 FLJ	Paris, France.	Time Signal daily, 8.26 a.m. and 8.26 p.m.	
58 PMY	Bandoeng, Java.	From 11.10 p.m.	32.26 —	Rabat (Radio Maroc).	M., 6.30 a.m. to 8.30 a.m.	
58 —	Prague.	W. and S., 7 a.m. to 9 a.m.	32 EH90C	Berne, Switzerland.	Irregular.	
51.22 XDA	Mexico City, Mexico.	Irregular; 11.30 a.m. to 3.30 p.m.	32 XDA	San Lazaro, Mexico.	Daily, 8.30 a.m.	
50.26 HVJ	Vatican City, Rome.	Early morning till about 7 a.m.	31.55 VK3ME	Melbourne.	Saturdays, 9.30 p.m. to 11 p.m.	
50 EAJ25	Barcelona Radio Club.	Sun., 7.30 a.m. to 8.30 a.m.	31.51 OXY	Lyngby, Denmark.	Relays Copenhagen daily, 6.30 a.m. till close down.	
50 PK2AF	Djocjacarta, Java.	From 11.10 p.m.	31.48 W2XAF	Schenectady, U.S.A.	Daily, 10 a.m. to 3.30 p.m.	
50 7LO	Nairobi, Kenya.	Daily, 3.30 a.m. to 7 a.m.	31.38 Zeessen	Konigswusterhausen, Germany.	Relays various German stations, generally 12.30 a.m. to 12 noon.	
49.83 W9XF	Chicago, U.S.A.	M., 3.30 a.m. to 6 a.m.; 9 a.m. to 11.30 a.m.; 1.30 p.m. to 6.30 p.m.	31.35 WIXAZ	Springfield, Mass., U.S.A.	Daily, 12 midnight to 4.30 p.m.	
		T., W., Th., F. and S., 3.45 a.m. to 5 a.m.; 9 a.m. to 12.30 p.m.; 2 p.m. to 6.30 p.m.	31.3 KAI XR	Manila, Philippine Is.	Relays KZRM: Irregular.	
		Sun., 3.45 a.m. to 5.15 a.m.; 9 a.m. to 12.30 p.m.; 5.30 p.m. to 7.30 p.m.	31.28 PCJ	Eindhoven, Holland.	Th., 3.30 a.m. to 7.30 a.m.; F., 5.30 a.m. to 7.30 a.m.; 10.30 a.m. to 11.30 a.m.; 11.30 a.m. to 2.30 p.m.; S., 5.30 a.m. to 7.30 a.m.; 11.30 a.m. to 5.30 p.m.	
49.7 W2XAL	Coytesville, N.J., U.S.A.	M., 9 a.m. to 12 noon; T., W., F. and Sun., 2 a.m. to 6 a.m.	31.25 LGN	Bergen.	Irregular.	
		T., 10 a.m. to 1.30 p.m.; W., 10 a.m. to 3.30 p.m.; F., 2 p.m. to 4 p.m.	31.1 VUB	Bombay, India.	Testing M. W. and S., 11.15 p.m. to 12.30 a.m.	
		S., 8 a.m. to 1.30 p.m.; Sun., 12.30 p.m. to 4 p.m.	30.75 —	Agan.	W. and S., 8.30 a.m. to 9.45 a.m.	
49.7 PK3AN	Sourabaya, Java.	From 11.10 p.m.	30.57 LSOR	Buenos Aires, Argentine.	10.30 a.m. to 1.30 p.m. daily.	
49.5 W3XAU	Philadelphia, U.S.A.	Daily, 11.30 a.m. to 4.30 p.m.	30.5 TIH	Heredia, Costa Rica.	(Late NRH): Daily, 2.30 p.m. to 3.30 p.m.	
49.5 W3XAL	Cincinnati, U.S.A.	Daily, 11 p.m. to 3 a.m.; 5.30 a.m. to 8.30 a.m.; 10.30 a.m. to 6 p.m.	30.5 —	Poznan, Poland.	W., 6.15 a.m. to 9.15 a.m.; F., 6 a.m. to 12.30 p.m.	
49.4 —	Vienna.	T., 9.30 p.m. to 11.30 p.m.; F., 1.30 a.m. to 2.30 a.m.; Sun., 9.30 a.m. to 11.30 a.m.	30 —	Belgrade.	T., 7.30 a.m. to 8.30 a.m.	
49.34 W9XAA	Chicago, U.S.A.	Daily, except M., 11.30 p.m. to 1.30 a.m.; 11.30 a.m. to 2.30 p.m.	29.5 HS2PJ	Bangkok, Siam.	M., 12.30 a.m. to 3.30 a.m.	
		M., 3.30 a.m. to 5.30 a.m.; 9.30 a.m. to 12.30 p.m.	29 —	Saigon, Indo-China.	Irregular.	
49.22 VE9GW	Toronto, Canada.	Daily, 11.15 p.m. to 4.30 a.m.; 8.30 a.m. to 4.30 p.m.	28.98 LSX	Buenos Aires, Argentine.	Daily, 11.30 a.m. to 1.30 p.m.	
49.18 W3XAL	Boundbrook, N.J., U.S.A.	Daily, except M., 9.30 a.m. to 10.30 a.m.; 2.30 p.m. to 5.30 p.m.	28.25 VK2ME	Sydney, Australia.	Irregular.	
49.1 VUB	Bombay, India.	Testing, T., Th., Sun., 9.45 a.m. to 10.15 a.m.	28.2 PLR	Bandoeng, Java.	Daily, from 11.10 p.m.	
49.02 W2XE	New York, U.S.A.	Daily, 11.30 a.m. to 5.30 p.m.	26.1 KAI XR	Manila, Philippine Is.	Relays KZRM: Irregular.	
49 F3ICD	Saigon, Indo-China.	Daily from 11 p.m.	25.65 KIO	Kauhuku, Oahu.	Irregular; sometimes 6.30 a.m. to 12.30 p.m.	
48.86 W3XK	Pittsburgh.	Th. and Sun., 9.30 a.m. to 4.30 p.m.	25.61 XDA	Mexico City, Mexico.	Testing.	
48.8 KAI XR	Manila, Philippine Is.	Daily, except M., 7.30 p.m. to 2.30 a.m.	25.53 G5SW	Chelmsford, England.	Daily, except Sun. and M., 6.30 a.m. to 11.30 a.m.	
48.7 VE9CL	Winnipeg, Canada.	Daily, 10 a.m. to 1 p.m. Till 4.30 p.m. on W.	25.5 PK6KZ	Macassar, Java.	Daily, except S. and Sun.; 12 midnight to 1 a.m.	
48.62 HRB	Tegucigalpa, Honduras.	T., Th., S. and Sun., 11 a.m. to 4.30 p.m.	25.42 —	Vienna.	From 11.10 p.m.	
48.3 HKA	Barranquilla, Columbia.	M., W., F. and Sun., 12.30 p.m. to 2.30 p.m.	25.4 12RO	Rome, Italy.	W., 1.30 a.m. to 3.30 a.m.; Th. 9.30 a.m. to 11.30 a.m.; 9.30 p.m. to 11.30 p.m.	
46.3 3ZC	Christchurch, N.Z.	W., 3 p.m. to 4.30 p.m.; F., 7 p.m. to 8.30 p.m.	25.34 W9XAA	Chicago, U.S.A.	Daily, 3.30 a.m. to 5.30 a.m.; 7 a.m. to 9.30 a.m.	
48 CN8MC	Casablanca, Nth. Africa.	Relays Rabat: T., 7.30 a.m. to 9.30 a.m.; 11.30 p.m. to 12.30 a.m.; W., 7.30 a.m. to 9.30 a.m.	25.3 KAI XR	Manila, Philippine Is.	Testing, 11.30 p.m. to 12.30 a.m.; 5.30 a.m. to 6.30 a.m.; 8.30 a.m. to 9.30 a.m.; 10.30 a.m. to 12 noon.	
47.81 HKC	Bogota, Columbia.	Daily, except M., 1 p.m. to 4 p.m.	25.27 VUC	Calcutta, India.	Relays KZRM: Irregular.	
47 CT8AG	Funchal, Madeira.	F. and S., 9.30 a.m. to 11.30 a.m.	25.25 W3XK	Pittsburgh, U.S.A.	Testing.	
46.6 —	Moscow.	T., Th. and S., 11.30 p.m. to 12.30 a.m.	24.46 PLM	Bandoeng, Java.	Daily, 4.30 a.m. to 2.30 p.m.	
45 SKR	Constantine, Algeria.	T. and S., from 9.30 a.m.	23.28 —	Rabat (Radio Maroc).	From 11.10 p.m.	
44.6 VRY	Georgetown, British Guiana.	Th., 11.45 a.m. to 1.30 p.m.; M., 10.15 a.m. to 1.30 p.m.	21.5 —	Bucharest.	Sun., 11 p.m.	
		From 12.30 p.m.	20.95 G2NM	Sonning-on-Thames, England.	Th. and Sun., from 6.40 a.m.	
43 EAR110	Madrid, Spain.	W. and Sun., from 10 a.m.	20.5 XDA	Mexico City, Mexico.	M., 6 a.m. to 8.30 a.m.	
42.9 CTIAA	Lisbon.	S., from 9.30 a.m.	19.84 HVJ	Vatican City, Rome.	Daily, 7 a.m. to 7.30 a.m.	
42 HKX	Bogota, Columbia.	1.30 p.m. to 3.30 p.m.	19.72 W3XK	Pittsburgh, U.S.A.	Irregular.	
41.7 VSIAB	Singapore.	T., Th. and S., 2 a.m. to 4 a.m.	19.50 W2XAD	Bandoeng, Java.	Th. and Sun., 12.30 a.m. to 4.30 a.m.	
41.7 HKF	Bogota, Columbia.	2 p.m. to 3.30 p.m.	18.8 PLG	Bandoeng, Java.	Daily, except Sun., 5.30 a.m. to 7.30 a.m.	
41.6 —	Teneriffe Radio Club.	Irregular.	17.25 JIAA	Kemikawao, Japan.	From 11.10 p.m.	
41 Radio Vitus	Paris, France.	Testing.	16.9 H8J	Bangkok, Siam.	Irregular.	
40.7 XEP	Nueva Laredo, Mexico.	Irregular.	16.8 PLF	Bandoeng, Java.	Sun., 11.30 p.m. to 2 a.m.; M., 5.30 a.m. to 7.30 a.m.; W., 12.30 a.m. to 2.30 a.m.; 5.30 a.m. to 7.30 a.m.	
40.2 YR	Lyons, France.	Daily, except M., 4 a.m. to 5 a.m.	16.55 W9XAA	Chicago, U.S.A.	Irregular.	
39.8 —	El Prado, Riobamba, Ecuador.	F., 1.30 p.m. to 3.30 p.m.	16.3 PMC	Randoeng, Java.	From 11.10 p.m.	
37.76 HSP	Bangkok, Siam	Irregular.	16.3 PCK	Kootwijk, Holland.	Daily, from 6 p.m.	
37.50 JIAA	Kemikawao-Cho, Japan.	Irregular.	15.93 PLF	Bandoeng, Java.	From 11.10 p.m.	
			15.9 XDA	Mexico City, Mexico.	Daily, 3.30 a.m.	
			15.5 —	Nancy, France.	Daily, 8.40 a.m.	
			15.05 LSG	Buenos Aires, Argentine.	Irregular.	
			14.55 PMB	Bandoeng, Java.	From 11.10 p.m.	

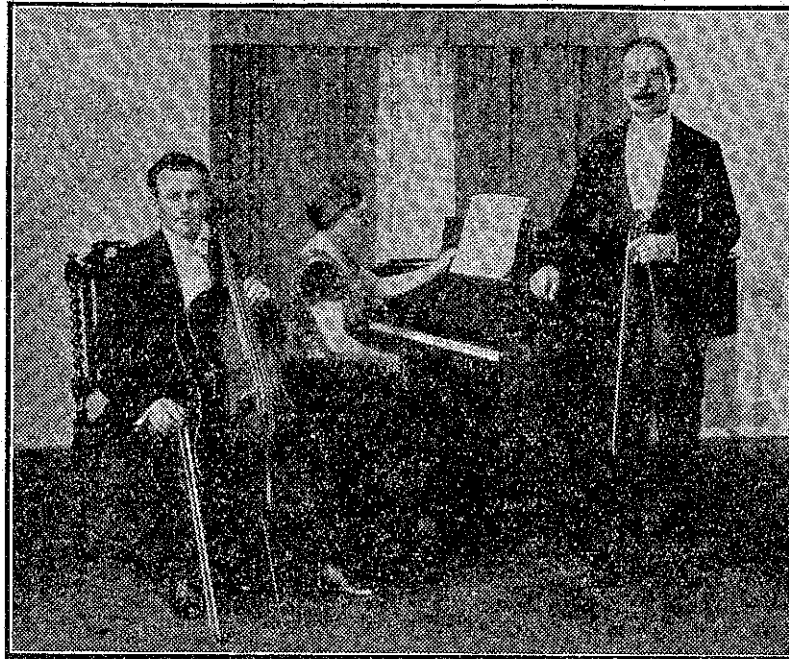
## Earthquakes and Seismographs

(Continued from page 3.)

an onion. There is good evidence that the outer layer is about 30 miles thick and the basement rock is composed mostly of granite. There seems to be a well-defined surface of discontinuity (i.e., a break of rock type) around this depth. Then the next thick layer seems to have a break at about 1500 miles below the earth's surface. The nature of the rocks in this stratum is thought to be darker and heavier than that in the upper and something like basalt rocks.

Some authorities consider that minor breaks also exist at 75, 250, 750 and 1100 miles below the surface, but it is a fairly well agreed fact among seismologists that the main breaks or junctions of layers occur at 30 and 1500 miles below the surface. Regarding the central core, the evidence available indicates that it must be homogeneous to a high degree, very rigid and dense—more dense probably than steel. Both temperature and pressure existing there must be of a high order, but the state of balance of these forces is not quite understood.

Now in order to get a better idea of the propagation of the earth waves, if we look at the clock and



**A TRIO FROM THE WELLINGTON CHAMBER MUSIC PLAYERS.**

A trio of Wellington's leading artists who recently performed at 2YA. From left to right: Claude Tanner (cellist), Evelyn De Mauny (pianist), and Leon De Mauny (violinist).

—Jauncey, photo.

imagine it represents a section through the earth with New Zealand represented by the figure 7 and say the vibrations of the Napier 'quake would pass around the earth's outer layers in the direction of 8, 9, 10, etc., i.e., in a clockwise direction, and simultaneously there would be a series of waves passing around in a counter-clockwise direction. A further series of waves would be found to be passing through the earth close to the inner core.

Yet another type of wave has to be accounted for. This is called the ground wave, and comes in after the transverse and longitudinal waves because it is composed of the energy of these waves that have been reflected from the various layers and further reflected from the floor of the ocean on the air itself. It travels right around the outer ground-level skin, and is the strongest of all the waves.

Thus when all these incoming waves arrive in close succession, we have an explanation of the complex curve recorded.

Actually the complete motion of a particle of matter was carefully analysed in a Japanese earthquake, and subsequently a model was made which proved to be like a huge loosely-tangled knot of yards of string.

In spite of the fact that the curve record is very complex, seismologists can interpret the irregularities very accurately. To give just one instance that happened immediately after the Murchison 'quake, it may be recalled that an observatory in Ottawa, Canada, announced that a 'quake must have taken place at the latitude and longitude of Murchison and calculated the time to be only one minute later than it occurred.

### Seismographs.

THE seismograph itself is very sensitive owing to the mechanical arrangements for magnifying the actual movements that it detects. The record is made by either a beam of light

focussed on to a slowly-moving photographic paper or a solid stylus scratching its motions on a smoked paper disc or cylinder.

Two arms set at right angles are oriented in a north-south and east-west direction to record the relative amount of motion in each plane.

A central mass, consisting of a heavy weight, ranging even up to tons, is delicately pivoted or suspended, and upon it is attached the recording arms or mirrors in the case of a beam of light.

What takes place when an earthquake wave comes along is that the supports move and the central mass remains more or less fixed because of the principle of inertia on which the instrument is built. Thus we see that the actual motion is recorded by and on the supporting or balancing outer framework.

Another type of seismograph that is very sensitive is one that uses a radio circuit to give it the required accuracy.

The fundamental principle on which this instrument is constructed is that a cylindrical mass several hundred pounds in weight is suspended by a wire 80 feet long, and has a large plate of a condenser fixed at the bottom. Another condenser plate is held a little distance away and is connected into the circuit. Any variation in the distance between the two plates sets up audio frequency sounds, which are ultimately converted into a series of waves on a recording device.

### The Science of Seismology.

SEISMOLOGY is a fairly new science, but seismographs, of a type, were used by the Chinese hundreds of years ago. Much has already been accomplished, as mentioned earlier, but many problems still remain to be solved. There is the question of "continental drift," by which is meant the view held by some authorities that the continents themselves are more or less afloat on the lower layers of the earth, much the same as waterlogged pieces of wood. It has been stated that there is a measurable amount of lateral motion across the earth's crust by the North American

Continent within the lifetime of an average man.

Seismology, aided by geology, has indicated where mountain chains may be borne where there are now deep seas.

Men of all nations have taken up the study, but the Japanese have led the way, aided by the fact that they experience thousands of earthquakes every year. The late Professor Omari was no doubt one of the greatest authorities on this subject.

It was he who warned the Japanese authorities of the likelihood of impending earth movements in certain areas of structural weaknesses; and in view of this warning the majority of the population were evacuated to other regions. Subsequently earthquakes did take place in the locality, but the toll of life was considerably lesser than it would have been had his warning gone unheeded.

### Future Earth Movements.

THE question naturally arises as to whether earthquakes can be predicted, to which I answer "Yes, provided a geological time scale is used."

Man, with his average span of three score years and ten on this earth of ours fails to comprehend the true age of the earth, which is of the order of 1,500,000,000 years.

On geological evidence, earthquakes may continue in a region for a long period. New Zealand, in particular, must look to that narrow rift in the sea floor which runs from the vicinity of the East Cape over a thousand miles to Tonga, as the evidence of crustal weakness and cause of many of her earthquakes.

The study of the mountain systems of the New Zealand-New Guinea areas and elsewhere right around the whole Pacific by scientists of all nationalities, will, in due course, enable us to have greater warning, and therefore preparedness for future earthquakes that undoubtedly will come in the course of history.

I will conclude by quoting the following remarks of Professor Bartrum, of Auckland University, with which I heartily agree:—

"We in New Zealand are living in a fool's paradise, in that we are making no adequate attempt to study earthquakes and their causes.

"New Zealand is known to be liable to earthquakes of varying intensities, and there is no reason to suppose that the islands have yet reached a stable state. There is a yearly average of about 70 earthquakes strong enough to be felt by humans. At the same time little real attention is paid by the Government to the study of seismology, and I would urge on all to attempt to have this state of affairs remedied."

In the course of this lecture to the Justices of the Peace Association, Professor Bartrum pointed out that very frequently warnings of a severe earthquake were given some time before it occurred, in the form of strange noises of a very low wave length, which might be heard by some people and be inaudible to others. The cause of these noises was a series of small earth jars, brought about by the breaking of uneven conditions between planes of rock, which would eventually slip extensively and cause the big earthquake.

AS announced in our last issue, Mr. Will Lawson, the much-travelled New Zealand poet and writer, will, on May 22, speak from 2YA on "Impressions of the Far East." The time of this talk has been altered, however, from 7.40 p.m. to 8.15 p.m.

## ORMOND DIFFERENTIAL CONDENSERS

A supply of differential condensers is now available. Fitted with Vernier control knob to give finest possible control. .0002 MFD.

PRICE:

**7/6**  
each

Post Free.

**The ELECTRIC LAMP  
HOUSE LTD.**

27 Manners Street,  
WELLINGTON.



## N.Z. Short-wave Club

## The Secretary Writes

**PENDING** confirmation, the next meeting and lecture will be held on Thursday, May 28 next, at 7.30 p.m., in Messrs. Nimmo's Concert Hall, corner Willis and Bond Streets, when the president, Mr. F. W. Sellens, will take for his subject "Wavelength Calibration," showing an easy way of finding stations. Any shortwaver in Wellington on that date will be welcome.

Country members will be interested to note that we are getting ready a complete list of stations and times of operation to send to them. In addition, I hope to be able to enclose a few notes of interest (not Treasury notes, as a member suggests). This will enable us to keep in touch with members until the suggestions sent in can be put into operation.

Any shortwaver in the Auckland district who attends the Auckland Radio Exhibition is invited to introduce himself to NZ12W, Mr. L. Saunders, who will be at the "Radio Record" stand and will be very pleased to meet members and prospective members. In his absence Mr. Colin Smith, of the "Record" (NZ60W), will supply information and collect subscriptions. It is hoped that Q.S.L. cards will be available for sale at the stand to bona-fide members of the club.

Several stations have sent to Headquarters Q.S.L. cards in reply to members' reports. These I will forward on to their destination. Members are asked to make their reports as complete as possible as, owing to the new postage rates, it is an expensive matter to reply to a note saying, "I heard you so-and-so; please send me a card."

We missed a special announcement from W3XAL in Wellington, but, fortunately, NZ99W, Mr. Gee, of Otangihaka, wrote in giving us full details. A number of reports were sent in, which I handed to Mr. Sellens, who asked me to thank members on his behalf. From these reports we can make some interesting comparisons of reception in different localities. The Bay of Plenty seems a very favourable place for shortwave reception.

Yours, MAC.

## Short-wave News

## KEL Testing.

**FURTHER** to my report in May 8 issue, re Californian station working JIAA through Manila, I picked this

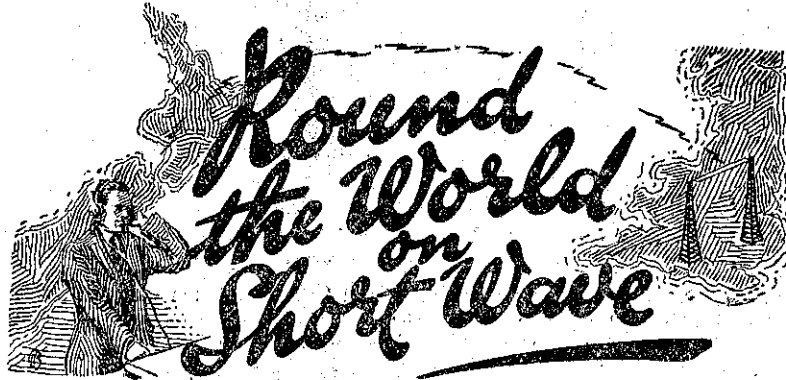
After trying out dozens of imported short-wave sets, it was believed that stronger reception with less noise could be obtained. A new design covering New Zealand conditions was built and, on testing, after final adjustments, it proved a leader in the short-wave world. This set is now commercially called the

## "ADD-A-PHONE"

Every purchaser will be a satisfied user, for, as well as full instructions in searching the world for interesting items, the designer, MACK, of

## MACK'S RADIO

Kent Terrace, WELLINGTON. is always available to show just how everything works.



**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.

station up direct on the 6th. Details are as follow: KEL (10.410 kilo.), Bolinas, California. To be found about one point on dial above VK2MB, Sydney. I stated previously that it was a broadcast station. This is not the case. As they also gave the call KRF they were evidently rebroadcasting them. I picked them up at 5.45 p.m., when they were about R7 (reaching R8-9 by 6 p.m.), working JIAA direct. Programme com-

## DX Notepaper

**DXers!** Write for that verification on D.X. notepaper and avoid missing out important details. Takes a quarter of the time to write out, too. Obtainable from P.O. Box 1032, Wellington, in two-dozen lots (minimum order), price 1/6. or six dozen for 4/-, post free.

prised a selection of gramophone records. They stated they were testing with the latter station. A few evenings ago this station working through Manila put over greetings to the Emperor of Japan from the Japanese Ambassador, who was seated in the room at his hotel in New York. As greetings were transmitted the English translation was given by the Ambassador's secretary. This was put over from about 11.45 p.m., April 30, to 1.30 a.m. next morning. Station KEL is owned by the Radio Corporation of America and Communications Inc.—M. Walker (Wellington).

## Recently Heard Short-wavers.

**STATION NRH**, Costa Rica, Central America, has been heard operating on 29.8 metres for the last month. Reception is even better than on the previous wavelength of 30.5 metres. It is now possible to receive him 100 per cent. throughout his one hour's transmission. His special test on 30.5 metres to Mr. R. L. Jones (Wellington) on March 28 was not received here too well. Before commencing transmission his general broadcast was carried out on 29.8 metres. He came through very well indeed, and once he called Mr. Jones and referred to his special broadcast. Afterward, however, he changed his wavelength to 30.5 metres and he was only 25 per cent. readable.

**WHY?**

Kingsford Smith uses Burgess Batteries. Commander Byrd uses Burgess. More Burgess Batteries are sold in New Zealand than any other make. Why?

**BURGESS RADIO BATTERIES**

call, as far as I could make out, was HKV. He has been heard acknowledging reports from listeners, and the word "Columbia" has been mentioned, so it is probable the correct call sign is HKD. I am writing for a verification and data.

On May 7, at 11.45 p.m., a station was heard on 47 metres playing music, and an announcement was made that it was "Patan, California, U.S.A." Strength was R9, and very clear. I would like to hear from Mr. Mark Churton, of Auckland, and Mr. Ellis, of Okato.—A. P. Morrison, Brooklyn, Wellington.

## Free Licenses for Unemployed

**RADIO** is considered to be practically a necessity in Germany, and the Government is considering a scheme whereby persons who have been out of employment for six months or more shall continue to work their receiver without payment of a license fee until such time as they are earning again. The same privilege of free radio is accorded the blind and those who are suffering through war service.

## Enthusiastic Radio Amateurs

## Clandestine Listening

**THAT** his establishment is "full of clandestine wireless amateurs" is the complaint of the headmaster of a famous Paris school. He states that pupils are constantly "making radio sets on the sly," installing them in their dormitories, and sometimes concealing them under their beds. Certain pupils, he declares, have hidden receivers in their classroom desks, and when they have appeared to be listening to their professors, have actually been holding phones to their ears.

## FOR SALE OR EXCHANGE

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

**4-VALVE** Browning-Drake, professional wired, complete with cabinet, accumulator, A, B and dry C batteries, Amplifier Speaker. £11 cash. Fryer, Allardice Street, Dannevirke.

**YOUTHFUL** poise of figure secured by taking Youth-O-Form Capsules. 20lb. reduction 6 weeks. 6/6 posted. A. C. Timms, Chemist, Pahiatua.

**DOUBLE** Chins, Enlarged Busts, Producing Hips reduced to shapeliness with Youth-O-Form. 6/6 posted. A. C. Timms, Chemist, Pahiatua.

**FAT** men secure slim contour and active muscles of youth by taking Youth-O-Form Capsules. 6/6 posted. A. C. Timms, Chemist, Pahiatua.

**OH**, my corns! "Corneata" is the remedy. It eats them away. 1/3 posted. Sole Agent: A. S. J. Lamb, Karangahape Road, Auckland.

**HEADACHES.** Neuralgia banished. "Migrol" gives instant relief. 1/6 and 2/6. Send stamped addressed envelope for sample to Lamb, chemist, Auckland.

**Easy Housekeeping.**

IN New York housekeeping has no horrors. It is an incidental affair taking but a few moments of one's day—and performed in that brief period with enchanting efficiency. The two problems of the New York housewife—shortage of labour and of space—have been so triumphantly met that they have become positive assets! Labour is so expensive that the American woman turns to labour-saving tools. Space is so expensive that she lives on an intensive plan—and finds herself dowered with the luxury of convenience—of having everything at hand. When your kitchen floor is exactly one yard square, you can't get weary walking from one end to the other!

**Tribute.**

THUS writes Ethel Mannin, gifted writer and staunch upholder of her own sex: "The loyalty which is part of the love of women in general and of mothers in particular is beyond all littleness of reasoning and logic. It is foolish, if you like, but magnificent in its pitiful folly as in its faith and courage. It has the epic grandeur of tragedy and the infinite tenderness of the love that many waters cannot drown. It is as unquenchable as love and is enduring as long as love lasts."

**Do You Know?**

THAT the success in cooking steak is to stew it first with a little fat in a pan over gentle heat till the fat is absorbed, then add boiling water and proceed as usual, but if water is added too soon the steak becomes tasteless. That potatoes bake more quickly and easily if soaked for a few minutes in hot water before being placed in the oven? That English hostesses are leading the way in the demand for unusual teas, among the most popular being jasmine tea, which has the essence of fresh jasmine flower mingled with the choicest green tea leaves? That egg stains on spoons will quickly disappear if you rub them with a cork dipped in salt? That the good old card game of bezique has returned to social favour?

**An Admirable Idea.**

A SUGGESTION recently made in England was that, on the Queen's birthday, every woman should be asked either to lunch at a restaurant offering all-Empire foods and drinks, or to give a party at home with a similar menu. The restaurants to be asked to give a percentage to charity, hostesses to take up collections, while Empire foods, and more especially Empire drinks and coffee, would have an advertisement. This seems an example worthy of emulation.

**Chic.**

IT is well to remember that buttons abound, some of oddly cut crystal, some clear white with colour glimmering through; china flower buttons, attractive sets with links for tailored blouses. Wooden buttons, carved, painted and enamelled; coral and turquoise sets with earrings to match; and leather buttons with belts to match. Also that becoming smallish draped turbans and tricorns are much in the mode,



and very desirable for the woman past her first youth to whom the beret is barred, or should be. Also, it is good style to wear a light frock under a dark coat, which gives admirable scope for varying the ensemble.

**A Change for the Better.**

SPEAKING for myself, says a vivacious chronicler, I like my longer skirts. I can sit down in comfort without having to grab my skirts to make them cover all that a skirt should. And I'm tired of having no shape. Even if my waist does need corsets to help locate it, surely that's no worse than pretending I haven't got a waist at all. Away with short skirts and low necks and slipping shoulder straps. Away with stockings that have to be pulled up so tightly that they ladder almost if the wind blows on them. And hail, all hail, to our new sensible and becoming garments. Mark my words, it won't be long before middle-age joins in rejoicing, too, but I'm afraid there

will be a hullabaloo when they realise that longer skirts are only a step toward feminine trousers!

**No Longer Lonely.**

THREE years ago a lady in Finchley was distressed by the loneliness of young servant girls who had come from the provinces. They had no friends with whom to spend the seven hours of their "Sunday out," and nowhere to spend them in safety. So she hired a good-sized room, provided tea and supper, and invited them to come for rest and recreation. The eighty girls who responded crowded out the place, larger premises had to be taken, and now there are five centres in various parts of London trying to cope with this undoubted demand. These "wayfarers" clubs have their headquarters in Portugal Street, Kingsway. Each centre has a permanent helper, but the members themselves help to run it, and even their boy friends—who are wel-

come guests—can join its visitors' service corps, and help too. Though the wayfarers have a "rule" founded on the well-known "charity" chapter of 1 Corinthians, and a hymn of their own, they enjoy games and dancing on their Sundays—they even have a ukulele band of their own, as well as a professional pianist, to dance to.

**The Cult of Colour.**

FOR a bedroom with a dull outlook, a cheery impression may be obtained by treating walls and ceiling alike with a pale shade of carnation pink distemper. The door should be painted several shades deeper, and all other woodwork may be painted in a shade of soft pale orange; while a floral cretonne with clear green background, patterned with bold design in pale yellow, orange, and tobacco brown foliage is suggested for curtains and bedspreads. For rooms facing a sunny aspect, tones of mauve are delightful. This colour makes a delightful background for floral cretonnes, and goes especially well with mahogany furniture. Another delightful scheme for a bedroom is attained with a combination of daffodil and rose. Yellow walls and ceiling, dull rose carpet and bedspread, and fadeless artificial silk curtains of the same flower-like toning, have proved very successful.

**Our Competitors.**

A WRITER of distinction thus discourses: The Brighter Male is coming in again! Every few years there is a mild revolt against the subfusc hues of civic and ceremonial attire. Why should mere man not irradiate his office by going there in chromatic garments of the most misguided golfer, or sit at the dinner table looking less like the butler? It is said that New York tailors have resolved that their clients shall be robed in more colourful garb to assist the "economic renaissance" and encouraged to wear large checks and plaids. So arrayed, the buoyant male will be fit companion for the female of his species with trailing skirts and perchance an hour-glass figure. Who knows, he yet may have to complete himself with mutton-chop whiskers!

**The Quest of Beauty.**

NEVER be persuaded to use face creams containing animal fats, as even a small proportion in a cream will encourage the growth of superfluous hair. There are lots of good vegetable creams nowadays from which may be selected a preparation to suit each individual need. Graceful and well-kept hands, too, can be the portion of most women. Indian women, who are very insistent on the cult of allure, use up their odd moments by gently massaging their hands with olive oil, which they dip from a little dish beside them. They stroke from the finger-tip downward, exactly as though working on a tight glove. Another simple exercise which helps to keep the hands young is to shoot the fingers out time after time to their fullest extent. Also turn the wrists round and round in the manner of a conjuror with cards. These small aids take but little time, and do help to give a woman the sense of being well-groomed.

## Our Cookery Corner

**Yorkshire Pie.**

**Ingredients:** ½ lb. of cooked lean ham, 2 eggs, a pint of milk, and seasoning to taste.

**Method:** Mince the ham and put into a well-buttered pie dish and pepper it liberally. Make the milk hot, and pour over the eggs, which have been lightly beaten, add a pinch of salt, and pour the custard over the ham. Bake slowly at first, and then quicker until the custard is set and all is nicely brown on top.

**Spaghetti and Cutlets.**

**Ingredients:** Slices of crisp toast, a tin of spaghetti in tomato sauce, and small mutton cutlets.

**Method:** Lay the toast, broken in pieces, on a flat dish, make the spaghetti very hot and put on the toast, and lay the cutlets, that have been nicely grilled, on top, and serve very hot.

**Braised Veal Cutlets.**

**Ingredients:** 1½ lb. of veal cutlets, cut into small pieces, 1 oz. butter, a rather thick slice of streaky bacon, one small onion, a little white stock, or, better still, of white wine, pepper and salt, and orange juice.

**Method:** Put the pieces of veal into a shallow dish or casserole, add the butter, the bacon cut into strips, 1 onion finely chopped, pepper and salt, and a wineglass of white wine or white stock.

Cover the pan tightly, place in a moderate oven, and cook for 1½ hours. This is a method of cooking between boiling and roasting. The meat cooks first in the steam, and, after absorbing all the liquid and juice, it browns. Meat so cooked is tender and tasty, and none of its food value is lost.

When nicely browned, place the cutlets on a hot dish, and squeeze the juice of half an orange over them. Put a little salt and water into the casserole, and boil three minutes for the gravy. Serve very hot, accompanied by a dish of brown baked potatoes.

**Harlequin Jam.**

**Ingredients:** 6 lb. marrow, cut in dice, 5 lb. pres. sugar, 8 oz. root ginger, well bruised, 8 oz. glace cherries, halved, 8 oz. citron peel, cut in dice, 8 oz. crystallised ginger, cut in dice, large tin crushed pineapple, 2 lemons, rinds peeled, juice squeezed.

**Method:** Cut the marrow into dice and sprinkle it with 1 lb. of sugar and leave for 48 hours. Then boil it gently with the root ginger till tender, but not broken up at all. Add the other ingredients and boil for five minutes. Then add the other 4 lb. sugar, boil for ten minutes, and put in hot jars.

**Savoury Parsnips.**

SCRAPE six medium-sized parsnips. Cut in halves down the middle. Parboil them and drain. Have ready a tin in which two or three ounces of butter or dripping have been made very hot. Put in the parsnips and cook in oven until tender and well browned. Serve hot with joint.

**FAMA** For Bathrooms, Lavatories, Sink-tops, etc.  
FAMA STONEWOOD FLOORING CO., Wellington.

HAVE you renewed your subscription to the—  
"Radio Record and Home Journal."  
12/6 in Advance; 15/- Booked.  
BOX 1032, WELLINGTON.

# ... With ... BOOK and VERSE

By "John O'Dreams"

## Our Fortnightly Book Review

### Darley Steps and Other Verses

By C. R. Allen

BOOKS of verse written by dwellers in this Dominion are somewhat rare events in our literary history, and it was with keen and critical interest that I opened the slim volume of verse that is Mr. C. R. Allen's latest contribution to belles-lettres.

Mr. Allen is an accomplished litterateur, being in turn novelist, playwright, musician, and poet; and in reading his latest work I am struck anew by the force of his imagery, his acumen, spiritual vision, and response to the radiance and beauty of the good green earth.

Imaginative fantasy is allowed full scope in "Darley Steps," a narrative poem which enthralled by its atmosphere of beauty and terror, and ends on a note of peaceful loveliness.

*Darley River brimmed between  
Golden banks this afternoon.  
Drowsy ring-doves seemed to croon  
"All that was has never been.  
There is but this golden day."*

I counsel aspiring young writers to study this poem for its sustained effect, wealth of detail, sure touch, and fitting versification.

The elegiac "In Hoc Signo," suggested by Memorial Window in chapel of Collegiate School at Wanganni, pays tribute to heroes who have passed on, and sets in juxtaposition our own "red rata, clematis and fern" with beloved Old Land.

*Far, far away in some soft English glen  
Through the long dusk is heard the  
nightingale.  
Here in this land of loose-limbed smiling  
men,  
Clamorous creek and pastured hill and  
dale.  
Bell-birds are tolling by a swift stream-  
side.*

"A Singer of Songs" is effective in terseness, and "Death of Little Pan" races along in an ecstasy of youth and joy—

*For the dawn had come bright as a  
scimitar hurled  
From the fortress of night at the rim  
of the world. . . .*

until destiny crashes and all delight is ended.  
For its poetic apprehension of the

passing show of life and death, spiritual awareness, and rhythmic and picturesque verse form, "The Singing Heart" will be chosen by many as the best poem in the book. Briefly, it is the story of "Peter, the giant of Lushdale," Mary his wife, his sons, "who were strong and wild," and David of the fragile body and singing soul. If space permitted, one would fain quote largely from this beautiful allegory that is instinct with quick response to nature's moods and the varying life of humanity.

*Rustled the leaves of the poplar,  
Their neither sides showed grey.  
Then an amber moon looked over the hill,  
And birds and branches were deathly  
still. . .*

And again:  
*Though all the children of God's earth  
At sickle-time must fall,  
And the stout trees may be uprooted,  
The little flower that is born  
Like a frail child amid the corn  
Is stronger than them all.*

Mr. Allen is a poet of nature. Obviously at one with the joys of the countryside, he intertwines the beauty of the world with his mystical imagination, and expresses it in magical cadences for him who has ears to hear. The lovely poem "Persephone" tells, in exquisite versification, of the first coming of Spring, and "Sentinel" conducts us to a wood of enchantment.

The futility of regrets for lost youth is given expression in the gravely beautiful "The Unwritten Page":

*These may not be,  
The old delight, the wonder of the  
morning,  
And leaves that turned upon the golden  
age.  
And though to me  
Their blots and errors are a bitter  
warning,  
Here's a clean quill for the unwritten  
page.*

An interesting and notable collection, which by virtue of poetic equipment, an other-world quality somewhat difficult to define, and mystical interpretation of life's complexities, will enhance the author's already established literary reputation.

"WORLD Without End," by Helen Thomas, is unique in fine sincerity and simplicity of narration. Under the thin disguise of changed names, the book tells the story of the married love of the poet Edward Thomas and his wife; their young children, the homes they lived in, the hardness of the struggle with material things. The author sets before us her poet-lover, his beauty and charm, splendid intellect, delightful comradeship, and occasional moods of dark distrust and despondency; in the process unconsciously revealing her own great qualities of courage, devotion and gaiety of heart. In this somewhat disconcertingly frank story, various characters are limned, one surmises from life; notably of a great London editor, who proved a very present help in times of stress almost amounting to poverty. There are beautiful descriptions of days and nights in out-of-door England, and long tramps by husband and wife who were at one in their love of all things beautiful. Of the nightingale Mrs. Thomas writes: "Then out of the silence, out of the scent-laden, moonlit, dappled copse, comes a long, clear, vibrating note of purest tone. Low and tender at first, then the sweetness becomes strength, the tenderness passion, until in that wild note it is as if God speaks and we understand. All pain, all ecstasy, all despair, all love, are expressed." This is a beautiful story of a very perfect love, which the Great War ended. But somehow one feels as though one had no right to read it.

MISS ELIOT BLISS, still in her twenties, after taking a diploma in journalism, acting as sub-editor of a year book and as secretary-clerk to a parliamentary candidate, has turned her attention to novel writing, having just published "Saraband," while a volume of her poems is to appear later in the year. Miss Lesley Smith, in "Four Years Out of Life," gives an obviously sincere and very affecting account of her experiences as a V.A.D. in France in 1915, her book being yet another tribute to gallantry and heroic endurance of men and women during the terrible years when England was at war. Miss Vera Wheatley, in "Single-handed," has dealt well and wisely with the career of a faithful and uncomplaining daily drudge, who, in service at the age of 14, worked for eleven hours a day for a weekly wage of half-a-crown. Miss Wheatley's story is quite unbiased, and is permeated with such a revealing comprehension of the Muggies of the world, and what they thought and felt and endured, that one sighs with thankfulness to remember that such social conditions are now almost entirely of the past.

ENTERTAINING to a degree, and a most vivacious chronicle, is "—And the Greeks," by Charles Graves, brother to Mr. Robert Graves, who will be remembered as the author of "Good-bye to All That." The author is possessed of considerable literary skill, as was to be expected, coming as he does of literary stock, and takes his readers at a gay pace on a luxury jaunt through Europe. The pilgrimage passes through Deauville, Moritz, Murren and Monte Carlo; we rub shoulders with the smartest of smart sets, the most conservative of public school boys; we hear choice stories of well-known figures in the great world. We learn how the gayest of the gay and the richest of the rich dress and talk and act when away from their native heath. Celebrities, foreigners, gamblers and millionaires are presented in the literary hotchpot and rampant high spirits and gaiety are the order of the day. As an example of Mr. Graves's style may be quoted:

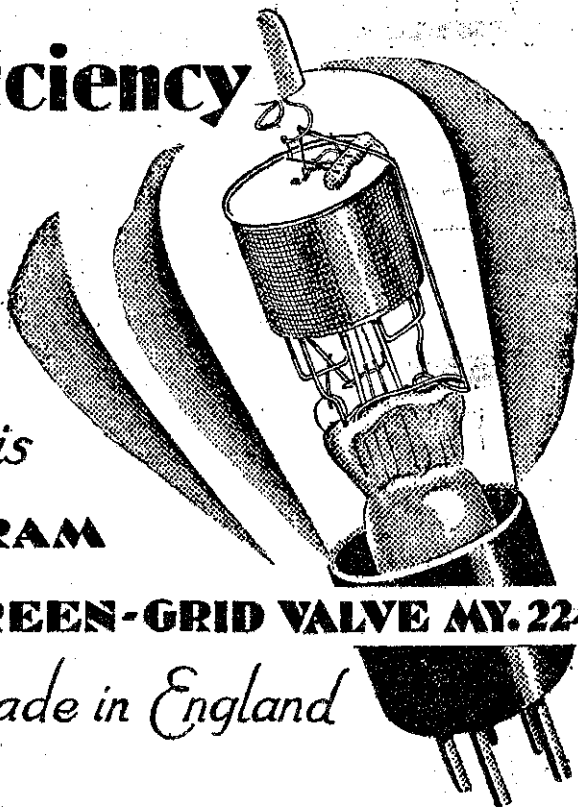
"What is the Lido, anyway? It is an island eight miles long, with two huge hotels, two medium-sized hotels, an immature nine-holes golf course, dozens of water bicycles, a gondola or two, a floating population of Italian princes, Spanish dukes, Americans, Old Etonians, and cocktail shakers. Everyone wears pyjamas all day. It is an orgy of slumber-suits. All day you bask. All night you dance. Foreign royalties aquaplane in the moonlight. Plump Dutchmen run up and down the beach taking exercise."

Charmingly light, frivolous to a degree, the book nevertheless contains brilliant thumb-nail studies of "certain people of importance" whom Mr. Graves encountered in his gambols in Europe. He is equally diverting when he discourses of Cairo or the proprietors of London restaurants. A pity to miss this clever and light-hearted travel-tale. And the illustrations are brilliantly executed.

POET, dreamer, novelist, Mr. Vernon Knowles is to be reckoned with in the literary field. The author of "The Ripening Years" will publish shortly a new novel entitled "Pitiful Dust," a striking and sincere narrative of frustrated love. It is prophesied that this book will create a furor of applause from those capable of appreciating clever characterisation, arresting dialogue and plot of admirable verisimilitude.

THE numerous people who have yearned to run a bookshop will find much to charm in a recent novel, "Albert Grope," in which the author, F. O. Mann, creates a delightful picture of one kept by Victorian Mr. Blowberry. . . . A book to read and a book to buy.

# Osram...noiseless efficiency



*This*

**OSRAM**

**SCREEN-GRID VALVE MY.224**

*is made in England*

If your radio incorporates the screen-grid principle you will find that its working will be far more efficient if you substitute an Osram MY. 224 for your present screen-grid valve. The new Osram series of 2.5 volt valves is definitely non-microphonic—the only valves that are truly insensitive to vibration or shocks.

You can test Osram '2.5' superiority at your Radio Dealer's. Ask to switch on any set, tune out all stations and tap the 224 or 227 detector. If it is microphonic the speaker will emit a pinging noise, indicative of imperfect reception. If the microphonic valves are replaced by Osram 2.5s, tapping will result in silence.

**Osram**  
2.5  
*ac* **Valves**

*Made in England*

Ask your dealer also to show you the full range of Osram 2.5 volt valves—MY.224, MY.227, MX.245 and MX.280.

Advertisement of the  
**BRITISH GENERAL ELECTRIC CO. LTD.**

37 Taranaki Street, Wellington.  
Brunswick Bldgs., 49 High Street, Auckland.  
Hannaford Chambers, 145 Worcester Street, Christchurch.

## Make your Set MODERN with the Silver Marshall 738

Here is the very latest and most interesting radio development—a self-contained, all-electric-operated converter which makes a

**Powerful Short-Wave Super-Heterodyne  
Out of any Broadcast Receiver**

The aerial lead is merely removed from the broadcast receiver and connected to the aerial terminal of the SILVER-MARSHALL 738; two leads are then run from the converter to the aerial and earth terminals of the broadcast set.

Simplified single dial tuning covering 18 to 206 meters.

## SILVER-MARSHALL Radio Sets and Radio Parts

Complete S.-M. Receivers  
and Cabinets.

Short-wave Sets, Chassis  
and Parts.

N.Z. Distributors.

FACTORY IMPORTS,  
LTD.,

THOS. BALLINGER &  
CO. LTD.,

98 Tory Street, Wellington.

Victoria Street, Wellington.

TO RADIO DEALERS.—Write to either of the above for particulars of available dealer territory.

## CONDENSERS

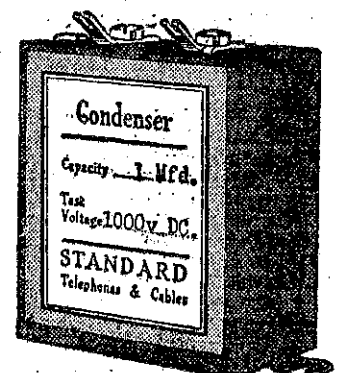
Made to the specifications of the  
International Standard Electric  
Corporation.

*Standard*

Up-to-date manufacturing processes have enabled Standard Condensers to be made in the most compact sizes possible, compatible with downright dependability.

Produced in the Standard factory at the rate of 10,000 per week, they can be sold throughout the world at prices that defy competition.

Capacities: .1 to 4 mfd.; test voltages, 500 to 2500 volts.



**Standard**  
*Telephones and Cables (Asia) Limited*

HEAD OFFICE: G.P.O. BOX 638, WELLINGTON.  
Auckland: P.O. Box 1897, South Island: L. B. Scott, Ltd., Christchurch.