

# THE RADIO RECORD

Published Weekly

REGISTERED G.P.O., WELLINGTON, N.Z., AS A NEWSPAPER.

Vol. III., No. 24.

WELLINGTON, FRIDAY, DECEMBER 27, 1929.

(Price, 3d.)

## In these December Days

*Gripping and Reflective Talk by Rev. A. B. Chappell*



**A**S I talk to you this evening, I ask particularly that you will, all of you, remember that I am guided in the choice of each of the subjects of my chats with you by the events that make an impression, from time to time, on our minds. You may think me this evening a little sombre in mood. Well, what of that? There are shadows in life, and it is good not to be afraid of them. Better to look closely at them, to see of what they are made, lest they become spectrally mysterious and affrighting. They are shadows now.

The year wears on. Another Christmas is upon us. We have reminder that life has a journey's end. The calendar speaks in a monitory voice. Nor is that all in the grey thought of these December days, hurrying on to their own and the year's end. A notable figure has passed from the life of our city and province and land and nation. Not even Bishop Cleary's great gifts of mind and heart could withstand the call to lay life down. You will, I know, readily forgive me if, musing, as so many of you are musing about these things, I let my thought run on this evening about these hastening December days and the other reminders that time passes from us all. If sombre, however, we need not be morbid, but rather wholesomely thoughtful.

Into the memorial urn of the past the ashes of another year are beginning softly to fall. Soon the record of its dead deeds will be all written, and the spent life be passed from reality to recollection, if, indeed, it have so much survival. It is a time for quiet meditation. True "Finis" has not yet been appended to Time's story: the grim prophets of the world's sudden end are still discredited. The earth swings on through its vast orbit, and another new year

**FROM IYA** is given a weekly feature talk by the Rev. A. B. Chappell that is welcomed by all listeners. His subject is chosen by Mr. Chappell entirely at his own discretion, and frequently is determined only at the last moment. Specially typical and appealing in its reflectiveness is the following, recently given, for the publication of which appeal was made by many listeners.

awaits birth. We shall be buoyant and optimistic as of yore; hope springs eternal. But for a little, as the old year's ritual honour is beginning to be duly paid, we do well to let its passing subdue us to soberness.

Not without reason is the calendar made. It is no arbitrary device. It is written in the circles of the sky; and as the great lines move across the page of space they mark the points that man has used for the ordering of his days. No magic moment may separate the years as human experience knows them. If no calendar were kept we might pass all unknowing on through their succession. Yet in the journeying of our planet these points of new departure are set, and our noting of them brings thought of human ends and beginnings. They preach to heeding ears a truth of great practical value—the truth that most things have an end. It is the great flywheel of workday wisdom, the steady influence of life.

A modern poet has arrestingly told his story of the first dawning of the ideas of time and death upon human understanding. In an Eastern land, far from Eden, a great tribe rose from the offspring of Cain. For a while they knew nothing of death. Life seemed endless, and time had no definition. Cain knew, alone of all this Eden-banished host, what death was; the murder of his brother was an ever-burning recollection. He kept his secret, and no thought of life's end came to check the wanton joy that

everywhere had sway. Then, one day, in the middle of some youthful games, a flying stone struck Lamech's son to the ground. His companions gathered about his breathless body; they brought playthings; and tried to arouse him from his sleep. But no such sleep as this had ever been known there. No response met their persistent pleadings: the boy was heedless. Into the group of the perplexed youths came Cain, and he whispered, "The boy is dead." The word brought no meaning until Cain told the things he knew of life's destruction. The people listened awestruck. "A new spirit from that hour came o'er the house of Cain." Before, there had been but the vaguest sense of time! now it gave to life a value past reckoning. Even the sunshine had a different appearance. "Work grew eager, and device was born."

It seemed the light was never loved before.

Now each man said, "'Twill go and come no more."

No budding branch, no pebble from the brook,

No form, no shadow, but new dear-ness took

From the one thought that Life must have an end.

To muse ever on death is to fail to live healthily. That way uselessness lies. But to live as if earthly life had no end, and opportunity no limit, is equally errant. That way lies Fools' Paradise. It were well to face the fact that an end is sure, that the only certain thing about life is its own uncertainty.

The wisely gay of olden days had a skeleton at their feasts. They were wise to have their feasts. They would have been foolish, to hasten their own dwindling to skeletons by neglect of

—Continued on page 2.

(Continued from front page.)

good cheer. The skeleton without the feast would have been, indeed, a sorry arrangement. But the feast without the skeleton would have lacked full proof of sanity and courage. They did not take their pleasures sadly, those banqueters of old; they were of the stuff out of which heroes are made. They dared to set together the joys and solemnities of life, to measure the gladness against the pain, and still be gay. They could bear the thought of the end of the feast without losing its relish.

With the approaching end of the year comes the "Cheerio!" of Rabbi Ben Ezra:

Grow old with me,  
The best is yet to be,  
The last of life for which the first was made.

Our times are in His hand,  
Who says, A whole I planned;  
Youth sees but half; trust God; see all,  
nor be afraid.

They prove their manhood who can read the gloomiest forecasts of some weird observer of the conjunction of planets, and then go undisturbed to their tailors and order their new suits.

Some day  
The cloud-capt towers, the gorgeous palaces,  
The solemn temples, the great globe itself,  
Yea, all which it inherit, shall dissolve,  
And like the baseless fabric of a vision

Leave not a wrack behind.  
Well, what of that? It were well to be decently clad and decently busy when the dissolution comes. We are clocks, says a literary medico, wound up for so many years. We must run

down, then, eventually. Very well; there's no reason in that for worrying others with the ceaseless release of our alarms.

It is not by either epicurean recklessness of all but pleasure, nor by stolid indifference to it, that life's triumph can be won. It comes with the wise use of every privilege, and the wise doing of every duty, in the light of days recognised as fleeting. In the doings of our earthly life, bounded as it is by a sure finale, time is of the essence of the contract. Opportunities seldom pay second visits. This evening's chance of showing kindness, to look no further, will not recur to-morrow.

Sturdy old Samuel Johnson taught Lord Chesterfield this lesson when the great dictionary was at last published. In the day of his dire need of help for its publication Johnson's appeals to the noted patron of the Arts met with cold indifference; but when, in spite of all difficulties, Johnson's task was accomplished, Chesterfield pressed his patronage. Johnson's memorable letter of dignified refusal was blunt in its intimation that the ignoble lord's kindness had "missed the bus." It concluded: "The notice which you have been pleased to take of my labours, had it been early, had been kind; but it has been delayed till I am indifferent and cannot enjoy it, till I am solitary and cannot impart it, till I am known and do not want it."

There is a page in Carlyle's diary that must have been blurred with tears as he wrote. It is the page that tells of regret that his dead wife had not received from him more thoughtful care than he had given. He blamed himself, perhaps with characteristic strenuousness rather than calm justice,

for neglect. She had been dutiful in the extreme, and he had loved her; but more tenderness, he thought, might have been shown by him. "Oh, for five minutes more of her, to tell her with what love and admiration, as of the beautifullest of known human souls, I did intrinsically always regard her!" Then, a few lines farther down, his wail of regret bursts into a torrent of urgent appeal: "Thou who wouldst give, give quickly; in the grave thy loved one can receive no kindness. . . . Be wise, all ye living, and remember that time passes, and does not return."

Sunset and evening star write in their journal the same solemn counsel. It shines in the moon's waning bow. These December days—days of examinations, of compiling reports, of closing of accounts in preparation for audit—whisper it. As the Old Year dies, this counsel will be uttered clearly in reason's ear. Other days and years and months may come, but these not again, and there is no journey without an end. Not with any morbid sense of helplessness do we think of these things, but with a calm and cheerful resolve to "carry on!"

### Radio in the Far North

THE Iceland Government has signed a contract with the Marconi Company for the erection of a modern 16-kilowatt station. It is reckoned the station will be ready next June. It will be more powerful than the main British broadcasting stations, and about half as powerful as Daventry. It will be capable of telegraphic communication as well as broadcasting.

## Radio on the Continent

### A Serious Problem

WITH the large increase in the number of broadcasting stations in Europe, the question has arisen whether it is possible to allocate to each station a wavelength which will not cause interference with other transmissions. The position is acute, and it is regarded that the only solution lies in a reduction of the number of transmitting stations.

It has already been found necessary to apply this remedy to at least one European country, for according to a wavelength allocation plan recently formulated at Prague, it has been found possible to grant only sixteen wavelengths to France. Thus, as this country has twenty-four broadcasting stations in existence, it has been found necessary to discontinue transmissions from eight of these.

Another solution of the problem of interference is one which, though scarcely commendable, is being adopted by almost every country in Europe. In order to counteract interference from other countries, each country is endeavouring to increase the transmitting energy of its broadcasting stations. Such measures can only result in chaos, and the only satisfactory solution of the problem would be an International Conference to decide on an impartial distribution of both wavelengths and transmitting power.

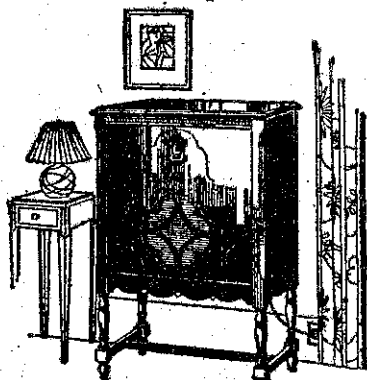
Gradually, with the evolution and development of the wireless programmes most authorities have put forward schemes either for an increase in the number of stations to supply an extended service or, alternatively, an increase in the power of the transmissions, thus obtaining greater range. Taking Great Britain alone, the new Bookman's Park dual transmitter will work with an energy of 30 kilowatts in the aerial, and in the near future four more similar high-power installations will commence broadcasting. On the Continent we find numerous proposals to erect super-power stations in various cities scattered throughout Europe.

So far as can be foreseen the near future will bring with it a battle of giants, an event which will benefit no individual country, but which, on the other hand, in the present limitations of the waveband, will sadly hamper broadcasting developments in Europe.

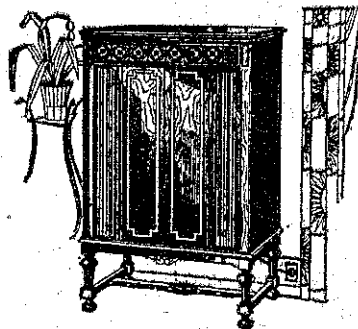
### Broadcasting in Canada

A CHAIN of high-power broadcasting stations across Canada is recommended in the report of the Royal Commission recently appointed to investigate Canada's wireless problems. It is also recommended that a State-owned corporation should be set up, similar to the B.B.C., and that funds necessary for the operation and maintenance of the service should be obtained from licence fees and programmes sponsored by advertisers, together with a Federal Government subsidy of £200,000 annually for five years. As a nucleus of the broadcasting chain, it is suggested that seven 50-kilowatt stations should be erected to give reliable service over the populated areas of the Dominion.

### New Dynamic Concert Speaker

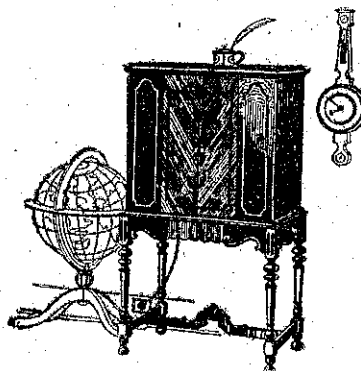


Rogers 530 Lowboy



Rogers 580 Phonolectro-Radio

### New Rogers Valves Fully Guaranteed



Rogers 550 Highboy

Now Even!  
Better

New Cabinet  
Beauty

**ROGERS**  
BATTERYLESS A/C  
TRADE MARK REGISTERED IN 1925  
**RADIO**

Five New  
Models

1930 Series Literature on  
Request.

SOLE N.Z.  
DISTRIBUTORS:

**A. R. HARRIS COMPANY LTD.** 200 GLOUCESTER STREET, CHRISTCHURCH.

Applications are invited from responsible Dealers where not represented.

# Radio of Yesterday and To-day

## Comparison and Contrast at Chicago Radio Exhibition



O the average visitor, the 1929 Radio Show was probably "just another show." But to the thoroughly inoculated radio enthusiast, veteran of many shows, there is just a little more than period furniture and suave demonstrators.

The veteran radio show-goer is on an errand, and goes almost directly to his objective, and moves on. He is looking for things that the blind enthusiast cannot see. He probes into chassis, goes behind the scenes of period cabinets and directs his inquisitive gaze into the "innards" of all apparatus.

This year he investigated the screen grid radio receivers. He knew, of course, that screen grid valves were listed as one of the show's "sensations." What he wanted to see, however, was



MR. OSCAR DYER,

A young tenor soloist. He has been heard from 2YA as a soloist and also as a member of the Mellow Fellows Quartet and the Wellington Orpheus Society.

—S. P. Andrew, photo.

the way in which these valves were used in radio circuits. So he looked for genuine bandpass filter circuits and to his astonishment discovered that only three, possibly four, manufacturers had worked it into their new models. He saw that there were several varieties of the same idea, and that there can be bandpass filters, and tuned filter bandpassers.

While looking for the new screen grid bandpass circuits, he discovered a receiving set that only used a single stage of audio amplification in push-pull, immediately after the detector, preceded by four stages of screen-grid amplification. This, according to quick figuring, should give amplification into the millions! He saw for himself power detection (anode bend) automatic volume control, installed both in radio and audio circuits, but because of the complexity of wiring, and the general unwillingness of engineers to divulge their "secrets," he went away comparatively uninformed on the "how" of the method.

Contrast and comparison are always interesting, and it is not surprising that when the main feature of the Chicago Radio Exhibition was a display of antiquated apparatus alongside the ultra-modern, that this was one of the most successful shows yet held in America. This unique display included relics of great value—original Fleming valves, a Marconi kite aerial which was used in the triumph of that inventor's life—the bridging of the Atlantic; the first telephony apparatus to span the "pond," and a model of the first neutrodyne. But this was not all, the newest all-electric circuits, remote and automatic controls, a device for visual tuning, and a totally new instrument, were in contrast. The accompanying article, from the viewpoint of a "more than casual" observer, tells in detail the story of this remarkable show.

THERE were other things that engaged his attention, which as an old-timer in the matter of show inspection and radio history, he was equipped to thoroughly appreciate. In a corner, for instance, and quite unobtrusively presented to the gaze of the onlookers that ignorantly glanced at it, he discovered the model of the original "neutrodyne" circuit receiver, as built by Professor Louis A. Hazeltine, the inventor. He recalled his own home-made neutrodyne set of many years ago, and observed that there were still many neutrodynes at the present show, though in modified or improved form.

Another sight which interested him as an old-timer was the early model

IT seemed that there were several other "historical" displays that are really part of radio history. For instance, he lingered long enough before the cases showing Dr. De Forest's Bunsen burner detector, which the good doctor himself says was the original step in the invention of the world-famous audion, which is shown in its original state alongside of the burner. A little farther along, the set, including one of the real kites used to support the antenna. Then, there was an "SOS" ("C.Q.D.") key, the same, indeed, which had sounded the s.s. Republic's call of distress. Here was a relic indeed!

Next, after finding that the minia



BARRY INGALL AND HIS HAWAIIAN ORCHESTRA.

A very popular feature of 1YA programmes.

—S. P. Andrew, photo.

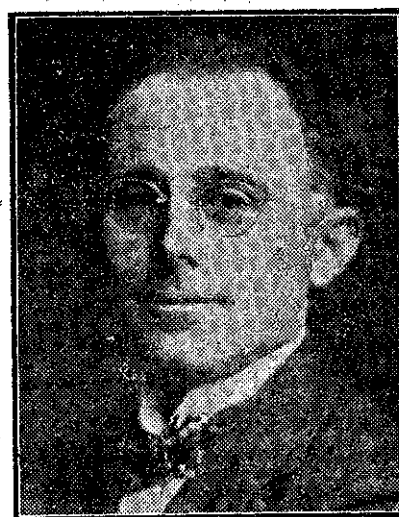
veteran show-goer saw replicas of Marconi's first trans-Atlantic receiving receiver built by the amateur pioneer Alfred H. Grebe. In the "pile" of sets he saw also an amateur transmitter for short-wave work, one of the first commercial sets, and, he learned, the very one that an amateur used to speak directly with Europe for the first time. This was probably ten years ago! Compared to these relics, the crystal set that won the "radio relics" contest was a grown-up boy!

ture models of radio installations on ships were working models, and that the small direction compass could actually turn and has a needle in its base, the show-goer turned his attention to the newer devices of radio science.

For a long time he had wanted to see the recording machinery used for making talking pictures. Here was one of the instruments, bare of any covers, and easy enough to look over in great detail, since hardly anyone

took notice of it! Aside from an automatic voltage regulator, which the show-goer had heard of before, and which seemed to actually work, though built on a transformer principle and labelled as something "really different and new," there were other novelties that engaged his attention.

THERE were remote and automatic controls for tuning in radio receivers that could be called new. The Motomatic remote control was worth a second look. Edison's device for visual tuning interested him, as did the remote tuning arrangement which permitted the tuning, at any distant point, of a receiver located any distance away. The idea used was probably not "new," as it consisted of a remotely controlled motor. The method of control was, however, although it



MR. ARTHUR E. WILSON,

Organist and Choirmaster of the Baptist Tabernacle, Auckland, where regular organ recitals have been a feature at 1YA.

—S. P. Andrew, photo.

did look a bit complex right there at the booth. There was also an automatic printer for typewriting news on a machine, as picked up by a broadcast set. It was fascinating for our show-goer to watch the precision with which these devices tuned in automatically the stations selected.

TRICK furniture, notably modernistic conceptions as applied to radio, relieved the monotony of too much woodwork, apparent everywhere. It wasn't until the showgoer could squeeze his way through a group looking under the top of a beautiful table in one particular booth that he discovered that it was a radio receiver built under it! An automobile receiver, for installation under the cowl, was another interesting development.

As becomes an onlooker who has seen enough, our veteran showgoer only casually looked at the television demonstration, to notice that it had visibly improved over last year's transmissions. He heard the automatic wire-less transmitter and receiver, set up to

show how this was done, on a large scale, between countries.

With all the new electrically operated devices threatening to spoil radio reception, manufacturers of filtering devices have been alert; so that there are few forms of interference that will not yield to one or another of these filters.

OF particular interest to dwellers in city districts where the lighting service is direct current, is a new product of a well-known manufacturing firm. So new is this, in fact, that as yet neither details or price can be obtained. It will prove an undoubted boon, however, as it is nothing less than a properly filtered and shielded miniature motor generator set; permitting the d.c. dweller to avail himself of the most modern of a.c. receivers.

Last but not least—perhaps to show the versatility of radio—was a device known as the Theramin, a totally new musical instrument for the home. An offshoot of radio, the demonstrations of this instrument at the show proved it to be capable of producing some really fine tone shadings, both volume and pitch being controlled entirely by proximity of the operator's hands.

PERHAPS the most important thing of all at the Radio Show (speaking now particularly of the Radio World's Fair at Madison Square Garden, New York) escaped the casual visitor entirely.

Seven years ago when broadcasting took the public by storm, the first attempt at a public showing of radio apparatus on the Hotel Pennsylvania roof in New York was swamped, and from the attendance figures at the various shows throughout the country it may be seen that radio interest is far from being on the wane.

AN experimental short-wave station situated in Holland recently broadcast a special programme of Dutch national dance songs on an ultra-short wave-length for relay in the United States. The programme was relayed through 29 American stations from Boston to San Francisco and from Florida to the Canadian frontier. This broadcast, which was completely successful, will probably be the forerunner of a series of trans-Atlantic exchange programmes.

## Germany's Radio Capital

### A Comprehensive Plant

GERMANY to-day is said to possess the most extensive wireless station in the world. This is situated at Nauen, some 20 miles from Berlin, and it was here that the first commercial wireless company in Germany erected its original plant. In the early days of radio communication it was mistakenly believed that the longer the wave-length or lower the frequency used, the greater would be the distance over which the transmissions could be heard, and the Nauen station was equipped accordingly.

In 1919 a world congress decided that the best way to keep amateurs from disturbing official communications

## The Regional Scheme in England

### "Brookman's Park" Transmitter

LATE in September the first of the B.B.C.'s new regional transmitting stations for the provision of alternative programmes commenced broadcasting. By the adoption of the regional scheme, the B.B.C. hopes to bring the whole of England within crystal range of one of their stations.

In fulfilment of this object the present broadcasting network of stations is gradually being replaced by a number of powerful transmitters strategically situated throughout the country. The first of these new stations to commence broadcasting is located at Brookman's Park, a few miles north of London.

The buildings which comprise this station are situated in a flat field of some 30 acres in area. At the four corners of the field are steel masts, which are of the lattice tower type and are insulated from earth at the base. The masts are only 200 feet high—much lower than the height which would have been chosen from an engineering point of view. Unfortunately, there are Air Ministry limitations on the height of masts which may be erected near London. Other regional stations throughout the country, however, will have masts which will probably be about 700 feet high.

The distance between each of the masts at Brookman's Park is 600 feet, and there are 900 feet between the building and each aerial. There is an electrically lit red lantern at the top of each mast which serves to warn aircraft attempting to land in the neighbourhood. Below the centre of each aerial is a small, square, stone building, containing the feeder system, coupling the feeder wires from the main building to the aerial itself, and underneath, radiating from this building is the earth system consisting of a number of wires buried one foot below the surface of the ground, the ends of the wires forming an oval extending about 200 feet on each side of its par-

ticular aerial, and 150 feet beyond each mast.

The power-house itself contains four 300 horse-power Diesel engines, to each of which is coupled a direct-current dynamo generating 220 volts. These engines, which are each of six cylinders, are mounted on a single bed of concrete which is so constructed that vibration cannot be transmitted to other parts of the building. The supply is direct current at 220 volts in order to make possible the use of a "buffer" battery. The storage battery has a capacity of 2000 ampere hours, and is intended to supply current when the transmitters are not running. The main motor generator room contains six large motor generators besides smaller ones.

While the station is running on full load two motor generators will be in use—one for each transmitter, while the third will act as a spare for either transmitter. The other three large machines in this room are for heating the filaments of the transmitting valves. It is interesting to note that while the average wireless set absorbs about .5 ampere to light the valves, the transmitting valves at this new station absorb 2600 amperes!

The transmitters normally deliver 30kw. to each aerial and employ modulation at low power. There is first a drive stage, for which special precautions are taken to keep the frequency constant to within about 200 cycles. The output from the drive valve is applied to the separator stage, after which comes the modulated amplifier. This is the stage at which the modulation takes place, and the power level is approximately 1kw.

Next to the main transmitter hall are two control rooms where the programmes are received on the land-lines running to the studio at Savoy Hill. These two rooms, one for each transmitter, contain all the necessary amplifiers and controlling gear, while the lines to Savoy Hill are underground all the way to ensure constancy of performance and reliability. In these control rooms are also small receiving sets built-in so that the modulation can be tested as received from the aerial of each transmitter, as well as controlled and watched in the ordinary line circuits.

Everything has been done to make the station as up to date and as per-

## Wireless News

BY one of those delightful hazards which achieve more than the most carefully-thought-out plans, the song of a Canadian robin was recently broadcast to the infinite pleasure of many bed-ridden radio enthusiasts and thousands of others. During preparations for a broadcast by CNRM (Canadian National Railways, Montreal), the microphone was placed near the open window. On the ledge a Canadian robin perched and commenced to chirp, finally bursting into full song. Holding their breath and moving on tiptoe the personnel of the studio performed the necessary operations for sending the impromptu concert into the ether. The red-breasted songster concluded its recital with a satisfied chirp, and did not even return for its recompense, which, in the form of a feast of crumbs, lay untouched on the window-ledge for days.

AN innovation in electioneering was seen last May during the British General Election, when speeches made by the leaders of the political parties were retransmitted by landline and heard simultaneously in a number of different towns. Such a scheme had, however, never been adopted by a commercial firm until recently, when speeches made at a trade luncheon given in London by a well-known radio manufacturing firm were relayed by wire to six large provincial cities. Not only were those actually attending the luncheon enabled to hear the speeches made, but by means of microphones suspended in front of the speakers and connected to long-distance telephone lines the proceedings were followed with the utmost ease by similar trade gatherings in provincial centres over 300 miles from the capital city.

fect as possible, and there is no doubt that it is a wonderful achievement from a technical point of view, and also from the point of view of appearance, for the station is systematically and artistically laid out. The cost of this modern wonder is stated to be under £150,000, and its opening marks the beginning of a most important era in the history of British broadcasting.

was to limit them to wave-lengths not exceeding 200 metres. With such waves, it was believed, no harm could be done. But it soon became apparent that the professionals had made a sad miscalculation, for the despised amateurs achieved such results that the long-wave senders began to look more like amateurs themselves.

Such a development naturally had to be coped with, and the important wireless companies of the world turned their attentions to short-wave transmission. As a result of this, the Nauen station, which now sends the "trans-radio" messages, has been rebuilt and enlarged. As well as the two long-wave transmitters, operating on 13,000 and 18,000 metre wave-lengths, seven new short-wave transmitters, operating on the 15-30 metre band, were recently installed. The installation of seven more short-wave transmitters will be completed before the end of the current year.

The mighty maze of aeri-als at Nauen, with its 12 high masts, two of them 853 feet high each, seven others each 690 and the other three each 492 feet high, is by now almost anticipated, so rapid, has been the advance of technology. The great masts are now used only for the two long-wave senders, which chiefly take care of communication with America and the Far East. Between them stand the new masts, only about 65 feet high, from which are strung the aeri-als for short-wave sending. These look but little different from the telegraph wires along the neighbouring railroad line.

Two somewhat larger nets of aeri-als, hung from masts 245 feet high, are being built for the service to North and South America. These aeri-als are so directed toward the destination to be reached as to prevent the waves from going backward around the earth. With a wave-length of 15 metres by day and 25 to 30 by night, they take

care of the entire short-wave traffic, above all to South America, Siam, Manila and Cairo. This short-wave traffic will soon be extended to Mexico, and perhaps also to the British dominions, in case an agreement can be reached with the British Government.

UNDERNEATH the great web of aeri-als stands the station's power plant—for all the world like a great spider in the middle of its net. Here the great generators hum their monotonous song, bringing the electrical current up to the vast tension of 120,000 volts for the two long-wave senders. They run day and night without ceasing. One of them has been running ever since 1916, with a pause of but four hours per week.

Every transmitter at the Nauen station is operated from the central office at Berlin. Thus the station requires only sufficient employees to

(Concluded on page 29.)



**DURING** the past few months the police authorities of Paris have been conducting experiments on short wavelengths in the transmission of finger-print photographs. By a new method it has been found that full details of any individual print can be transmitted in as short a period as fifteen minutes, and it is proposed to install a regular international service for the use of criminal investigators in other European capitals.

**THE** B.B.C. official in charge of the production of sound effects will shortly have his task considerably lightened, for it is intended to have special "effect" records made for use in the studio. The method in use at the moment for imitating the sound of gun-fire, for instance, necessitates the manipulation of a sheet of iron. Other props include special chains for rattling and coconut shells for giving the sound of horses' hoofs. The records it is proposed to manufacture will be costly, but it is estimated that the reproduction and imitation of such things as crowd noises, wind, seaside sounds and so on, can be much better done by means of a record than with the present "fake" methods. Indeed, considering the ease with which gramophone music and effects can be "faked" over the microphone, it is surprising that greater use has not previously been made of records.

**ACCORDING** to a Chicago report a means has been devised whereby an aviator can flood an aerodrome with light merely by pressing a button. He carries on his plane a radio transmitter tuned to a certain frequency, or possibly tunable to several; when he presses the button the transmitter emits waves which are intercepted by a receiver in the aerodrome, this receiver being kept tuned to the particular frequency used by the plane. The receiver is connected to the flood-lighting, which is brought into action by a relay when signals of a certain frequency are received.

**VERY** successful tests with the transmission of two simultaneous broadcasts from the same transmitter were carried out recently in Holland. For several evenings both music and speech were broadcast without interference to either transmission. Similar experiments were afterwards conducted between two stations with a combination of simultaneous telephony and telegraphy. These met with equal success.

**THE** northern part of Sweden has always presented a problem to the broadcasting authorities owing to the great distances and the sparse, scattered population. The most northerly main station is that situated in the garrison town of Boden, near the Finnish frontier, but the station, with an aerial power of 0.6 kw., cannot—even though reinforced by two relay stations in the mining districts to the north of the Arctic Circle—cover the whole province. Since the population does not reach half a million in those vast areas, financial considerations, apart from others, preclude the erection of a high-power station. An attempt to overcome—partially, at least—this handicap has been made by the distribution of the broadcast programmes via telephone lines to in-

dividual telephone subscribers who have only to connect their telephones to their receiving sets.

**QUITE** apart from the equipment of trains for broadcasting reception the Germans are now applying radio to the actual working of the railway system. Wireless telephony is being widely used. For example, on the train itself, the brakeman (guard) can talk to the driver by radio. The railroad's central office handles some 1800 wireless messages daily on five wavelengths, and in the goods yards at Hamm, Westphalia, where 350 cars per hour are shunted about, the engines have loop antennae and get their orders by wireless telephony.

**OWING** to the continued disturbances caused by train wires, illuminated advertisements, etc., to wireless reception in the towns and suburban districts of Holland, the Netherlands Union for Radio Telegraphy is making new efforts to bring about the formation of a Permanent Bureau for combating such disturbances, and to this end has approached all broadcasting societies in the Netherlands with a view to obtaining their co-operation.

**WITH** the advent of still-picture transmission, some considerable development in the utilisation by police authorities of the service thus offered may be expected in the near future. No doubt, at no very distant date, the broadcast listener in possession of a picture receiving instrument attached to his wireless set will be able to record an illustration of the person forming the subject of a "Police Bulletin broadcast." Such picture transmissions, combined with the radio-diffusion of finger-prints, will probably play an important part in the detection of crime, and will considerably facilitate the apprehension of criminals.

**MUSIC** played in the WGY studio at Schenectady, New York, is now scheduled as part of the regular Thursday night programme of a broadcasting station situated at Turin, Italy. The programmes are transmitted across the Atlantic on short-wave, and at Turin the signals are intercepted and rebroadcast for an hour, commencing at midnight. This is reported to be the first occasion that any Italian station has relayed a programme from the other side of the Atlantic.

**AN** innovation in American radio is the "small ad." invented by Mr. Stephen Kelen, who buys up "hours" of broadcasting time from the big broadcasting corporations and sells them in three-minute slices to the small advertiser who cannot afford the many dollars necessary to buy an "hour" of his own. Mr. Kelen allows so many words announcement, the rest of the

three minutes being devoted to music. The artistic effect to this must be, to say the least of it, patchy.

**SEVERAL** police cars in both Sydney and Melbourne are now equipped with receiving sets. The transmitters are of the 2 k.w. type, and are suitable for both speech and morse. Private telephones connect police headquarters with the transmitting stations, and in both Melbourne and Sydney the police have often received the radio report of a crime so expeditiously that arrests have been made before the culprit could leave the scene of his misdeeds. Only the police and the transmitting officers know the wavelengths employed, unless some amateur happens to pick them up by accident, but although the system admits of the use of telephony—and if required police headquarters can speak direct to the patrol cars—morse is invariably used on account of its greater privacy.

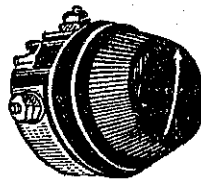
**THE** success and popularity of recent items which have been relayed from theatres, halls, tattoos, and other sources of entertainment have convinced the B.B.C. that the outside broadcasts may eventually have preference over items from the studios. Technical developments and the lifting of bans in various entertainment centres have opened up new fields for the B.B.C. programme department to exploit.

**IN** view of continued representations in Europe for the repression of

the well-known Eiffel Tower wireless station, the staff have produced a spirited reply in the form of a record of the station's daily output. Transmissions go out for nineteen hours each day between 1 a.m. and midnight, and comprise 51 separate features, including concerts, weather forecasts, meteorological information for farmers, "chats" with ships at sea and aeroplanes in flight, traffic messages to North Africa, and stock exchange quotations. Five separate wave-lengths are employed. In the circumstances, it appears as though the representations made to suppress this station are ridiculous and unfounded.

**A** PORTABLE outfit for taking radio-vision pictures has been invented by Denes von Mihaly, a radio engineer of Germany. The apparatus may be used to take motion pictures and transmit them via radio to various distances. Through the medium of this apparatus it is not necessary to have a huge permanent transmitting station; pictures can be transmitted from any spot desired. Such a development of radio-vision brings it into the realm of the news photographer. What seemed like a wild dream a short time ago is now a scientific possibility. We are now on the threshold of witnessing the latest news events at the same time that they happen.

**RECENTLY** Dr. A. S. Eve, of McGill University, in America, proved by an interesting experiment that wireless waves such as those used for broadcasting can pass through at least 200ft. of rock. He accomplished this by installing a super-heterodyne receiver in the Mammoth Cave of Kentucky. He found that the longer the waves the more rock they were able to penetrate, but short waves (40 metres) could not be detected more than a few hundred feet from the entrance of the tunnel. Waves of 6000 metres bored through over 900ft. of solid rock.



**A Rheostat of Unusual Qualities**

## EMMCO'S Bakelite Rheostat

A rigidly-built Bakelite Rheostat. Positively moisture proof. Very compact size. The Rheostat has a wonderfully smooth operation, and is equipped with strong striking plates. Single hole mounting. In 6, 10, 20 and 30 ohms.

Price ..... 4/6  
Potentiometer, same quality, 400 ohms. Price 5/6

All Emmco products are fully guaranteed

**MADE BY ELECTRICITY METER MANUFACTURING CO., LTD.**

Distributors for New Zealand:

JOHNS, LTD., Chancery Street, AUCKLAND.  
THOS. BALLINGER & CO., LTD., Victoria St., WELLINGTON.  
L. B. SCOTT, LTD., Worcester Street, CHRISTCHURCH.

# The New Zealand Radio Record

(Incorporating the "Canterbury Radio Journal.")

P.O. BOX, 1032, WELLINGTON.

Published Weekly. Price 3d. Subscription Post Free in advance, 10s. per annum; booked 12s. 6d.

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

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 each insertion.

N.Z. RADIO PUBLISHING CO., LTD.,  
P.O. Box 1032, WELLINGTON.

WELLINGTON, FRIDAY, DECEMBER 27, 1929.

## REGULATING B CLASS STATIONS.

A STIR has been made in the circle of B Class stations by an intimation issued by the Secretary of the Post Office, Mr. G. McNamara, to the effect that regulations would shortly be issued requiring the B Class stations to limit station announcements to the call-signal of the station, plus the privilege of announcing the name of the licensee or his business only at the beginning and the end of the programme. This, it is explained, is due to the fact that many stations repeatedly draw attention throughout their programme to the business of the licensee or of those responsible for the programme, and thus secure valuable trade advertisements. This has the effect of placing non-broadcasting firms in similar lines of business at a great disadvantage, with the result that some are seeking equal privileges by applying for broadcasting licenses. The undesirability of filling the air with competing stations of this calibre is recognised, and hence the Department proposes to avoid the incentive for establishing unnecessary new stations by restricting the privilege, which is held to have been abused.

NATURALLY considerable protest has been evoked by the prospect of this regulation from those who recognise that the value they derive from their broadcasting activities will thereby be limited. In the course of their protest, the broadcasting stations concerned advocate what we have always foreseen they would ultimately advocate, viz., that a proportion of the fees from listenership should be devoted to their local stations, or, as it is put, "the Post and Telegraph Department should allow the listeners-in to nominate to which group of stations their license fees are to be paid." The propounder of this suggestion must have a rather subtle sense of humour. We cannot imagine any business organisation being prepared to permit itself to finance a radio broadcasting service on so unstable a foundation, nor do we imagine listeners themselves will fail to see the weakness of such a proposition.

ANOTHER point worthy of passing comment in relation to the B Class station is the fact that, although they admit their raw material consists almost entirely of gramophone records, they pay

no fee for copyright privileges. This is far different from the case with YA stations, who are required to set aside a definite proportion of their fees for the copyright of all items used in their programmes. It is apparently open for the Copyright Association at any time to make demands on the B Class stations for copyright fees.

## "Hullo World!"

### A Breezy Interlude

#### Address by Mr. Dana

"Hello, world! This is Amurrica speaking, Amurrica speaking to New Zealand." With this breezy introduction Mr. Marshall Dana, associate editor of the "Oregon Journal," published in Portland, Oregon, U.S.A., opened what proved to be one of the most eloquent and interesting talks given from 2YA over recent months. Mr. Dana, on what he described as "a newspaper expedition," has been in the Dominion for some months past on a special mission of investigation into the dairying industry. In the course of this mission he travelled some 2000 miles over the by-ways of the country, and some 1000 miles over the main highways. It was his special effort to get off the ordinary tourist track, and make contact with the real heart of the country.

Prior to the sailing of the Maunganui for Australia on Friday last, Mr. Dana was introduced to 2YA at 9 o'clock on Thursday evening, and pleased listeners by a very eloquent address. In moving sentences he first of all extended seasonal good wishes as from America to New Zealand, and established a bond of sympathy and union by referring to his forefathers who, under a pioneering impulse, had moved to the United States. Similarly, his hearers were the descendants of others who, in obedience to another pioneering impulse, had come to this new land, and had built it into its present prosperous and thriving condition.

In his study of the dairy industry of the Dominion, which was now world famous, he had noted that the supremacy was due to a high degree of pasture science, co-operative organisation, the application of top-dressing and herd-testing, and a regular rainfall. Without these factors New Zealand's dairy industry would never have attained the supremacy it had. He had been greatly interested in all aspects of it that he had investigated, both in the fields of production, manufacture and marketing. He found attention specially concentrated upon the export market, so much so that he found a definite neglect of the internal market, particularly in relation to the consumption of milk and its products. Mr. Dana referred to the fact that in the United States consistent propaganda and instruction on the principles of health had raised the per capita consumption of milk from 22lb. to 63lb. over a few years, and even on the latter figure they felt they had only begun to adequately utilise milk. Milk was a vital necessity to the human race, but particularly to children, because of its mineral content. While New Zealand farmers had shown that they were quite alive to the necessity of mineralising

their pastures to increase butter-fat production for export purposes, both they and the town and city people showed an inadequate realisation of the value of milk as an article of diet. This, he thought, was reflected in the comparatively poor teeth he had noticed, particularly on the part of young people. He found attractive young girls of 17 and 18 smiling charmingly with full sets of false teeth, thus revealing that in their babyhood and childhood they had had insufficient supply of milk and its products. He had been told that milk drinking was only a habit, that ice cream was a luxury; and, most alarming of all, a dairy factory manager had told him that they would not even trouble to try to sell cheese in New Zealand. This attitude was wholly wrong, and in the interests of health he felt that hearers would be rendering a benefit to their children and future generations if they adopted the practice of a more liberal use of milk. The cow was a wonderful benefactor to the human race, and in all their development they could entertain a regard for their friend the cow.

A splendid tribute was paid by Mr. Dana to the hospitality and courtesy extended to him in New Zealand. This particularly applied to the Department of Agriculture, which had placed the Farm Economist, Mr. Fawcett, at his disposal as a guide; and the various dairy personalities, Rotarians, and others with whom he had come in contact.

## "Uncle Ernest"

### Rev. Weeks Sends Greetings

WRITING from London under date November 14 to the general manager of the Radio Broadcasting Company, the Rev. Ernest Weeks, better known to 2YA radio children as "Uncle Ernest," says:

"May I wish you and all your staff and radio helpers throughout New Zealand every good wish for Christmas and the New Year. I shall never forget the very happy fellowship we had together; I have frequently been lonesome for it since coming to England, but shall always be glad that we had a hand with you in the great work of radio. Perhaps some day we may be permitted to pick up the thread again, who knows? I am sending herewith a greeting which I should be glad if you would forward to Wellington—with my good wishes to the staff there—so that someone in charge of the children's hour may give the little people my affectionate greetings. I shall be greatly obliged if for old times' sake you will arrange for this to be done."

The message to which Uncle Ernest refers was duly broadcast from 2YA.

## SYDAL CAN DO IT!

Use Our Booking Offices in Advance

### S-O-S

TRAVEL IN COMFORT BY  
CAR

WELLINGTON — PALMERSTON  
NEW PLYMOUTH

Many people make a point of judging their friends by their hands. Did you ever think of this? For a trifling cost you can make sure that your hands are at their best. A jar of Sydal will make your hands soft, white and supple, and keep them so for months. Sold everywhere in two sizes.

# Bishop Cleary's Death An Exciting "Outside" Broadcast

## Broadcast of Requiem Mass

ON Thursday, December 12, 1YA carried out a memorable broadcast, when thousands of people, Roman Catholics and Protestants listened in to the solemn requiem mass at the burial service of the late Bishop Cleary.

It was a wonderfully impressive service, with splendid descriptions interpolated by the Rev. Father Holbrook. Every listener could clearly follow the solemn ceremony.

## The Advance of Radio

### Its Present-day Perfection

RADIO, in its many phases, is rapidly approaching perfection. An interesting review of its present-day state of advancement was recently published by Dr. Fulton Cutting, a well known American authority on radio in all its numerous fields. His views on this subject are given below:—

TO predict radio's future with any degree of assurance, it is necessary to review its history and carefully scrutinise the present trend, and even then the prophet is apt to be wrong. Radio is a constant surprise in itself. Subject to the imagination, research and effort of the scientific mind, its ultimate limitations are not even suspected to-day. We know what has been and what is, but we do not know how to-day's achievements may be eclipsed to-morrow.

The dynamic speaker, the screen-grid valve, the new type of engineering construction, the new development of metallurgists and the amazing co-ordination of many other elements and factors have all brought about improvements and advances more rapidly than was ever expected. Radio has made faster strides in a shorter time than have ever been made in any other industry.

To-day, with power at a high point, tone at a fine degree of actuality, beauty in keeping with the most luxurious of home appointments, value at a price never before made possible, it is easy to believe that radio has reached its final stage of development. Certainly it has achieved the point where no one need longer wait for its future offerings. I have no doubt that we will witness many changes in radio receivers as time goes on, but I do not hesitate to say that the purchaser of to-day's radio will derive a good measure of satisfaction from it for several years to come.

Have you obtained your copy of the  
"N.Z. Radio Listener's Guide"?

Dealers and booksellers 2/6; Post Free  
2/9—P.O. Box 1082, Wellington.

Available everywhere.

## An Insight into a B.B.C. Relay

WITH the acceptance of the radio set as an everyday means of domestic entertainment, the listening public are now demanding the introduction of new features into programmes. In England this requirement is at present being supplied in the form of surprise items and outside broadcasts. The latter consist of relayed commentaries on important topical happenings, and the success of these broadcasts depends in no small measure on the ingenuity and resource of the engineers in charge.

In the following article, the Director of the B.B.C.'s Outside Broadcast Department gives an interesting insight into some of the experiences and difficulties encountered in conducting a successful relay. As an illustration, he gives a vivid description of the efforts made by the engineers of the department to supply listeners with a running commentary on the return of the newly-completed British airship, the R101, from her maiden voyage.

WE do not enjoy the luxury of working in studios with carefully regulated acoustics in which lines lead from permanently adjusted microphones direct to the control room. Ours the task of collecting programmes from the four corners of the country; our microphones are slung as best they may be in the roofs of cathedrals, the tops of mountains, at the bottom of coal pits, on launches bobbing about the river, even (as on one occasion) in the cabins of aeroplanes in flight; "trunk lines" to the control room are such as the post office can manage to give us, often at very short notice; we work on strange territory, under conditions where the B.B.C. generally has to take second place. But we do see life.

One of our greatest problems is that of how best to convey "atmosphere." The background of incidental sound is often a very important part of an outside broadcast; it, so to speak, "places" the programme and stamps it as the genuine article. The microphone is a temperamental creature; one can never be sure exactly what sounds it is going to pick up. But even when it has done its work—and we, through our head-phones at the "control point," can hear each sound perfectly—we are a long way off final success, for between us and the listener are the telephone lines to Savoy Hill (and thence to the London, Daventry, and other transmitters), which may play us false. This is no place for a technical discussion; let it suffice to say that for relaying purposes a telephone line must have a certain minimum range of frequencies, must be balanced, and not noisy.

ONE of our most trying experiences was in connection with the recent commentary on the return of the R101 to Cardington. The organisation of this broadcast—a very detailed and complicated business—had been completed before the airship had left her shed on the previous Saturday.

What a day! To begin with, the lift which runs to the top of the 170ft. mooring mast, overcome, perhaps, by the importance of the occasion, decid-

ed to burn out a coil at the very moment when we were about to remount the tower for our final test over the lines to London. The airship could be seen hovering in the air a few miles to the south. Squadron-Leader Helmore (the commentator), the engineers and myself had to sprint up 170 feet of spiral staircase!

It was three o'clock—the time at which our lines to London was supposed to "come through." The airship was planned to arrive at 4 p.m. Both 1 o'clock and the R101 drew nearer, but our line had as yet not come through. At last we were connected, but the line was so unsatisfactorily "noisy" that we had to abandon all idea of using it. As always, we had a pair of lines at our disposal, a "programme line" and a "control line" (through which our engineers can talk to headquarters during the actual relay). When the airship arrived we had to use the control line for the commentary, which meant that until the end of the broadcast we were entirely cut off from London except via the microphone, which, of course, could not be used for liaison work.

That line was a traitor of the deepest dye. It obstinately refused to carry all those "atmospheric" sounds which we had reckoned would make such an expressive background. Even the words of the commentary were distorted and, at moments, lost altogether. The whole of our plan for the relay was rendered useless. We had intended the sounds around the mooring-tower to tell their own story—the shouts of the officer in charge of the landing party, the whirr of the electric winch winding in the airship on its cable, the roar of the engines, etc.

As it was, the interval had to be filled up, on the spur of the moment, with semi-technical talk until Major Scott, emerging from the airship (it has a mouth which opens like a shark's), could come and give his account of the trial. We are, through experience, steeled to most situations—but in this hour of crisis, with the relay going out to the whole Empire, I was in a cold perspiration, while Helmore, pacing to and fro like a caged lion, was a pathetic sight. However, at the critical moment Major Scott appeared and immediately commenced his account of airship's maiden voyage. We were saved!

## Radiovision in England

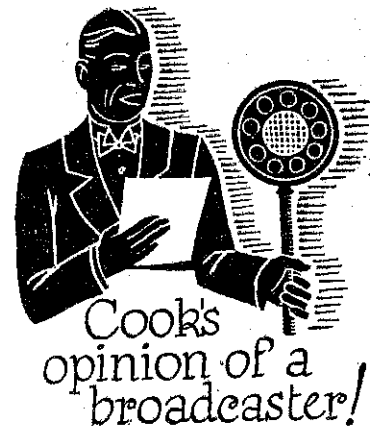
THE Baird radiovision broadcasts are now in full swing in England. They are not accompanied by speech or music, because one wavelength only is available for radiovision transmissions at the time. Later on, if the experiments are a success and the public show a keenness to receive radiovision pictures, the B.B.C. may, when the twin wavelength station at Brookman's Park is ready, grant the Baird people facilities for the use of a separate wavelength, so that radiovision can be accompanied by speech and music.

## 1YA Artists

### Great Success at a Concert

A CORRESPONDENT has kindly forwarded us a clipping from the Thames "Star" with the published report of a very successful concert at which all the performers, except the instrumentalists Kirby and Williams, were regular contributors from Station 1YA. The point about this particular concert which is worthy of emphasis is that those organising the concert specially arranged for the services of those artists who regularly perform from 1YA. This policy was so successful that the hall was thronged at 3/- and 2/- a head to hear the same performers who are available nightly at 30/- a year, or approximately 1d. and a fraction per night.

This incident has its lesson in its demonstration of the popularity of 1YA artists and the publicity value of their performances over the air. It shows that people are glad to see in the flesh and hear directly the artists who have established themselves as worthy performers on the air. The same experience is available at other 1YA stations, where artists who have established themselves as popular performers over the air are much sought after as performers at local concerts. Another reflection which is prompted is that this experience discounts very markedly the complaints made sometimes concerning the programmes. The programmes and performers can't be quite so bad when a discriminating public is prepared to pay good round figures in solid cash to hear what radio listeners hear for their small fee.



—she thinks he's wonderful during the evening programme—but when it comes to baking she'd sooner have a tin of ANCHOR SKIM MILK POWDER on the shelf than the finest radio going. A few spoonfuls added to every mixing means more delicious scones and cakes—higher food value—and a freshness that lasts for DAYS.

Just try it yourself. Ask your grocer for ANCHOR SKIM MILK POWDER. Price 1/2 tin.

For Free Folder of Tested Recipes, write NOW to "Anchor," Box 844, Auckland.

## Our Mail-Bag

### Appreciated by the Old.

I HAVE been reading in the "Radio Record" about a pal in sickness. Well, every word he says is true. It is just a pleasure to hear Mr. Announcer's sweet voice. I am to-day (Tuesday) sitting in my dining room listening to those sweet records that have been playing all the week from 12 o'clock. It is simply lovely. I have five old pensioners with me. They do enjoy the music from my wireless, and I often have from 10 to 15 people in to hear my wireless going. Of course they are poor old pensioners; and then I have eight men in the house staying with me, lodgers. When they read some of the complaints they laugh and say "the poor milkman will have a rest now; something else to find fault with." I think we are treated better here than in Australia. I was born in Australia, Victoria. I know Smithy's mother and father in Sydney, and I know more about the Kelly Gang than I have read in our evening paper. I knew Ned's mother, and sister Kate. I saw the four of them a few hours before they were caught in Glenrowan. I am going to tell you that there is a few in Wellington a sight worse than the Kelly Gang. I am no friend of the Kelly Gang, but I know that much. I lived near those Kellys. Why did they start bushranging? They never put the foundation in print.—Q. (Wellington).

### The Detector Valve.

TO the Editor: May attention has been drawn to a statement made by me, appearing in your "Topical News" column on Page 9 of last week's issue, end of first paragraph, which reads as follows:—"... and in October, 1922, by Professor Fleming's detector valve," is, unfortunately, a slight error on the part of the reporter, for I said that it was in 1904 that Professor J. A. Fleming, of London, invented the Fleming valve, which consisted of a carbon filament lamp with a sealed-in plate, and I explained that it was while Fleming was investigating a phenomenon discovered by Thomas A. Edison in 1890, known as the Edison Effect, he discovered that the unidirectional conductivity accompanying this effect could be utilised as a detector of radio frequency currents. I then went on to say that it was about 1912 or so that Lee de Forest introduced a third member into the valve between the filament and plate which he called the grid. My reference to October, 1922, was in connection with the first radio exhibition held in London (in which I had the privilege of taking part) a month or so before the British Broadcasting Company started their activities.—D. Neill Keith (Wellington).

### An Appreciation.

LAST evening some eight lovers of good music gathered at my home and listened to the relay of "The Messiah," rendered by the Lower Hutt Methodist Choir and assisting artists. It was a wonderful performance, and my friends and I would like to congratulate everyone concerned on such a splendid rendering. We were very sorry when it concluded. I have heard "The Messiah" many times and consider this rendering far above any I have listened to. The choir was beautifully balanced, the soloists were outstanding, the orchestra performed well, and the whole performance reflects great credit on the conductor. Station 2YA is to be congratulated on the excellent programmes it provides its listeners with, and I consider this rendering of "The Messiah" on a par with the recent Maori Pageant, and look forward to many more such programmes. I would like to mention before closing that we listeners-in regard the announcer at 2YA as a real friend, so here's wishing the staff at 2YA greetings for 1930.—Grateful (Otago Central).

WE regret that in our issue dated December 13, the names under the photographs of Miss Marie Gaundin and Mrs. Elvira Meban (on page 3) were transposed.

## Operations to Music

### Patients Listen-in

PATIENTS may now listen-in to wireless broadcast while they are undergoing a surgical operation. This striking innovation in modern surgery, which was described at the recent Pan-Pacific Surgical Congress in Honolulu, was commented on by Sir W. Arbuthnot Lane, the distinguished surgeon.

In certain major operations spinal anaesthesia is given to the patient. A hypodermic needle on the spine renders the trunk of the body insensible. The patient is fully conscious, but quite free from pain during the operation.

He can, however, see what is happening, and hear the surgical sounds, and the usual method of saving him from the upsetting effects of this consciousness is to give him sufficient gas to send him to sleep, or, if that would be dangerous, to put a silk handkerchief over his eyes, and let the anaesthetist distract his attention by talking.

The new method is described as being "much preferable to the talking anaesthetist." Headphones are placed over the patient's ears, and he is able to listen-in until the operation is finished. He thus not only has his mind distracted completely and pleasantly from the operation, but in addition his ears are closed to the sounds of the operating theatre.

## Overcoming Broad Tuning

"THERE is a satisfactory method of overcoming the broadness of tuning of the screen-grid valve," said a Wellington listener to "Switch" last week. "I have a set using three stages of screen-grid radio-frequency amplification, which is extraordinarily sensitive. I tried it on an outdoor aerial, but found that the set was very broad in tuning. Then I tested it on about ten feet of insulated wire as an aerial, and it was knife sharp in the tuning, besides bringing in the Australian stations. Cut down the length of your aerial, is my advice to owners of screen grid sets, if you reside within a few miles of a broadcast station."

## Miss Marjorie Skill

### Sydney Singer for 2YA

NEW ZEALANDERS who have listened-in to the Australian stations will know well the voice of Miss Marjorie Skill, soprano, broadcaster and concert-hall singer. She is an artiste with abundant brightness and a refreshingly sweet quality of voice. She was a pupil of Mr. Roland Foster, and studied at the Sydney Conservatorium. Miss Skill has toured much in Australia, being in great demand by musical societies. As a broadcasting artist she had the unique experience of being one of a party which gave a concert 1200 feet down in a coal mine.

Miss Skill is singing at 2YA on Sunday, December 29. To one of her songs, "Lo, Here the Gentle Lark," Signor Truda, considered to be the finest flautist in New Zealand or Australia, will play an obligato.

## Wireless Wanderings

THE Swedish broadcasting service, controlled by the State Telephone and Telegraph Department, shows a record expansion. At the end of 1928 Sweden had 31 broadcasting stations, the most important of which is at Motala. The number of licensed listeners now registered exceeds 400,000, corresponding to 66 receiving sets per 1000 inhabitants. The Department has 19 radio telegraph stations, of which the powerful transmitters in Karlsborg, in Central Sweden, and Varberg, on the west coast, handle the foreign traffic, the Varberg station being specially built for communication with America.

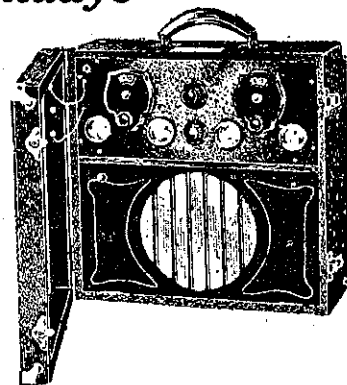
STEADY progress is being made in England with experiments in facsimile telegraphy which were commenced a short time ago in view of the interest that was being evinced, particularly by business men, in its future possibilities. There are already four or five facsimile telegraphy services in use between important cities in England, but perhaps the most highly developed system in use is that used in America. A picture can be taken, for example, to a post office in New York and sent to Chicago or any other town within a very short time.

## You NEED an AIRZONE PORTABLE these Holidays

Take an  
AIRZONE  
with you.

Complete with full  
equipment, including  
Philips Valves, and  
Magnavox Speaker

**£27**



### Wellington:

F. J. W. FEAR & CO. .... 63 Willis Street.  
ELECTRICAL SUPPLIES, LTD. .... 37 Cuba Street  
WHITCOMBE & TOMBS, LTD. .... Lambton Quay.

### N.Z. Distributors:

J. A. SMYTH & CO. .... 71 Victoria Street, Wellington.

## GREETINGS!

TO OUR MANY VALUED RADIO CLIENTS.

We desire to express our appreciation of their continued co-operation, and have much pleasure in extending our heartiest wishes for a Bright and Happy Christmas and continued Prosperity in 1930.

**G. G. MACQUARRIE, LTD.**

Electrical and Radio Engineers ∴ Electric Lighting Specialists  
120 WILLIS STREET, ∴ ∴ WELLINGTON



## Radio Telegraphy

## *Xmas Greetings to Children*

### *A Radio Valuation*

**T**HE total value of the radio receiver installations in the world has been estimated at £368,750,000 by the Electrical Equipment Division of the Department of Commerce of America. The value of the broadcasting stations, in operation is placed at £4,536,440. The report states there are 21,629,107 receiving sets in the world; the United States having 10,250,000. Europe, aside from Russia and Turkey, has 9,139,824 sets. The figures indicate there is one receiving set for every 12½ persons in the United States, one for every fifty-three in Europe, and one for every eighty-eight in the world.

—S. P. Andrew, photo.

The sun has been shining into my study so brightly and beautifully to-day. I wished the windows were twice

## A New Invention

In some countries where considerable quantities of Press messages are handled speeds up to 250 words a minute are achieved. The new system mentioned, though, must make use of some method altogether different from current practice. Mr. Gibbs does not see any possibility of this new invention being employed in New Zealand for many years.

# How to Enjoy Your Holidays

The Railway Holiday Booklet contains glad tidings—it tells of how to reach all the delightful places you have longed to visit, with a maximum of comfort and a minimum of cost. Call, write, or 'phone for a copy—obtainable free at any Railway Station or City Booking Office.

Remember—Cheap Tickets are obtainable  
from 13th December to 11th January.  
Return up to 8th February.

**WANTED AND FOR SALE.**  
For column of casual advertisements  
see page 32.

## Superior Performance at no Extra Cost

# DIATRON

## PRECISION

# RADIO VALVES

**Insist on the Valve in the "BLUE DIAMOND" carton.**

**N.Z. Distributors : N. R. CUNNINGHAM Ltd., Masterton.**



WOMAN, a dog, and a walnut tree, the more you beat them the better they'll be. This does not seem true of the B.B.C."

It certainly does not seem true if we are to judge by

the effect of a steady campaign in certain quarters of the Press to belittle the work of the British Broadcasting Corporation ever since it was changed from a company into a corporation. I read in some organ the other day that the programmes of the B.B.C. had never been as bad as they had been lately, which seems a most perverse reply to the consistent beating the programmes have been getting from their critics.

If a prominent member of the staff leaves because he has been offered a larger salary elsewhere, his resignation is accorded as much publicity as might be the abdication of a monarch. If a new transmitting station is opened and obliterates the ambiguous reception of Budapest in a Notting-hill drawing-room, the complaint of the injured owner of some obsolete receiving-set is given as much space as though the new transmitting station at Brookman's Park had blown him and his whole family across the road into the drawing-room opposite.

## Stately Amenities of the B.B.C.

### Influence of the Dinner Jacket on Broadcasting

(By COMPTON MACKENZIE, in the "Morning Post.")

LIFE must be one dam' thing after another at Savoy Hill, to judge by the number of interviews that the officials there seem to spend their time in granting to representatives of the Press. who, it may be added, never seem to derive the slightest satisfaction from these interviews, being evidently always thwarted by the urbane discretion of the interviewed.

The sad thing about this irrational and promiscuous criticism is that it tends to make it impossible for anybody to criticise the B.B.C. rationally and particularly. Once you get into people's heads that the B.B.C. is always wrong, you will find it difficult to get them to pay attention when it would serve a useful purpose to demonstrate that it very often is wrong.

I, for instance, might personally wish to suggest that the spirit of compromise which animates the pro-

grammes is not an entirely admirable spirit. But I should hesitate to do so, because I should feel I was attacking one of those particularly British traits which makes the B.B.C. the typically British affair it is.

Indeed, if I wished to go boggy-hunting I could draw a splendid boggy at once by putting forward the theory that the campaign against the B.B.C. was being worked in the interest of pan-Americanism, to whose ambitions the existence of the B.B.C. must present itself as a perpetual menace. Certain it is that the attempt to Americanise our culture will never succeed so long as the B.B.C. holds out against it.

IT may not be generally known that the announcers have to wear a dinner jacket and a black tie in the evening, and I think that it ought to be generally known, for if it were generally known it would have a reassuring effect on the listening public.

The Englishman who always dresses even when he is alone has had a great influence on the destiny of civilisation; and it seems pathetic that so many Englishmen who do dress for dinner should still be supposing that wireless is an amusement confined, so far as they are aware, to the servant's hall. It is really time these gentlemen woke up and realised that exactly the same convention which leads them to change for dinner every evening rules the life of an announcer of the B.B.C.

It must no longer be assumed by what, with a certain rashness, I will call the educated classes that radio is a new toy to amuse what, with a rashness equal to my own, they consider their inferiors.

It is going to be a difficult task when the present charter of the Corporation expires in a few years' time to keep it from becoming an unscrupulous weapon in the hands of those who have realised only too well its baser potentialities.

FOR some time now I have been sadly but surely driven into thinking that the University of Cambridge represents better my notion of what a University should be than my own University of Oxford. But the other day I heard a story that made me suppose Oxford has not changed so much as I was beginning to fear it had.

A prominent official of the B.B.C. recently visited his old college, and on being asked by one of the dons what he was doing now, replied that he was interested in wireless. "Oh!" was the comment, "next time you come up I suppose you'll be telling us that you have something to do with roller-skating."

This was reassuring. Oxford could not yet be quite such a Detroit of Europe as I had been supposing.

Still, while it is pleasant to reflect that the abolition of compulsory Greek, the disastrous effect of which on my

University I have the painful gratification of remembering that I prophesied as an undergraduate in my own magazine, did not succeed in dispelling the very last enchantment of the Middle Age, it is not so pleasant to find a habit of mind suitable enough for dons being maintained in the world of unenchanted existence.

I should like to suggest, if I may do so without impertinence in these true-blue columns, that the handling of the microphone by leaders of the Conservative Party during the last election campaign might have been less inefficient and less ineffective if they had given themselves the trouble to study its peculiar psychology.

MY own belief is that, within a comparatively short time, we shall be finding that, however mightier than the sword the pen may remain, the voice may prove mightier than either. At any rate that is a proposition which should be pondered by thinking men and women before they dismiss it without a moment's consideration as fantastic.

The B.B.C. is only a matrix as yet, but it is the matrix of what may be a wonderful gem. The cutter and the polisher must work upon it and give it the significant form it lacks at present. It has the power to be, as I think it was Mr. J. H. Squire who first observed, a real Ministry of the Fine Arts.

Will it become that? Or will it slowly degenerate into a mere hive of industrious bureaucrats trying to extract honey from artificial flowers? Either of these developments is possible in its present state.

The business of the educated public is to give it intelligent support, and most imperative of all it is the business of artists and scientists and men of affairs not to appear before the microphone like self-conscious grown-ups at a children's party.

## Broadcasting in Europe

### A Frequency Check

IN view of the increasing congestion of the European ether and the consequent necessity that transmitting stations should not depart from their allotted wave-lengths, it is essential that means should exist for their exact calibration. For some time past the German high-power transmitter at Koenigswusterhausen has broadcast at regular periods calibrated waves for the benefit of Europe in general, and of its own country in particular. At the beginning of each transmission a short tuning signal is sent out, and is followed by the call-sign in Morse. In the

ed by the call-sign in Morse. In the event of any unforeseen interruption taking place, in order that the time schedule should not be completely upset, the "missing" signals are specially broadcast at the end of the transmission and an announcement made to that effect. As these signals are accurately measured, the broadcasts are regularly used by both German telegraphy and telephony transmitters to check their wave-lengths, and should also prove of use to amateurs for the calibration of medium and long-wave wireless receivers.

## Procure Your Copy of the "All About the All-Electric" HANDBOOK Now !

Only a limited number have been printed

The "All About the All-Electric" has been specially written so that the youngest radio enthusiast can fully understand the technical articles on modern Radio. Everything about A.C. Sets is explained in this handbook. You will find it an inexpensive help.

### Some of the Articles :

Choosing an All-Electric Set.  
Power and A.C. Valves.  
A, B, C Battery Eliminators.  
A.C. Crystal Set and Amplifier.  
How to Convert your Set.  
Pick-up Adjustment.  
Building the Four-Valve A.C. Browning-Drake.  
A.C. Power Amplifier.  
Speakers for All-Electric Sets.  
List of stations (over 300).

### "ALL ABOUT THE ALL-ELECTRIC."

"RADIO RECORD."  
P.O. Box 1032, WELLINGTON.  
Please post me immediately .....  
copy [less] of your 74-page illustrated reference work, "All About the All-Electric" at 1/9 per copy, posted. I enclose herewith postal notes for ..... (Add exchange to cheques).

Signed .....  
(Write address clearly) .....  
1-7 .....

PRICE 1/6

From most  
Radio Dealers and  
Booksellers.

If unobtainable,  
MAIL the COUPON.  
TO-DAY !

# THE D.X. CLUB

Views and News.

## Identification Wanted

## DX Topics

**COULD** any listener identify a station of approx. 1440 k.c. (205 metres). Dial reading is 6 (on 0—100 dial). This station is just below 2YB New Plymouth, 244 metres (1230 k.c.) and seems to be always relaying 2YA. It is none of the private N.Z. "B" class stations.—J. J. Bilton (Cromwell).

[This is obviously an harmonic of 2YA, Wellington, on 205 metres (1440 k.c.).—Ed.]

**ON** December 8 I tuned in a station at about 1.30 a.m. Reception was exceptionally powerful, with intermittent short fades and heavy static. The items heard were chiefly Hawaiian music and violin solos. The announcements were made every two items, but owing to very bad static, and the announcer's poor English, I could not identify the call, but at 2.35 the announcement sounded something like WNX or WNS. The announcer's "Good-night" sounded like "Goudnoight. After the last announcement the carrier wave, with a strong generator hum, continued for four or five minutes. The same night I received station JOAK, Japan, at fairly strong loudspeaker strength.—A. Dryden (Southland).

**WOULD** you be kind enough to let me know if there is an American radio station KBOO, Oklahoma? On December 13, at about 7.35 p.m., I heard what I think was this call on about 1150 kilocycles, and the announcement was that "I get the blues when it rains" would be played; an organ was playing the music. Has any other listener heard this station.—W. G. Morris (Apti).

[The station heard by you was probably KVOO, Tulsa, Oklahoma, operating on 1200 k.c., power 5000 watts. Station slogan, "The Voice of Oklahoma."—Ed.]

## Stations Identified

**RE** Mr. McMinn's query as to whether any S.W. listener has heard 2UZ, Melbourne. I heard that station on November 27, about 10.30 p.m., at good strength and volume, broadcasting records. I have written to them, but have not yet received a reply. Wavelength, as Mr. McMinn states, was about 65-67 metres.—S. Mason (Bulls).

# 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

## Radio and Aviation

## Not so Bad!

**A FURTHER** triumph for radio in the field of aviation was recently demonstrated in America, when a pilot, flying under conditions duplicating those caused by the densest fog, took off, flew fifteen miles, and landed safely within a few feet of his point of take-off, without at any time seeing the ground or any part of his machine except the illuminated instrument board.

This achievement in "blind flying," it is stated, will focus the interest of aviators all over the world, since fog has long been recognised as man's greatest enemy in the air. The principal factors in making the accomplishment possible are a new application of the visual radio beacon, the development of an improved instrument for indicating the longitudinal and lateral position of an aeroplane, a new directional gyroscope, and a sensitive barometric altimeter so delicate as to measure the altitude of the aeroplane within a few feet of the ground.

In place of the natural horizon by means of which the pilot usually keeps his plane in a stable and safe flying position, and which the flyer is deprived of in a fog, the aviator used an "artificial horizon" in the form of a small instrument indicating longitudinal and lateral position with relation to the ground at all times.

Stability thus assured, the pilot was able to locate the landing-field by means of the direction-finding radio. In addition to the long-distance radio beacons already well-established in America, another beacon has recently been perfected. This governs the immediate approach to the field, casting a beam from fifteen to twenty miles in length in either direction.

On the instrument-board a visual radio receiver, consisting of two vibrating reeds tuned to the radio beacon, enabled the pilot to locate the beam, and through it, the landing field. If he turned to the right of his course, the right reed showed excessive vibration, while if he turned to the left, the left reed at once indicated his mistake. By keeping the two reeds in equilibrium he was able to fly directly down the path of the beam to his landing.

This amazing demonstration eliminates the last great hazard to the reliability of aeroplane travel, and indicates that a principle has been developed which, when eventually perfected for commercial use, will render aviation more independent of weather conditions than any other form of transportation.

letters from our audience. These letters are passed to the programme director, the continuity writers, and the musical staff, and are read carefully by them. You might think we do not consider your individual comments of our programmes, but we do. So when you have anything to suggest—how any detail can be improved—won't you write us? We want our audience to know in advance that these comments are, and will continue to be, greatly appreciated.—Yours, etc., H. Ford Billing, Director of Broadcasting from station WLM, 50,000 watts, 700 k.c.; Station WSAI, 500 watts, 700 k.c. P.S.—It appears that the call has been changed from W8XAL to WSAI.—A. D. Rogers (Wellington).

"Simple Simon," who conducts a daily column in the "Morning Post," recently used this paragraph:—"This morning I met a musical acquaintance, and I had to listen to a long discourse on how the wireless had 'killed the demand for good music.' Of course, I have heard and read it all a hundred times before. But it so happens that later in the day I tried to buy a seat for Delius's 'Mass of Life' at the Queen's Hall, and could not get one for love or money. The house was sold out days ago, I was told at the box office man. Now when one considers that that concert was organised by the B.B.C. themselves, that it was broadcast, and therefore was available to almost everybody for nothing, and that this is just one of a long series of first-class concerts by the B.B.C. and their own splendid orchestra, all this talk about the havoc wrought by wireless seems to me to be sheer nonsense."

# Plug it into your light socket

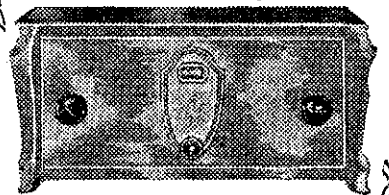
Connect the new "Ultimate" to any light socket and it is ready for instant reception—simple as switching on the electric iron. No batteries or their attendant troubles to bother you—no weak signals or crackling noises.

## IT'S ALL-WAVE AND SCREEN-GRID TOO!

All the best developments known to modern radio have been built into this remarkable new receiver. Call and see it at your dealer's or mail Coupon TO-DAY for free illustrated literature.

# The SCREEN GRID FOUR Ultimate

ALL WAVE — ALL ELECTRIC



MESSRS. RADIO, LTD.,

Auniao Avenue, Auckland.

Please send me free illustrated literature on the new "Ultimate" All-Wave All-Electric Screen-Grid Four.

Name .....  
Address .....

# Do We Need an International Language?



PEOPLE of the world are swiftly becoming internationalised. Though they probably are not as yet understanding each other very much better, they are becoming more and more interested in each other as fellow travellers through life in a common humanity. Very significant is the mass of current literature in all languages now increasingly available through translations. These are the first steps towards mutual understanding. And here is additional argument for systematic "outside" broadcasts from overseas.

Even in the event of such broadcasts becoming regular features of programmes—and with the increased efficiency of transmitting equipment they undoubtedly will—it will be impossible to appreciate them to the fullest extent, for we have no international language. Every nation of the world to-day spends hours daily in adding to the babel of confused tongues that combine in making the ether hideous

THE age of international broadcasting is upon us, long before we are ready for it. The wireless medium is steadily becoming more and more perfect, but we have no universal language; and there appears not the slightest hope that we are within centuries of attaining this very desirable end.

with their prattle. There is no single language that can be understood by the whole world, and it is obvious that we are not within centuries of attaining anything like a universal speech fit for transmission by radio.

Speech and language are by no means the same thing: language embraces perhaps all the means known to man of communicating with his fellows, whether by word of mouth, by written symbol, by sign, by gesture, by waving flags, by semaphore, by Morse code, or by knotted string.

Speech is a term restricted to that form of language which is made by the so-called organs of speech, and which is apprehended by the ear. Speech is an act, or a performance. Certain rapid muscular adjustments have to be made, in certain sequences; the adjustments and the sequences vary

from nation to nation, or, as we say, from language to language. The muscular adjustments that are necessary for what is known as English speech are quite unlike those required for French speech, and still more unlike those required for Siamese, for Arabic, and Japanese.

The structure of the human body and mind is such that the muscular, mental, and nervous habits acquired in youth become very firmly ingrained, and are seldom uprooted, or modified in later years. The habits of speech are amongst the earliest acquired: we can perform the act called speech in the way we first acquired it, and there, as a rule, our familiarity with speech, our capacity to perform speech, ends. Every spoken language, in short, has its own sounds, its own rhythm, and its own intonation, and speakers of each language have by long practice acquired the habits necessary for the performance of these so thoroughly that they find it almost beyond their ability to disturb them.

The first step towards a universal "speech" is to find, from among the welter of sounds in the whole realm of speech, those that are common to all languages, if there are any. Our universal language must be such that all the nations of the earth can pronounce it without fear of being unintelligible. It will have to have a definite rhythmic system, and this will have to be taught throughout the world. The rhythm of a language is as essential a part of its structure as its syntax and its sentence formation; and in no respect are the languages of the world more at variance than in their rhythms.

A universal speech is impossible unless and until all the nations of the world can be taught to perform the act of speech in the same way. Then they will have to be taught to think along the same lines, for speech and thought go hand in hand.

What the universal language of the world will be, if it ever comes, it is impossible to say. It will most likely be the language of the race that will be economically most powerful in the

world of the future? It may be a form of English, or it may be a form of Chinese, which, when all is said and done, is spoken in one form or another by more people than any other language. If England and the United States can settle their political and economic differences, they might try their hand at settling their linguistic differences, for agreement in that direction will be a very big step towards establishing the universal language of at any rate the Western world.

## Radio in Other Lands

THE value of wireless has rarely been exemplified better than in the case of the aeroplane Southern Cross which landed at Croydon on July 10, having flown from Australia in under thirteen days. Captain Kingsford Smith and his three companions thus beat the record of Mr. Bert Hinkler for a flight between England and Australia by more than two days, though it must be remembered that the Southern Cross is of much higher power than Mr. Hinkler's little Avian. By means of the wireless equipment on board, the operator, Mr. McWilliams, was able to receive messages throughout the flight. The receiver used covered a wave-range of 18 to 2700 metres.

THE entire population of Sing Sing Prison, New York, can listen to radio programmes through an installation which was designed by one of the prison's inmates who was an electrical expert before entering the prison. The system connects more than 2000 headphones and twenty-one loudspeakers with a central radio receiving set. The programmes are tuned in on this set, and all inmates listen to the same broadcasting. Although the prison covers several square miles and comprises scores of buildings, the quality and volume of reproduction is reported to be remarkably good.

## WANTED AND FOR SALE.

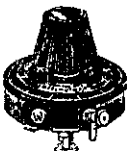
For column of casual advertisements see page 32.



Lissen R.C.C. Unit.  
Price ..... 6/9



Lissen Mansbridge Condenser. Prices:  
.01 mfd, 2/6; .1 mfd, 2/6;  
.25 mfd, 3/6; .5 mfd, 3/6; 1 mfd, 3/6; 2 mfd, 4/6.



Lissen Rheostat, 7 and 35 ohms.  
Price ..... 3/6 each



Lissen Grid Leak, Fixed, 1, 2, 3 and 4 meg.  
Price ..... 1/6 each  
Variable ..... 2/6

### LISSEN

## RADIO PARTS

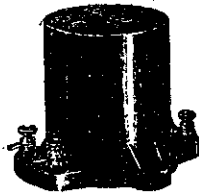
### Lead the World in Value and Performance

Remember when you are building or adding to your Set, that although often a certain make of part is mentioned, you can, in practically every instance use a Lissen Part, and not only get louder, clearer signals, but save yourself a considerable amount of money, too!

Remember Lissen Parts are British Made.

Your Radio Dealer can supply Lissen Parts—or send cash direct to—

**Abel, Smeeton Ltd.**  
Customs St. E., Auckland.



Lissen Transformer, 12/6. 12 months' guarantee.  
Super Transformers, 25/-.  
Price ..... 1/6 each



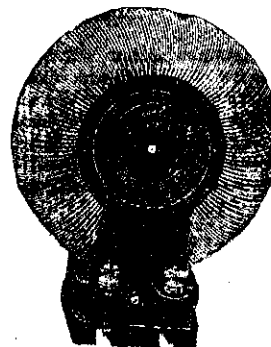
Lissen Fixed Condenser, all sizes.  
Price .... 1/6 each



Lissen H.F. and L.F. Chokes.  
Price .... 7/6 each



Lissen Neutralising Condenser.  
Price .... 6/- each



## DUBILIER

### SHORT WAVE

22.5 to 45 M. Coil and Base .... 17/-  
44 to 90 M. Coil and Base .... 17/-  
H.F. Choke ..... 5/6  
Special Vernier Condenser ..... 15/-

Ask for NEW PRICE LIST.

**A. E. STRANGE**  
404 Worcester St., CHRISTCHURCH



AN Auckland musician is reported to be the proud possessor of a real Strad. cello. Another notable cello which probably was heard by Lord Byron, is owned by Mr. Norman Martin, a cellist heard from 2BL, Sydney. When Mr. Martin purchased the cello it had not been played on for fifty years. By an inscription on the instrument it was shown that it once belonged to the wife of the Earl of Bessington. She was a writer of note, and a close friend of Lord Byron.

THE commercial radio telephone service (on a short wavelength) between Melbourne, Sydney and London, is just about to be inaugurated. The Melbourne "Herald" has booked the first call. For the outset the calls are being put through a special box at the G.P.O., Melbourne, but early in the New Year the system will be extended to the telephone network. From the beginning, however, any private subscriber in London may be called. The charge will be £9 for a three-minute conversation.

"SWITCH" wonders what the advocates of pure English would have said if they had been listening to a small station which the writer heard testing the other night. A gentleman with a nice foreign accent was giving listeners an example of "English as she is spoke." He was evidently testing in co-operation with some listener, to whom he frequently spoke. The gentleman with the foreign accent had some queer idiomatic expressions, but he excelled himself when he asked "Is it worser?" If anyone had been guilty of such English from a "YA" station there would have been a riot of letters to the Press.

THE dissatisfaction with broadcasting as at present conducted in Australia, seems to have become substantial enough to stir the new Commonwealth Government. A Cabinet committee has been appointed to consider the whole question of wireless policy in Australia. The committee comprises Mr. Brennan (Attorney-General), Mr. Lyons (Postmaster-General), and Messrs. Beasley and Forde (Assistant Ministers). The committee has had a lengthy interview with Mr. H. P. Brown, Director of Commonwealth Postal Services, and has asked him to set out in writing his proposals for the future conduct of all phases of radio.

A question put to "Switch" recently was: "Can I get loudspeaker reception of 2YA, with a crystal set?" There are several listeners in and around Wellington who regularly receive 2YA on the loudspeaker per medium of a crystal set. To do likewise it is necessary (1) To have a first-class sensitive crystal; (2) to have a high aerial absolutely unscreened from 2YA; (3) to have a good "earth." The earth wire should be thick, and as short as possible. It should be soldered firmly to a water-pipe or other good earth; (4) the aerial should be well insulated and led through an insulated tube (porcelain) into the house; (5) The lead-in wire should be insulated; (6) the loudspeaker should be sensitive; (7) the aerial should be as long as possible, provided the crystal set can tune up to its length.

RADIO plays various pranks. Telephone subscribers in some parts of Evans Bay can hear 2YA, Wellington,

on their telephones. News comes from Sydney that music emanating from the base of the 400ft. steel mast at the Pennant Hills radio station, near Sydney, proved an interesting attraction to a group of country newspaper proprietors who visited the A.W.A. station recently. All visitors to Pennant Hills examine this phenomenon, as it is really uncanny. The mast stands on enormous glass insulators, which prevents electrical energy induced into the mast from escaping to earth. A switch is provided for the purpose of "earthing" the mast, and if this switch is nearly closed a spark leaps from the mast across the gap. The aerials hanging from the mast transfer to it energy from station 2FC, which is only a few yards away. When the spark leaps from the mast it heats the air and produces a sound wave.

OVER four months have passed since the Australian Broadcasting Company took over its first station, and with the passing of time it continues to develop its organisation. On January 14, 5CL, Adelaide comes under the company's control, and on January 30, 4QG, Brisbane, which will give the company two stations in Sydney, two in Melbourne, and one each in Brisbane and in Adelaide and in Perth. These seven stations, so widely separated, have been placed under the superintendence of Mr. C. F. Marden, whose duties will be to provide for a close co-ordination between the stations, and generally to establish and supervise a standard of broadcasting transmissions throughout Australia. For some weeks past the Australian stations have not been worth listening to, so far as New Zealand listeners are concerned.

"BACH" (Plimmerton) writes: "Please publish a few words to say how much we enjoy the extended broadcast hours of 2YA, Wellington, and the news sessions. We have our receiving set with us, and I can tell you it is a constant source of pleasure. Neighbours who have brought their gramophones with them are already tired of their thirty odd records, and they come to us to listen in."

A FRIEND who is fond of statistics estimates that if all the listeners' aerials in New Zealand were connected up and stretched out in one straight line they would reach half-way from Wellington to Sydney—about 600 miles.

A WELLINGTON dealer informs "Switch" that the Christmas season has brought an increasing demand for crystal sets. School youngsters who have not possessed a wireless set, he states, are tired of hearing from

their more fortunate comrades of their enjoyment of radio, and particularly the kiddies' sessions, and this makes them decide to join the happy throng. Many of the youngsters around Wellington do not require to erect costly radio masts. 2YA comes in with such good volume that their aerials are merely run from a nearby tree or chimney to a small pole near the house.

NOW that the Australian stations are suffering an eclipse owing to unfavourable atmospheric conditions, New Zealand listeners in general are concentrating on the "YA" stations. In Wellington, 4YA, Dunedin, is in big demand, and can be heard with satisfactory loudspeaker volume on any night. 1YA, Auckland, and 3YA, Christchurch, are both available with good volume.

THE Melbourne police have now one of the finest wireless-equipped systems of motor patrols in the world. There are five high-powered cars patrolling each night and day, each of which keeps in touch with headquarters by radio. Each car has an up-to-date Morse operating equipment with a radio expert continually listening in. These cars have been instrumental in capturing many criminals and have had countless chases after motor-car

thieves. On one occasion a police car touched 87 miles an hour in a thrilling pursuit of thieves.

"SWITCH" has received a letter from a friend on holiday in the Marlborough Sounds who has taken his radio set with him. He reports splendid reception of 2YA, Wellington, from its commencement each day until closing down late at night. He concludes: "This radio adds to the pleasure of our holiday. Good luck to 2YA."

THE relays by 2YA, Wellington, of the "talkies" at the Majestic Theatre have been universally appreciated, and "Switch" has heard numerous expressions of pleasure with the innovation. It is difficult at times to realise that one is listening to a "talkie" and not an actual stage production. The general cry is "Give us more!"

"GRAMO" (City) has sent a little note as follows:—"You know there are frequently gramophone records which make a 'hit.' Let me add Malcolm McEachern's singing record of 'You Along O-Me' heard from 2YA, Wellington. This wonderful basso is well known as a member of the 'Mr. Optimist and Mr. Pessimist' duo heard from Sydney on many occasions in the past. I beg to nominate him as the finest basso in this quarter of the globe. Any other entries?"


AN ingenious adaptation of radio as a means of increasing business was recently discovered in a Turkish bath establishment in Paris. The proprietor found that the average patron would not remain in the steam room long enough to obtain the best results. This was largely due to the monotony of the procedure which does not permit of either conversation or reading. To overcome this monotony a special damp and heat-proof loudspeaker was installed with a radio receiver and amplifier located elsewhere.

# 1929!

## THE LATEST

### All-Electric Neutrodyne

HAS MADE GOOD



Quality Radio Apparatus

## A New Tone---



FULL, but NATURAL always, is obtained by the combination of the New "APEX" A.C. Receiving Set with the "APEX" Magnetic Cone Speaker, which may be easily and effectively mounted on the lid, giving an IDEAL RADIO COMBINATION.

Retail Price ..... £27

Write for our extremely attractive Double Offer.

# BOND & BOND Ltd.

N.Z. "APEX" AGENTS

# Next Week's Features

## 1YA Features

THE church service on Sunday, December 29, will be relayed from the Unitarian Church, the preacher being the Rev. Wilna L. Constable. This broadcast will be followed by a relay from the Town Hall of the concert to be given by the Municipal Band, conducted by Mr. Christopher Smith.

ON Monday evening the vocalists at 1YA will be Miss Kitty Williamson (soprano) and Mr. A. G. Taylor, who, as a bass-baritone, was a member of the Westminster Glee Singers for some time. He will sing "Widdicombe Fair," "Long Ago in Alcalá," and "The Carol Singers." Sketches will be given by Mr. Jack Gordon and Mrs. McGregor, and the 1YA Orchestral Octet will supply instrumental items, including a very fine suite, "Izeyl," by Durand.

ON New Year's Eve the ever popular Radio Scamps together with the 1YA Orchestral Octet under Mr. Eric Waters, will give a very bright programme until 10 p.m. Dance music will follow until 11.45, after which there will be a special description of the scene in the street near the Ferry Building, with the ringing of the midnight chimes and the singing of "Auld Lang Syne."

Mr. and Mrs. W. Scott, who have made themselves so popular with radio listeners, will give two piano and vocal numbers. Mrs. Scott, besides playing her husband's accompaniments, will be heard in pianoforte solos. Miss Gwladys Payne will sing mezzo-soprano solos, and the 1YA Orchestral Octet will supply instrumental items. The dance programme will continue until 11 p.m.

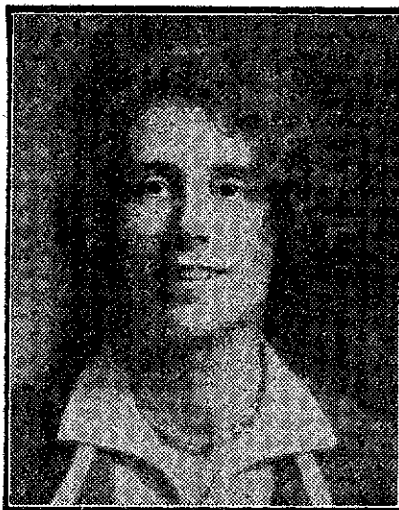
MR. REG. MORGAN and his orchestra have been engaged for Thursday evening, and will be heard in many delightful numbers, including baritone solos by Mr. Morgan himself. These

will be "Danny Boy" and "The Desert Song." Miss Kay Christie, contralto, is also appearing, singing "The Little Silver Ring," "Good Morning, Brother Sunshine," and "It's Quiet Down Here." Humour will be supplied by Mr. T. T. Garland. The Snappy Three will be giving some of the latest novel-

cal items of the musical programme, and Miss Maisie Carte-Lloyd will be heard in elocutionary numbers. Other fine items will be given by the Orchestral Octet, including the suite "Romanesque," by Besley. This programme will be followed by dance music until 11 p.m.



**MISS MAUDE FARRANT**  
Is a well known teacher of elocution, who has performed quite a number of times at 2YA, specialising in the humorous type of item.  
—S. P. Andrew, photo.



**MRS. ALICE HARRIS.**  
A soprano with a wide range of songs; a great sight reader. She was a member of the Orpheus Quartet of 2YA for some years.  
—S. P. Andrew, photo.

ties, and the usual dance programme will follow until 11 p.m.

Once again we will hear Mrs. Zoe Bartley-Baxter in shot one-act plays. The Studio Trio will provide some very fine instrumental items, and Miss Irene Frost, contralto, will sing, amongst other numbers, "Death and the Maiden," by Schubert.

ON Saturday, the New Zealand Four male quartet will provide the vo-

possible, than the last. The concert is in aid of a scheme to raise funds for tennis courts for the young Maori people of Otaki.

ON the afternoon of New Year's Eve, further summarised descriptions of the Wellington v. Canterbury cricket match will be given by Mr. A. Varney. For the concert session on Tuesday evening a special programme has been arranged, the assisting artists being Mrs. Violet Lochore (soprano), Mr. Lad Haywood (mandolinist), Mr. Peter Connell (baritone), Miss Evelyn Robinson (contralto), Mr. Harry Phipps (tenor), and Mr. Billy Hart, who will be heard in popular songs at the piano. Mr. Jack Wilkinson will provide the humour of the programme with several comic songs. The 2YA Salon Orchestra, under the conductorship of Mr. M. Dixon, will also contribute to the evening's entertainment. At 10 p.m. a dance programme will be presented, terminating at 11 p.m., when a relay of Watch Night service from the Taranaki Street Methodist Church will be carried out.

THE final day's play in the Wellington v. Canterbury match will be described on Wednesday afternoon by Mr. A. Varney. The concert session in the evening will consist of a special holiday programme, featuring Allan's Dance Orchestra in some of the latest dance numbers. The orchestra will be assisted by Mr. Val Jones (baritone), Miss Phyllis Liddell (soprano), Mr. Frank Amore (tenor), Mr. Frank Moran (comedian), and Miss Lily Charles, who will sing several popular song numbers. The programme will continue until 11 p.m., instead of 10 p.m., this being a departure from the usual practice on account of the holiday.

ON Thursday evening a new combination of entertainers, the Radiolites Concert Party, will provide a novelty programme of a bright and happy nature. The items comprise choruses, vocal solos, humorous sketches and novelty numbers, both vocal and instrumental, in keeping with the holiday season. In the news session, Hare Hongi will give his first of a further series of talks on "Maori Pronunciation."

A PROGRAMME of operatic numbers will be presented on Friday evening by the 2YA Orchestra, under Signor Truda and Misses Jeanette Briggs and Ngaire Coster (soprano and contralto respectively), Mr. J. M. Caldwell (bass) and Mr. Will Hancock (tenor). The orchestra will play the overture "Italians in Algeria" (by Rossini), a selection from the opera "La Traviata," two musical comedy numbers, "Veronique" and "The Gypsy Princess," and a concert waltz by Waldteufel, "Waltz Militaire." An item of outstanding interest will be a talk by Mr. E. Norman Torry, the well-known author and lecturer, on "How to Write Fiction." This will not be a dull, uninteresting

## 2YA Features

THE evening service of St. Gerard's Redemptorist Church will be broadcast on Sunday. The choir will be under the conductorship of Mr. J. F. Oakes, and Mr. Henry Mount will be at the organ. From the studio, at the conclusion of the church service, a concert will be given by the Wellington Municipal Tramways Band, assisted by the following artists:—Miss Eileen Higgins (mezzo-soprano), Miss Nora Greene (contralto), and Mr. John Prouse (baritone). An item of outstanding interest will be the first appearance at 2YA of Miss Marjorie Skill, of Sydney. Miss Skill is a leading lyric soprano in Sydney, and her numbers will be certain to create great interest amongst listeners. Signor A. P. Truda will play the flute obligato to Miss Skill's solo, "Lo, Here the Gentle Lark."

ON Monday afternoon the studio programme will be interspersed with summaries of the cricket match, Wellington v. Canterbury. This match, which is being played at the Basin Reserve, will be described by Mr. A. Varney. Listeners still have pleasant recollections of the last relay from Otaki, and they will no doubt be interested to learn that another entertainment will be given on Monday evening. Arrangements are being made to make this concert better, if

## EBONITE TUBING

### RIBBED AND PLAIN

For all types of coils for all circuits. Various sizes—but only one quality—THE BEST.

### HARD-RUBBER PANELS

Any size cut to order

Send for List

**L. B. SCOTT Ltd.**

Manchester and Worcester Sts.,  
CHRISTCHURCH



LO-LOSS from 5/- per foot.

lecture, but a bright, witty dissertation on "matters literary." Mr. Torry has lectured on numerous occasions both on the public platform and to clubs, societies and other organisations, and that his talk will prove of more than passing interest to listeners there can be no doubt.

A PROGRAMME somewhat off the "beaten track" will be presented on Saturday evening, when a relay description of the whole of the evening performance of Messrs. Wirth Brothers' Circus will be given. This programme should prove of more than passing interest not only to those in town, but also to the less fortunate in the country and in hospitals. Prior to passing to the relay the Salon Orchestra, under the conductorship of Mr. M. Dixon, will play as an overture Binding's "Life on the Ocean Wave." The usual dance programme will be presented at approximately 10 p.m.

### 3YA Features

THERE will be a relay of the service in the Anglican Cathedral on Sunday evening. An excellent studio concert will follow. The vocalists will be Miss Alice Vinsen (contralto), Mr. Fred Bullock (baritone), and Mr. Finlay Robb (bass). Elocutionary items will be given by Mrs. Margaret Williams. The items by the local artists will be supplemented by specially selected records.

ON Monday evening at 7.30 there will be a talk on "Esperanto" by Mr. N. M. Bell, M.A.

The New Brighton Municipal Band, under Mr. J. E. Nuttall, which always presents such bright and attractive programmes at 3YA, will be playing on Monday evening. The programme will include several novelty numbers, such as duets (by Conductor Nuttall and Bandsman Daniels) with band accompaniment, foxtrots with vocal effects, fantasia of Christmas carols, and a novelty foxtrot and waltz in which Mr. Les Croft and Mr. J. Nuttall will take part. A new singer for the evening will be Mrs. H. B. Naylor, a contralto from the studio of Mr. W. H. Dixon. Soprano solos will be sung by Miss Marjory Miller and tenor songs by Mr. P. Macdonald. Miss Mavis Kinsella will recite.

NEW Year's Eve, the Scottish Hogmanay, will be appropriately celebrated at 3YA with a Scottish entertainment. The singers will be the Melodious Four, and the instru-

mentalists will be Mr. Angus MacIntosh (piper) and the Studio Instrumental Octet under Mr. Harold Beck. From 10 o'clock till 11.45 there will be a relay of dance music played by the Bailey-Marston Dance Orchestra at the Winter Garden. At 11.45 there will be a relay from Cathedral Square, where there will be popular celebrations, and the Cathedral bell will ring out the old year and ring in the new.

FOR New Year's Day there will be another holiday entertainment. A miscellaneous programme will be presented by the Studio Instrumental Octet under Mr. Harold Beck. Mrs. Daisy Pearce (mezzo-soprano), who has not been heard from 3YA for some time, will be singing, also Mr. C. R. Williamson (tenor), and Mr. Clive Hindle (baritone). There will be popular songs by Miss Alma Finnerty and humorous recitations by Miss Ruby Boot.

THURSDAY evening's miscellaneous programme will comprise numerous classical items. The vocalists will be the Grand Opera Quartet, singing solo and concert numbers. Pianoforte solos will be played by Miss Frances Hamerton and violin solos by Mr. Arthur Gordon, first violin of the Christchurch String Quartet. Miss Dorothy Jenkin will recite "The French Peasant" and "The Thousandth Man."

POPULAR vocal numbers and dance music by the Bailey Marston Dance Orchestra will comprise Friday evening's programme. Mrs. Moana Lawrence, Mrs. E. H. Davies, Mr. Arthur T. Couch, and Mr. Robert Allison will be singing. Mr. L. T. J. Ryan will recite.

SATURDAY evening's programme will be of a vaudeville type. Mr. and Mrs. J. W. Bailey, of Wanganui, will be presenting two sketches. Miss Betty Hilliard will sing jazz songs. A new instrumental trio (Miss Gladys Vincent, Mr. Francis Bate, and Miss May Garden) will play selections, while solos will be played by Miss Vincent. Vocal soloists will be Miss Rose Horrell and Mr. Harry Francis. There will be selections by Miss Elaine Moody's Hawaiian Trio, and humorous numbers by Mr. J. J. Flewellyn.

### 4YA Features

THE service conducted by Captain Chandler will be relayed from the Salvation Army Citadel on Sunday evening. An organ recital by Mr. C. Roy Spackman will follow. It will be relayed from Knox Church.

THE vocalists for Monday evening will be Miss McCready, Miss Mary Somerville, and Mr. R. McDonald. Recitations will be given by Miss Erana Newbold. There will be instrumental selections by the 4YA Broadcasting Trio. The records will comprise choruses and orchestral numbers.

THE Scottish element will be very strong in the programme of New Year's Eve. The Dumedin Highland Pipe Band, under Pipe-Major J. Croon, will play numerous selections throughout the evening, and at midnight will play the old year out and the new year in. Miss Helen Roy (contralto), Miss Nellie Warren (elocutionist), and

Mr. J. Kennedy (tenor), all artists who have only recently made their first bow before the microphone, are included on the same programme. Mr. Buster Brown, the popular Scottish comedian, and Miss Gwenda Burt, one of 4YA's leading contraltos, will also perform.

A FEATURE of the programme on Wednesday evening will be Maori songs sung in Maori by Miss Ida Lungley. So often do we have the translated version of these popular folk songs that Miss Lungley's item should prove very entertaining. Mr. William Yates (elocutionist) and Miss Veronica McKenzie (soprano), well known at 2YA, are on the same programme, and their numbers for this occasion will add to their popularity over the air. Mr. W. Alloo will also be singing. There will be a relay from the Empire Theatre, Mr. Leslie Harvey playing on the Christie organ. Further instrumental music will be provided by "The Select Trio" and by Mrs. E. Drake (pianiste).

THE Celeste Quintet is to perform on Friday. An interesting item on this programme is the viola and piano duo of Flottermann Concerto. This concerto is in sonata form. The first movement is very melodious, the subject of which is brimful of melody. The finale of the concerto is in six-eight time and is exceptionally brilliant. There are so few duos for viola and piano that the innovation of this item on the programme is certain to be most interesting.

The vocal portion of the musical programme will be provided by Miss Mollie Fenton (mezzo-soprano), Mr. L. E. Dalley (tenor), and Mr. L. North (baritone). Recitations will be given by Miss Nellie Warren.

ON Saturday 4YA will relay from 3YA.

### International Radio

AN interesting experiment and one with far-reaching possibilities was made in Berlin recently when an attempt was made to transmit photographs from a ground station to an aeroplane in full flight. The first radiograph to be sent was a weather map showing the meteorological conditions the flying machine would encounter over the regular air route from Berlin to Paris, the second showed storm conditions, and the third the rain-soaked locality where the plane would land. The reception, which took place on an ordinary wireless set equipped with a Fultograph apparatus, five minutes after the pictures were dispatched, was of excellent quality.

IT is surprising to learn that the small island of Cuba has as many as ninety-four radio stations, which are used for both telegraphic and telephonic broadcasting, though the number of stations for telephonic transmission is far in excess of the other type. Owing to the super-abundance of stations operating, it has been found necessary to make new wavelength allocations. The measure has been taken, of course, to ensure that in future there will be no interference among them.

### Beam Installation for Spain

### For Communication with Colonies

BRITISH material, design and workmanship played a conspicuous part in the building of the important new group of wireless stations which were opened recently by the King of Spain of Aranjuez, near Madrid, in the presence of the Marchese Marconi, the Spanish Prime Minister, and Ambassadors representing other countries.

This group of wireless stations has been designed and built to extend the range of Spanish external communications in consideration of Spain's importance in the commercial life of the world and particularly of South America. Madrid is now placed for the first time in direct wireless telegraph communication with both North and South America and, by means of a short-wave Beam installation which is included in the equipment of the Aranjuez station, a regular commercial telephone service between Spain and the Argentine Republic will be available in addition to high-speed Beam telegraph services.

For use in these circuits special receivers have been constructed by British engineers on behalf of Transradio Espanola, the Spanish company which owns these stations and which carries out the wireless telegraph services between Spain and other countries. The supply of this apparatus to Transradio Espanola is the second large order for British wireless equipment recently received from Spain. A previous contract provided for the installation on behalf of the Spanish Government of a short-wave station to establish a direct radio service between Madrid and the Spanish colony of Fernando Po, in Equatorial Africa.

Have you secured your copy of  
"N.Z. Radio Listener's Guide?"

Dealers and Booksellers 2/6; Post Free 2/9—P.O. Box 1032, Wellington.

Now Available.

**The Government  
Tourist Dept's.  
Booking System**  
*Considered by Experts*  
**The Best in the  
World**  
Offices in all Main Centres

Relieve  
throat  
soreness  
quickly  
with

**Pulmonas**  
PASTILLES

Suck them slowly

1/6 all chemists

# Full Programmes for Next

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

## Sunday, December 29

### 1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, DECEMBER 29

- 3.0 : Afternoon session—Selected gramophone items.  
 4.0 : Literary selection by the Announcer.  
 4.8 : Studio items.  
 6.0 : Children's session, conducted by Uncle Leo.  
 6.55 : Relay of service from Unitarian Church. Preacher: Rev. Wilna L. Constable.  
 8.30 : (approx.) Relay from Auckland Town Hall of concert by the Auckland Municipal Band under the conductorship of Mr. Christopher Smith.  
 9.45 : (approx.) Close down.

### 2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, DECEMBER 29.

- 3.0 : Afternoon session—Selected studio items.  
 6.0 : Children's session conducted by Uncle George.  
 7.0 : Relay of service from St. Gerard's Redemptorist Church.  
 Organ—"The First Nowell" (Westbrooke)  
 Rosary with choral responses.  
 "Alma Redemptoris" (Richardson).  
 Sermon—Rev. Father T. Cahill, C.S.S.R.  
 "Adeste Fideles" (Novello).  
 "O Salutaris" (Silver).  
 "Tantum Ergo" (Neidermeyer).  
 "Divine Praises" (Oakes).  
 "Adoremus" (Rev. Father Murphy).  
 Organ—"Pastores" (Weigand).  
 (Organist: Mr. H. Mount. Choirmaster: Mr. Frank J. Oakes.)  
 8.15 (approx.) : Studio concert by the Wellington Municipal Tramways Band under the conductorship of Mr. E. Franklin, and assisting artists:  
 Hymn—Band, "Nearer, My God, to Thee" (traditional).  
 Overture—Band, "Morning, Noon, and Night" (Suppe).  
 Mezzo-soprano—Miss Eileen Higgins, "Ave Maria" (Kahn).  
 Baritone—Mr. John Prouse, recitative, "I Feel the Deity Within" (Handel), aria, "Arm, Arm, Ye Brave" (Handel).  
 Selection—Band, "Largo in G" (Handel).  
 Contralto—Miss Nora Greene, "O Rest in the Lord" ("Elijah") (Mendelssohn).  
 Violin—Yelhy D'Aranyi, (a) "Rondino" (Beethoven-Kreisler), (b) "Bagatelle in D" (Gatty) (Columbia 01622).  
 Soprano—Miss Marjorie Skill, of Sydney, (a) "Lo, Here the Gentle Lark" (Bishop) (with flute obligato by Signor A. P. Truda); (b) "Aria—Mignon" (Thomas).  
 March—Band, "Ravenswood" (Rimmer).  
 Weather report.  
 Mezzo-soprano, Miss Eileen Higgins, (a) "Could I" (Tosti); (b) "The Star" (Rogers).  
 Instrumental trio—De Groot, Bor, and Calve, (a) "I Zingari" (Leoncavallo), (b) "Mirage" (Coates) (H.M.V. B3028).  
 Vocal duet—Walter Glynn and Stuart Robertson, "The Moon Hath Raised Her Lamp Above" (Benedict) (H.M.V. B2979).  
 Selection—Band, "Un Ballo in Maschero" (Verdi).  
 Contralto—Miss Nora Greene, "Beyond the Dawn" (Sanderson).  
 Tenor—Murray Stewart, "Annie Laurie" (Trdfl.) (Parlophone A2857).  
 Intermezzo—Band, "The Way to the Heart" (Lincke).  
 Soprano—Miss Marjorie Skill, of Sydney, (a) "Mad Scene" ("Lucia di Lammermoor") (Donizetti) (flute obligato by Signor A. P. Truda); (b) "Dna Voce Poco Fa" (Rossini).  
 Baritone—Mr. John Prouse, (a) "The River of Years" (Marzials), (b) "My Fairest Child" (Alfred Hill).  
 March—Band, "B.B. and C.F." (Hume).  
 Close down.

### 3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, DECEMBER 29.

- 3.0 : Afternoon session—Selected gramophone items.  
 5.30 : Children's song service (Children of the Anglican Sunday Schools).  
 6.15 : Hymn tunes from studio.  
 6.30 : Gramophone recital.  
 7.0 : Relay of service from Christchurch Anglican Cathedral.  
 8.15 (approx.) : Studio Concert:  
 Suite—Philadelphia Symphony Orchestra, "Nutcracker Suite" (Tschai-kowsky): (1) Miniature Overture and March, (2) Dance of the Sugar Plum Fairy, (3) Trepak (H.M.V. D1214).  
 8.23 : Contralto—Miss Alice Vinsen, (a) "Creation's Hymn" (Beethoven), (b) "A Summer Night" (Goring Thomas).  
 8.29 : Bass—Mr. Finlay Robb, (a) "Peace" (Eric Fogg), (b) "The Heart Worships" (Gustav Holst).

- 8.33 : Suite—Philadelphia Symphony Orchestra, "Nutcracker Suite" (Tschai-kowsky): (1) Arab Dance, (2) Chinese Dance, (3) Dance of the Flutes (H.M.V. D1215).  
 8.41 : Recital—Mrs. Margaret Williams, "The House by the Side of the Road" (MS.).  
 8.45 : Baritone recitative and aria—Mr. Fred. A. Bullock, (a) "Like Death's Grim Shadow" (Wagner), (b) "O Star of Eve" (Wagner).  
 8.51 : Suite—Philadelphia Symphony Orchestra, "Nutcracker Suite" (Tschai-kowsky): Waltz of the Flowers (H.M.V. D1216).  
 8.59 : Contralto—Miss Alice Vinsen, "Harbour Night Song" (Sanderson).  
 9.3 : Bass—Mr. Finlay Robb, "Steal Away" (arr. Paul Robeson).  
 9.7 : Piano and cello—Alfred Cortot and Pablo Casals, "The Magic Flute" (Mozart-Beethoven) (H.M.V. DA915).  
 9.12 : Recitals—Mrs. Margaret Williams, (a) "The Song of the Sandhills" (Mary Colborne Veel), (b) "Saturday Night" (Mary Colborne Veel).  
 9.18 : San Francisco Symphony Orchestra, "Funeral March of a Marionette" (Gounod) (H.M.V. ED5).  
 9.22 : Baritone—Mr. Fred A. Bullock, (a) "Elegie" (Massenet), (b) "Glow of the Western Sky" (Hulbert).  
 9.27 : Choral—Royal Choral Society, "Hallelujah Chorus" ("Messiah"—Handel) (H.M.V. D1108).  
 9.30 : Close down.

### 4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, DECEMBER 29.

- 3.0 : Town Hall chimes.  
 3.1 : Selected gramophone items.  
 5.30 : Children's song service, conducted by Big Brother Bill.  
 6.45 : Relay of service from Salvation Army Citadel. Preacher: Captain Chandler.  
 7.55 : Weather report.  
 8.0 : Studio items.  
 8.15 : Relay from Knox Church of organ recital by Mr. C. Roy Spackman:  
 "Tannhauser" Selection (arrgd. Pearce).  
 "Evensong" (Easthope Martin).  
 "Meditation in D Flat" (St. Clair).  
 "Serenade" (Herbert, arrgd. for organ by C. Roy Spackman).  
 "Visione" (Rheinberger).  
 "Raymond" Overture (Thomas—organ transcription by recitalist).  
 9.0 : Close down.

## Monday, December 30

### 1YA, AUCKLAND (900 KILOCYCLES)—MONDAY, DECEMBER 30.

- 3.0 : Afternoon session—Selected studio items.  
 4.0 : Literary selection by the Announcer.  
 4.8 : Studio items.  
 5.0 : Children's session, conducted by Cinderella.  
 6.0 : Dinner session—"His Master's Voice" Hour:  
 New Symphony Orchestra, "Children's Overture" (Quilter).  
 6.13 : Tacet.  
 6.15 : New Light Symphony Orchestra, (a) "Just a Memory" (de Sylva), (b) "My Blue Heaven" (Whiting) (EB18).  
 Concerted—Light Opera Company, "The Arcadians" (Monckton).  
 6.27 : New Light Symphony Orchestra, (a) "The Glow Worm Idyll" (Lincke), (b) "Hearts and Flowers" (Tobani) (Zonophone EF20).  
 Concerted—Light Opera Company, "Veronique" (Messenger) (C1684).  
 6.42 : Tacet.  
 6.45 : Piccadilly Orchestra, (a) "Souvenir de Capri" (Beccce), (b) "My Beloved Gondolier" (Tobor) (B2575).  
 Piccadilly Orchestra, (a) "Serenade Neapolitaine" (Drigo), (b) "The Dansant" (Fletcher) (B2397).  
 6.57 : Tacet.  
 7.0 : News and market reports.  
 8.0 : Chimes.  
 Overture—1YA Orchestral Octet (under conductorship of Mr. Eric Waters), "St. Hubertus" (Finck).  
 8.11 : Soprano—Miss Kitty Williamson, "Rose in the Bud" (Forster).  
 8.15 : Concerted—"Whoopee" vocal gems, (Kahn) (H.M.V. EB41).  
 8.19 : Sketch—Mrs. McGregor and Mr. J. Gordon, "Just Like a Woman" (Collins).  
 8.29 : Cello—Beatrice Harrison, "Harlequinade" (Popper) (H.M.V. C1626).  
 8.33 : Bass-baritone—Mr. A. Gibbons-Taylor, "Widdicombe Fair" (trdfl.).  
 8.37 : Choral—Light Opera Company, "Songs of the Past" (H.M.V. C1049).  
 8.45 : Suite—1YA Orchestral Octet, "Izeyl" (Pierre-Monton): 1. The King Enters; 2. The Princess Enters; 3. Introduction and Lament; 4. Serenade to Izeyl.



# Week-all Stations-to Jan. 5

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

- 8.55: Vocal quartet—Zono Minstrels, "Way Down Dar in Tennessee" (Scott Gatty) (Zonophone 1227).  
 8.59: Weather report.  
 9.1: Instrumental—1YA Orchestral Octet, (a) "I've Never Seen a Smile Like Yours" (Johnson), (b) "The Toymaker's Dream" (Golden).  
 9.8: Concerted—Light Opera Company, gems from "Hold Everything" (de Sylva) (H.M.V. EB41).  
 9.12: Bass-baritone—Mr. A. Gibbons-Taylor, (a) "Long Ago in Alcalá" (Messager), (b) "The Carol Singers" (Sterndale-Bennett).  
 9.19: Kirilloff's Balalaika Orchestra, "Shining Moon" (trdtl).  
 9.22: Male trio—Melody Three, "My Song of the Nile" (Bryan).  
 9.25: Sketch—Mrs. McGregor and Mr. J. Gordon, "The Lady of the Lake" (Jeans).  
 9.35: Instrumental—1YA Orchestral Octet, "Reconciliation" ("Les Millions d'Arlequin") (Drigo).  
 9.44: Soprano—Miss Kitty Williamson, (a) "At Dawning" (Cadman), (b) "I Love the Moon" (Rubens).  
 9.51: Selection—1YA Orchestral Octet, "Sometime" (Trinkl).  
 10.0: Close down.

## 2YA, WELLINGTON (720 KILOCYCLES)—MONDAY, DECEMBER 30.

- 3.0: Chimes.  
 Selected studio items, interspersed with summaries of the Wellington versus Canterbury cricket match at Basin Reserve.  
 5.0: Children's session, conducted by Uncle Jeff.  
 6.0: Dinner Session—"His Master's Voice" Hour:  
 March—United States Army Band, "Army and Marine" (Starke).  
 Selection—Piccadilly Orchestra, "The Waltz Dream" (Strauss).  
 Jack Hylton's Orchestra, "My Inspiration Is You" (Nicholls) (C1577).  
 6.12: Tacet.  
 6.15: Royal Orchestra, "Sylvia Ballet—Prelude" (Delibes) (C1417).  
 Royal Opera Orchestra, "Sylvia Ballet—Intermezzo" (Delibes).  
 Salon Orchestra, "Chanson Bohème" (Baldi) (B2581).  
 6.27: Tacet.  
 6.30: Jack Hylton's Orchestra, "A Room With a View" (Coward) (C1577).  
 Salon Orchestra, "Aloha Sunset Land" (Kawelo) (B2581).  
 March—San Francisco Symphony Orchestra, "Marche Militaire" (Schubert) (ED9).  
 6.42: Tacet.  
 6.45: Detroit Symphony Orchestra, "Spanish Rhapsody" (Chabrier).  
 Balalaika Orchestra, "Shining Moon" (Russian folk song) (EA48).  
 March—United States Army Band, "American Spirit" (Buglione).  
 6.47: Tacet.  
 7.0: News session, market reports and sports results.  
 8.0: Chimes.  
 8.1: Relay from Lyric Theatre, Otaki, of concert by staff and pupils of Otaki Maori College, in aid of funds for formation of College tennis courts.  
 Close down.

## 3YA, CHRISTCHURCH (980 KILOCYCLES)—MONDAY, DECEMBER 30.

- 3.0: Afternoon session—Selected studio items.  
 4.25: Sports results to hand.  
 5.0: Children's session, conducted by "Scatterjoy".  
 6.0: Dinner Session—"His Master's Voice" Hour:  
 Piccadilly Orchestra, (a) "My Beloved Gondolier" (Tiber); (b) "Souvenir De Capri" (Becce) (B2575).  
 New Light Symphony Orchestra, "Just a Memory" (De Sylva) (EB18).  
 Violin and cinema organ—Elsie Southgate, "I Hear You Calling Me" (Marshall) (Zonophone 5109).  
 6.12: Tacet.  
 6.15: Waltzes—Marek Weber's Orchestra, "Pot-pourri of Waltzes" (Robert) (C1544).  
 Hilo Hawaiian Orchestra, "Sweet Hawaiian Dream Girl" (Williams).  
 6.26: Tacet.  
 6.30: New Light Symphony Orchestra, "Scene De Ballet Marionettes" (Gla-zounov) (B2754).  
 Violin and cinema organ—Elsie Southgate, "Rose in the Bud" (Tate).  
 New Light Symphony Orchestra, "Persiflage" (Francis) (B2754).  
 Jack Hylton's Orchestra, "When the White Elder Tree Blooms Again" (Doelle) (C1616).  
 6.44: Tacet.  
 6.45: Salon Orchestra, "My Blue Heaven" (Whiting) (EB18).  
 Hilo Hawaiian Orchestra, "Sleepy Honolulu Town" (Earl).  
 Jack Hylton's Orchestra, "I Kiss Your Hand, Madame" (Earl).  
 6.56: Tacet.  
 7.0: News session.  
 7.30: Lecture—Mr. N. M. Bell, M.A. "Esperanto."  
 8.0: Chimes.  
 Studio programme by the New Brighton Municipal Band, under the conductorship of Mr. J. E. Nuttall, and assisting artists:

- 8.1: March—Band, "Etheloids" (Slater).  
 One-step, Band, "If it Hadn't Started to Rain" (McKef).  
 8.7: Tenor—Mr. P. Macdonald, "Land of Delight" (Sanderson).  
 8.11: Instrumental—Christchurch Broadcasting Trio, (a) "Minuet"; (b) "Gavotte"; (c) "March" (Bridge).  
 8.21: Soprano—Miss Marjory G. Miller, (a) "Smile Thro' Your Tears" (Hamblen); (b) "The Hand of You" (Jacobs-Bond).  
 8.27: Vocal duet with band accompaniment—Conductor J. Nuttall and Bandsman R. Daniels, "Let the Rest of the World Go By" (Ball).  
 8.32: Accordion solo—Jerry O'Brien, "Little Judy" (O'Brien).  
 8.35: Recital—Miss Mavis Kinsella, "Hoodoo McFiggins' Christmas" (Leacock).  
 8.40: Whistling solo with violin and piano—Sybil Sanderson Fagin, "Honey-moon Waltz" (Arden) (Columbia 3901).  
 8.44: Contralto—Mrs. H. B. Naylor, "Last Night" (Kjerulf).  
 8.48: Foxtrots with vocal refrain—Band, (a) "Sing Me to Sleep With a Twilight Song" (Gilbert); (b) "She Donna Wanna" (Ager).  
 8.54: Chorus—Columbia Light Opera Company, "Rio Rita" vocal gems (Tierney) (Columbia 02572).  
 9.0: Weather report.  
 9.2: Instrumental—Christchurch Broadcasting Trio, "Novelletteen—Allegretto Scherzando and Finale" (Gade).  
 9.11: Tenor—Mr. P. Macdonald, (a) "At Dawning" (Cadman), (b) "The Last Song" (Rogers).  
 9.17: Fantasia and Christmas Carols—Band, (a) "Helvetia" (Calvert); (b) "While Shepherds Watch" (Tate); (c) "Lead Kindly Light" (Tate).  
 9.36: Soprano—Miss Marjory G. Miller, "Three Green Bonnets" (D'Hardelot).  
 9.39: Recitals—Miss Mavis Kinsella, (a) "The Canebottomed Chair" (Thackeray); (b) "Tisn't Worth It" (MS).  
 9.44: Novelty foxtrot and Waltz—Band with Messrs. Les Croft and J. Nuttall, (a) "Maggie, Yes Ma" (Tucker), (b) "You Wanted Someone to Play With" (McConnell).  
 9.52: Contralto—Mrs. H. B. Naylor, (a) "My Curly Headed Babby" (Clut-sam), (b) "Husheen" (Needham).  
 9.59: March—Band, "Heroes All" (Bidgood).  
 10.3: Close down.

## 4YA, DUNEDIN (650 KILOCYCLES)—MONDAY, DECEMBER 30.

- 3.0: Town Hall chimes.  
 3.1: Selected gramophone items.  
 4.25: Sports results to hand.  
 5.0: Children's session conducted by Uncle Allan.



## Major James E. Hahn

President AMRAD CORPORATION, of Boston,  
 President DE FOREST CROSLEY, LTD., of Toronto,  
 Director CROSLEY RADIO CORP., of Cincinnati, says:—

"Since the vacuum valve is the heart of any receiving set, we are naturally very exacting in choosing valves for the testing of AMRAD instruments. Our experience has taught us that RCA Radiotrons give the best results. Consequently we recommend their use in all radio sets bearing our name."

# RCA RADIOTRON

MADE BY THE MAKERS OF THE RADIOLA

# Amalgamated Wireless

(Australasia) Ltd.

BOX 830, WELLINGTON

- 6.0 : Dinner session—"Columbia" Hour:  
Selection—H.M. Grenadier Guards Band, "New Sullivan Selection"  
(arrgd. Godfrey) (02731).  
Waltz—Court Symphony Orchestra, "Destiny Waltz" (Baynes) (564).  
6.12 : Tacet.  
6.15 : Columbia Symphony Orchestra, "Idilio" (Lack) (01076).  
New Queen's Hall Light Orchestra, "Petite Suite de Concert" (Coler-  
idge-Taylor) (02588).  
6.26 : Tacet.  
6.30 : New Queen's Hall Light Orchestra, "Petite Suite de Concert" (Coler-  
idge-Taylor) (02589).  
Wurlitzer organ—Terence Casey, "I'm Lonely" (Coates) (01501).  
6.42 : Tacet.  
6.45 : Dance suite—H.M. Grenadier Guards Band, "Nell Gwynn" Dances  
(German) (01329).  
Columbia Symphony Orchestra, "Spring Song" (Mendelssohn) (01076).  
Waltz—Symphony Orchestra, "Morgen Blatter" (Strauss) (9218).  
6.58 : Tacet.  
7.0 : News session.  
8.0 : Town Hall chimes.  
8.1 : Overture—Berlin State Opera Orchestra, "The Beautiful Galathea"  
(Suppe) (H.M.V. C1527).  
8.9 : Mezzo-soprano—Miss McCready, (a) "Rose Softly Blooming" (Spohr),  
(b) "Porgi Amor" (Mozart).  
8.16 : Instrumental—4YA Broadcasting Trio, (a) "Prophete—Coronation  
March" (Meyerbeer), (b) "Berceuse de Jocelyn" (Godard), (c)  
"Bridal Chorus" ("Lohengrin"—Wagner).  
8.26 : Recital—Miss Erana Newbold, "Keeping a Thief" (Anon.).  
8.32 : Selection—Band of H.M. Grenadier Guards, "Pirates of Penzance"  
(Sullivan) (H.M.V. 1368).  
8.40 : Bass—Mr. R. McDonald, (a) "A Fairy Tale" (Charles), (b) "At  
Grendon Fair" (Marie).  
8.47 : Chorus—Light Opera Company, "The Arcadians" Vocal Gems (Monck-  
ton) (H.M.V. C1684).  
8.51 : Violoncello—Mr. Phil Palmer, (a) "Valse Apache" (Van Biene), (b)  
"Simple Aveu" (Thome).  
8.54 : Contralto—Miss Mary Somerville, (a) "Cradle Me Low" (Brahe), (b)  
"Rest at Midday" (Hamilton).  
9.0 : Weather report.  
9.2 : Royal Opera Orchestra, "Sylvia Ballet—Pizzicato and Procession of  
Bacchus" (Delibes) (H.M.V. C1418).  
9.10 : Mezzo-soprano—Miss McCready, "Convien Partir" (Donizetti).  
9.14 : Recitals—Miss Erana Newbold, (a) "True Friendship" (Anon.), (b)  
"It May Be Life" (Herbert).  
9.18 : Instrumental—4YA Broadcasting Trio, (a) "Pierette" (Chaminade),  
(b) "Herodiade—Prelude Act IV." (Massenet), (c) "Autumn and  
Winter" (Glazounov).  
9.26 : Bass—Mr. R. McDonald, "Song of the Sword" (Leighton).  
9.30 : Chorus—Russian State Choir, "Storm on the Volga" (Pastschenko)  
(H.M.V. C1498).  
9.35 : Violoncello—Mr. Phil Palmer, "Murmuring Breezes" (Jensen).  
9.43 : Contralto—Miss Mary Somerville, "How Changed the Vision" (Handel).  
9.48 : Instrumental—4YA Broadcasting Trio, (a) "Menuet" (Haydn), (b)  
"Raymond" Overture (Thomas).  
10.0 : Close down.

## Tuesday, December 31

### 1YA, AUCKLAND (900 KILOCYCLES)—TUESDAY, DECEMBER 31.

- 11.45 : Relay of results of Auckland Trotting Club's meeting at Alexandra  
Park, interspersed with gramophone items.  
5.0 : Children's session, conducted by Uncle George.  
6.0 : Dinner session—"Columbia" Hour:  
Plaza Theatre Orchestra, "The Three Bears" Fantasy (Coates).  
Regimental Band of H.M. Grenadier Guards, "All on a Christmas  
Morning" (Amers) (990).  
6.12 : Tacet.  
6.15 : Court Symphony Orchestra, "The Windmill Man," selection (Crook).  
London Mouth-Organ Band, "Joyous Greetings" (Leslie).  
6.27 : Tacet.  
6.30 : J. H. Squire Celeste Octet, "Peter Pan" selection (Crook), (02910).  
Debroy Somers' Band, "Community Medley" (Arrgd. Somers) (02832).  
6.42 : Tacet.  
6.45 : Paul Whiteman's Orchestra, "Silent Night, Holy Night" (Giebel).  
Herman Finck's Orchestra, "Bacchanalia" (arrgd. Finck) (02541).  
6.57 : Tacet.  
7.0 : News session and market reports.  
8.0 : Chimes.  
8.1 : Presentation of novelty programme, "Once Again We Scamper," present-  
ed by the "Radio Scamps."  
10.0 : "His Master's Voice" dance programme:  
Foxtrot—Arcadians Dance Orchestra, "Fascinating Eyes" (Snyder).  
Foxtrot—Jack Pettis and his Pets, "A Bag of Blues" (Goering).  
Foxtrot—Ambrose's Orchestra, "Try to Learn to Love" (Coward).  
Foxtrot—Jack Pettis and his Pets, "Freshman Hop" (Henry).  
Waltz—Arcadians Dance Orchestra, "Ah, Sweet Mystery of Life"  
(Herbert) (Zonophone 5249).  
10.15 : Humour—Leonard Henry, "The Tale of the Talkies" (Henry) (B2916).  
Foxtrot—Arcadians Dance Orchestra, "Our Canary" (Butler).

- Foxtrot—Ambrose's Orchestra, "Dance, Little Lady" (Coward).  
Foxtrot—Arcadians Dance Orchestra, "Dreaming of To-morrow"  
(Pole) (Zonophone 5251).  
Foxtrot—Geo. Olsen's Music, "Old Man Sunshine" (Dixon), (EA422).  
Foxtrot—Park Central Orchestra, "Then Came the Dawn" (Dubin).  
Waltz—Troubadours, "Diane" (Rapee) (EA269).  
10.36 : Wurlitzer organ—Leslie James, "Just Imagine" (de Sylva); (b) "Lily  
of Laguna" (Stuart), (B2902).  
Foxtrot—Arcadians Dance Orchestra, "The Man I Love" (Gershwin).  
Foxtrot—Arcadians Dance Orchestra, "Sentimental Baby" (Palmer).  
Foxtrot—Arcadians Dance Orchestra, "A Room With a View" (Cow-  
ard) (Zonophone 5167).  
10.51 : Humour—Leonard Henry, "General Post" (Henry) (B2916).  
Foxtrot—Nat Shilkret's Orchestra, "Nagasaki" (Dixon) (EA412).  
Foxtrot—Geo. Olsen's Music, "Doin' the Raccoon" (Klages), (EA422).  
Waltz—Nat Shilkret's Orchestra, "Till We Meet Again" (Egan).  
11.3 : Medley waltz—The Troubadours, "Popular Songs of Yesterday."  
Foxtrot—Nat Shilkret's Orchestra, "Dusky Stevedore" (Razaf).  
Foxtrot—Shilkret's Orchestra, "Just a Sweetheart" (Shilkret).  
Foxtrot—Shilkret's Orchestra, "When Sweet Susie Goes Steppin' By"  
(Kaufman) (EA452).  
11.15 : Tenor—Lewis James, "Roses of Yesterday" (Berlin).  
Foxtrot—Goldkettes' Orchestra, "That's What Put the Sweet in Home"  
Sweet Home" (Lowry) (EA487).  
Foxtrot—Goldkettes' Orchestra, "Sweethearts on Parade" (Lombardo).  
Foxtrot—Jack Hylton's Orchestra, "In the Woodshed She Said She  
Would" (Johnson) (EA480).  
Waltz—The Troubadours, "Another Kiss" (Schertzinger) (EA489).  
11.30 : Male trio—Melody Three, "Remember Me to Mary" (Green).  
Foxtrot—Shilkret's Orchestra, "Jimmy Valentine" (Madden) (EA475).  
Foxtrot—Rhythm Band, "Teach Me to Dance Like Grandma" (Cow-  
ard) (EA471).  
Foxtrot—Shilkret's Orchestra, "Gotta Be Good" (Schertzinger).  
Foxtrot—Jack Hylton's Orchestra, "In the Shadows" (Finck).  
11.45 : Auckland's welcome to the New Year—Relay of street noises from  
Lower Queen Street.  
12.5 : Close down.

### 2YA, WELLINGTON (720 KILOCYCLES)—TUESDAY, DECEMBER 31.

- 12.0 : Selected studio items interspersed with summaries of the Wellington  
versus Canterbury Cricket Match from Basin Reserve.  
5.0 : Children's session, conducted by Uncle Jim.  
6.0 : Dinner session—"Columbia" Hour:  
Selection—H.M. Grenadier Guards Band, "Merrie England" (German).  
Bournemouth Municipal Orchestra, "Idylle Bretonne" (Gennin).  
6.12 : Tacet.  
6.15 : Waltz—Jacque Jacobs Ensemble, "L'Estudiantina" (Waldteufel).  
Plaza Theatre Orchestra, (a) "A La Gavotte" (Finck); (b) "Minuet"  
(Finck) (01489).  
March—H.M. Grenadier Guards Band, "Old Panama" (Alford).  
6.27 : Tacet.  
6.30 : Ketelbey's Concert Orchestra, "The Sacred Hour" (Ketelbey) (01528).  
Sandlers' Orchestra, "Someday, Somewhere" (Rapee) (01521).  
Bournemouth Municipal Orchestra, "Fluttering Birds" (Gennin).  
6.43 : Tacet.  
6.45 : Musical Art Quartet, (a) "Mighty Lak a Rose" (Nevin); (b) "To a  
Wild Rose" (McDowell) (01508).  
Sandlers' Orchestra, "Sonny Boy" (De Sylva) (01521).  
March—H.M. Grenadier Guards Band, "Dunedin" (Alford) (01535).  
6.57 : Tacet.  
7.0 : News session, market reports and sports results.  
7.40 : Lecturette—Representative, Agricultural Department, "For the Man  
on the Land."  
8.0 : Chimes.  
Overture—2YA Salon Orchestra, under the conductorship of Mr. M. T.  
Dixon, "Hungarian Lustspiel" (Kela Bela).  
8.9 : Soprano—Mrs. Violet Lochore, "Sing, Joyous Bird" (Montague  
Phillips).  
8.13 : Humour—Mr. Jack Wilkinson, "I'm a Dada" (Pleasants).  
8.19 : Mandolin—Mr. Lad Haywood, (a) "The Doll Dance" (Brown); (b)  
"Kathleen Mavourneen" (Crouch).  
8.25 : Baritone—Mr. Peter Connell, "My Ain Folk" (Lemon).  
8.29 : Selection—2YA Salon Orchestra, "Scenes from the Cinema" (Ketelbey).  
8.37 : Popular songs—Mr. Billy Hart, a group of popular songs at piano—  
(a) "My Song of the Nile" (Meyer); (b) "I Want to Meander in  
Meadow" (Woods); (c) "Sing a Little Love Song" (Conrad).  
8.47 : Scottish humour—Mr. Jock Lockhart, "Song and Story."  
8.52 : Wurlitzer organ—Reginald Foort, "Forever" (Ager) (H.M.V. B3044).  
8.56 : Contralto—Miss Evelyn Robinson, "Good Morning, Brother Sunshine"  
(Lehmann).  
9.0 : Weather report.  
9.2 : Tenor—Mr. Harry Phipps, "Devotion" (Nicholls).  
9.6 : Suite—2YA Salon Orchestra, "Keltic Suite" (Foulds).  
9.14 : Soprano—Mrs. Violet Lochore, "Mary O'Neill" (McGeogh).  
9.18 : Humour—Mr. Jack Wilkinson, "All for the Ladies, All for the Girls"  
(Weston).  
9.24 : Mandola—Mr. Lad Haywood, (a) "Eileen Alannah" (Thomas); (b)  
"Poem" (Fibich).  
9.31 : Baritone—Mr. Peter Connell, "Hall Caledonia" (Stroud).  
9.35 : Instrumental—2YA Salon Orchestra, Request Number.  
9.43 : Scottish humour—Mr. Jock Lockhart, "Song and Patter."

- 9.48: Wurlitzer organ—Reginald Foort, "In the Heart of the Sunset" (Nicholls) (H.M.V. B3044).
- 9.51: Contralto—Miss Evelyn Robinson, (a) "O Lovely Night" (Landon Ronald); (b) "No, Sir" (Wakefield).
- 9.57: Tenor—Mr. Harry Phipps, (a) "Old Green Isle" (Temple); (b) "Scent of the Lilies" (Cohn).
- 10.3: Instrumental—2YA Salon Orchestra, "Echoes from the Volga" (Seredy).
- 10.11: "His Master's Voice" Theme Song Programme:  
Vocal solo—Helen Clark, "A Wee Bit O' Love" ("Smiling Irish Eyes").  
Nat Shilkret's Orchestra, (a) "Sing a Little Love Song" (b) "Hittin' the Ceiling" ("Broadway") (B5662).  
Vocal solo—Franklyn Baur, "When my Dreams Come True" ("Cocanuts") (EE173).  
Instrumental—The Troubadours, "My Song of the Nile" waltz ("Drag")  
Vocal solo—Franklyn Baur, "Pagan Love Song" ("The Pagan").  
Instrumental—All Star Orchestra, (a) "Too Wonderful for Words" (b) "Steppin' Along" ("Words and Music") (EA621).
- 10.35: "Columbia" Dance Programme:  
Foxtrot—Paul Soecht's Orchestra, "I Love You, I Love You, I Love You" (Firth) (01459).  
Foxtrot—Vern Buck's Orchestra, "What a Girl, What a Night" (Sanders) (01469).  
Foxtrot—Stellar Dance Band, "In the Shadows" (Finck) (R. G20451).  
Foxtrot—Piccadilly Players, "Who Did, You Did" (Kalmar) (01492).  
Waltz—Novelty Quintet, "Sunlight" (Regal G20432).
- 10.50: Vocal duet—Trix Sisters, "My Rock-a-Bye Baby" (Leslie) (01484).  
Foxtrot—Ben Selvin's Orchestra, "If I Had You" (Shapiro) (01469).  
Foxtrot—Stellar Dance Band, "The Song I Love" (de Sylva).  
Foxtrot—Piccadilly Players, "Happy Go Lucky Bird" (Kalmar).  
Foxtrot—Ben Selvin's Orchestra, "If You Want the Rainbow" (Rose).  
Foxtrot—California Ramblers, "You're Just a Great Big Baby Doll" (Herscher) (01365).  
Waltz—Novelty Quintet, "On Board" (Regal G20432).
- 11.11: Vocal duet—Trix Sisters, "I'm Crazy Over You" (Sherman) (01484).  
Foxtrot—California Ramblers, "Bless You, Sister" (Robinson).  
Foxtrot—Stellar Dance Band, "Heartbroken and Lonely" (Coslow).  
Foxtrot—Piccadilly Band, "A Room with a View" (Coward) (01420).
- 11.22: Negro Spirituals—Fisk University Jubilee Singers, (a) "Little David" (Trdtl.); (b) "Ezekiel Saw de Wheel" (Trdtl.) (Regal G20421).
- 11.30: Relay of Watch Night Service from Taranaki Street Methodist Church. Close down.

### 3YA, CHRISTCHURCH (980 KILOCYCLES)—TUESDAY, DECEMBER 31.

- 3.0: Afternoon session—selected gramophone items.
- 5.0: Children's session, conducted by Aunt Pat.
- 6.0: Dinner session—"Columbia" Hour:  
March—H.M. Grenadier Guards, "Martial Moments" (arrgd. Winter).  
Waltz—Eddie Thomas' Collegians, "Missouri Waltz" (Logan) (02553).
- 6.12: Tacet.
- 6.15: Violin and Wurlitzer organ—Marrnello, "Evening in the Desert" (Hermite) (Regal G20420).  
South Sea Islanders, "Dreamy Hilo Bay" (Heagney) (01162).  
March—Columbia Symphony Orchestra, "March of the Toys" (Herbert).  
Pianoforte solo—Percy Grainger, "Molly on the Shore" (Grainger).
- 6.26: Tacet.
- 6.30: Waltz—Eddie Thomas' Collegians, "Till We Meet Again" (Whiting).  
Waltz—Eddie Thomas' Collegians, "Beautiful Ohio" (Earl) (02651).  
Piccolo duet—Jean and Pierre Gennin, "Rippling Streams" (Gennin).
- 6.41: Tacet.
- 6.45: Violin and organ—Marrnello, "Once" (Saunders) (Regal G20420).  
Xylophone—W. W. Bennett, "Gee Whiz" (Byron) (02575).  
South Sea Islanders, "Lei Lani" (Heagney) (01162).  
Denza Dance Band, "On the Shadows" (Finck) (Regal G20451).
- 6.58: Tacet.
- 7.0: News and information session.
- 8.0: Chimes.
- Overture—Studio Instrumental Octet, under the conductorship of Mr. Harold Beck, "The Thistle" selection (arrgd. Myddelton).
- 8.10: Vocal quartet—Melodious Four, "We're A' Scottish Here" (McInnes).  
Contralto—Miss Belle Renaut, "Doon the Burn" (Hook).
- 8.14: Highland Patrol—Band of Royal Air Force, "The Wee MacGregor."
- 8.17: Bass—Mr. T. D. Williams, "The Border Ballad" (Cowan).  
Vocal duet—Melodious Duo, "The Crookit Bawbee" (trdtl.).
- 8.23: Selection—H.M. Grenadier Guards Band, "Sir Harry Lauder" medley (Lauder) (Columbia 02750).
- 8.27: Sketch—Clapham and Dwyer, "At the Races" (Clapham and Dwyer).
- 8.32: Studio Instrumental Octet—"Coronach" (Barratt).
- 8.37: Soprano—Miss Frances Hamerton, "Ye Banks and Braes" (trdtl.).
- 8.41: Scottish bagpipes—Mr. Angus MacIntosh, (a) March, "Balmoral Highlanders" (trdtl.); (b) Slow March "Highland Cradle Song" (trdtl.); (c) Strathspey, "Miss Drummond on Perth" (trdtl.).
- 8.46: Tenor—Mr. Russell Sumner, "Skye Boat Song" (arrgd. Lawson).  
Vocal quartet—Melodious Four, "Duncan Gray" (trdtl.).
- 8.52: Studio Instrumental Octet, "Highland Laddies" selection (arrgd. Seredy).
- 9.0: Weather report.
- 9.2: Vocal quartet—Melodious Four, "The Rowan Tree" (Nairn).  
Contralto—Miss Belle Renaut, "Angus McDonald" (Roedel).
- 9.8: Selection—Debroy Somers' Band, "Scottish Medley" (arrgd. Somers).
- 9.12: Bass—Mr. T. D. Williams, "The Laird O' Cockpen" (trdtl.).

- 9.17: Studio Instrumental Octet, (a) "Air" (Scottish) (Myddelton); (b) "Lassie" waltz (Hesse).
- 9.23: Male choir—Sheffield Orpheus Choir, (a) "Hymn Before Action" (Walford Davies); (b) "The Long Day Closes" (Sullivan).
- 9.28: Soprano—Miss Frances Hamerton, (a) "Can Ye Sew Cushions" (Coleridge—Taylor); (b) "Comin' Thro' the Rye" (trdtl.).  
Soprano and contralto duet—Dolce Duo, "O Wert Thou in the Cauld Blast" (Mendelssohn).
- 9.35: Bagpipes—Mr. Angus MacIntosh, (a) "Bonawe Highlanders" (trdtl.); (b) "Waltz Medley" (MS).
- 9.40: Tenor—Mr. Russell Sumner, "Annie Laurie" (trdtl.).
- 9.44: Studio Instrumental Octet, "John Anderson" (arrgd. Lake).
- 9.48: Vocal quartet—Melodious Four, "Mary of Argyle" (Nelson).
- 9.53: Selection—H.M. Grenadier Guards Band, "Sir Harry Lauder" medley.
- 9.56: Vocal quartet—Melodious Four, "For Auld Lang Syne" (trdtl.).
- 10.0: Relay from Winter Gardens of dance music by the Bailey-Marston Dance Orchestra (by permission of the management).
- 11.45: Relay from Cathedral Square of New Year street celebrations, including the ringing of the Anglican Cathedral peal of bells—"Ringing out the old and ringing in the New Year."
- 12.5: Close down.

### 4YA, DUNEDIN, (650 KILOCYCLES)—TUESDAY, DECEMBER 31.

- 3.0: Town Hall chimes.
- 3.1: Selected gramophone items.
- 4.25: Sports results to hand.
- 5.0: Children's session conducted by Uncle George.
- 6.0: Dinner session—"Columbia" Hour:  
Band—Royal Italian Band, "Marcia Reale" (Gabetti) (01182).  
Court Symphony Orchestra, "In Venice" (Sellars) (896).  
Cinema organ—Stanley MacDonald, "Was it a Dream?" (Coslow) (Regal G20401).  
Band—Royal Italian Band, "Garibaldi's Hymn" (Olivieri) (01182).
- 6.12: Tacet.
- 6.15: Ketelbey's Concert Orchestra, "Sanctuary of the Heart" (Ketelbey).  
Cello—W. H. Squire, "Melody in F" (Popper) (04176).
- 6.26: Tacet.
- 6.30: W. H. Squire's Celeste Octet, "Mignon—Introduction and Romance; Polonaise" (Thomas) (02749).  
Cello—W. H. Squire, "Silver Threads Among the Gold" (Dangs, arrgd. Squire) (04178).
- 6.42: Tacet.
- 6.45: Band of H.M. Grenadier Guards, "Turkish Patrol" (Michaelis) (4111).  
Cinema organ—Stanley MacDonald, "Nicolette" (Batten) (Regal).  
Waltz—Jacque Jacobs Ensemble, "Vienna Life" (Strauss) (02556).  
Idyll—H.M. Grenadier Guards Band, "Smithy in the Woods" (Michaelis) (4411).
- 6.58: Tacet.
- 7.0: News session.
- 8.0: Town Hall chimes.
- 8.1: Overture—Dunedin Highland Pipe Band under the direction of Pipe-Major J. Croon, "Heroes of Flodden" (traditional).
- 8.7: Contralto—Miss Gwenda Burt, (a) "A Little Coon's Prayer" (Hope), (b) "A Maiden's Song" (Vincent).
- 8.14: Band of H.M. Grenadier Guards, "Martial Moments" (arrgd. Winter) (Columbia 9065).
- 8.22: Recital—Miss Sheila Neilson, "Aunt Maria's Wireless" (Constance-duros).
- 8.28: Mezzo-soprano—Miss Helen Roy, (a) "St. Nicholas Day" (Easthope Martin), (b) "My Heart's Desire" (Clark).
- 8.35: Three-Four March—Dunedin Highland Pipe Band, "Green Hills of Tyrol" (traditional).
- 8.43: Scottish comedian—Buster Brown, "The Lass o' Killiecrankie" (Lauder).
- 8.47: Piccolo duet—Jean and Pierre Gennin, "Rippling Streams" (Gennin) (Columbia 02575).
- 8.53: Tenor—Mr. J. Kennedy, (a) "I Pitched My Lonely Caravan" (Coates), (b) "Serenata" (Jarman).
- 9.0: Weather report.
- 9.2: Selection—Dunedin Pipe Band, Two-Four March, "Earl of Mansfield" (traditional).
- 9.12: Mezzo-soprano—Miss Helen Roy, "Saint Valentine" (Easthope Martin).
- 9.16: Recital—Miss Sheila Neilson, "The Family Group" (Constance-duros).
- 9.22: March—Bande de Garde Rpublicaine France, "Le Bombardier" (Pares) (Columbia 01504).
- 9.28: Scottish comedian—Buster Brown, (a) "Ta Ta, Ma Bonnie Maggie Darlin'" (Lauder), (b) "The Boss o' the Hoose" (Lauder).
- 9.35: Selection—Dunedin Pipe Band, "Barren Rocks of Arden" (traditional).
- 9.41: Contralto—Miss Gwenda Burt, "Soul of Mine" (Barnes).
- 9.45: Saxophone—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft).
- 9.49: Tenor—Mr. J. Kennedy, "I Hear a Thrush at Eye" (Cadman).
- 9.53: Selection—Dunedin Pipe Band, (a) "Heroes of Victoria", (traditional), (b) "Cock o' the North" (traditional).
- 10.0: "His Master's Voice" Dance Programme:  
Waltz—International Concert Orchestra, "Blue Danube" (Strauss) (Zonophone EF21).  
Foxtrot—Shilkret's Orchestra, "Flower of Love" (Dreyer) (EA431).  
Foxtrot—Shilkret's Orchestra, "Dancing Shadows" (Golden) (EA367).  
Waltz—Paul Whiteman's Orchestra, "Cheerie Beanie Be" (Wayne).  
Tenor—Franklyn Baur, "Just Across the Street from Heaven" (Newman) (Zonophone EE107).

Saxophone—Rudy Wiedoeft, "Rubenola" (Wiedoeft) (EE119).  
 Tango Argentino—International Novelty Orchestra, "Y Como Le Va?" (Valverde) (EA364).  
 Waltz—urlitzer organ, "Janette" (Nicholls) (5094).  
 Yale Blues—Rio Grande Tango Band, "A Blue Serenade" (Lyfell).  
 Tenor—Gerald Griffin, "My Irish Song of Songs" (Sullivan) (2989).  
 Foxtrot—Nat Shilkret's Orchestra, "Hallalujah" (Robin) (EA253).  
 Foxtrot—Waring's Pennsylvanians, "What Did You Say?" (Yellen).  
 Foxtrot—Nat Shilkret's Orchestra, "Rio Rita" (McCarthy) (EA315).  
 Foxtrot—Zez Confrey, "Polly" (Zamecnik) (EA267).  
 Foxtrot—Nat Shilkret's Orchestra, "The Kinkajou" (McCarthy).  
 Male quartet—De Reszke Singers, "Absent" (Metcalfe) (E482).  
 Waltz medley—Ftterra and Paaluh, "Hawaiian Waltz Medley" (traditional) (B2369).  
 Barn dance—Bert Firman's Dance Orchestra, "My Lady Dainty" (Hesse) (5118).  
 Waltz—Troubadours, "La Golondrina" (EA349).  
 Schottische—International Novelty Quartet, "Lena" (Mewes) (EE67).  
 Foxtrot—Jack Hylton's Orchestra, "Swords and Sabres" (Bennett).  
 Foxtrot—Rhythmic Eight, "Possibly" (Gibbons) (EE97).  
 Baritone—Peter Dawson, "Believe Me If All Those Endearing Young Chams" (Moore) (DA886).  
 Foxtrot—Jack Hylton's Orchestra, "Babying You" (Ruby) (B5100).  
 Waltz—Troubadours, "Beggars of Life" (Brennan) (EA441).  
 Waltz—Troubadours, "Cielito Lindo" (EA349).  
 Foxtrot—Kahn's Orchestra, "In a Bamboo Garden" (Donaldson).  
 Comedian—Harry Lauder, "The Pirate" (Lauder) (D1434).  
 Chorus—Light Opera Company, "Hit the Deck" Vocal Gems (Youmans).  
 Foxtrot—Jack Hylton's Orchestra, "Don't Forget" (Hanley) (B5159).  
 Waltz—Ferreira and Paaluh, "Kilima Waltz" (traditional) (B2369).  
 Marimba Orchestra, "When It's Love-Time in Hawaii" (Heagney) (Zonophone 3852).  
 Foxtrot—Paul Whiteman's Orchestra, "O Ya, Ya" (Klages) (EA340).  
 Foxtrot—Shilkret's Orchestra, "Sometimes I'm Happy" (Youmans).  
 Foxtrot—Nat Shilkret's Orchestra, "Lonesome in the Moonlight" (Russell) (EA431).  
 Foxtrot—Nat Shilkret's Orchestra, "Fascinating Vamp" (Nussbaum).  
 Foxtrot—Nat Shilkret's Orchestra, "What's the Reason?" (Atteridge).  
 Tenor—Maurice Gunsby, "Lay My Head Beneath a Rose" (Falkenstein) (EE17).  
 Waltz—Rhythmic Eight, "Neapolitan Nights" (Zamecnik) (EE106).  
 Waltz—Goodrich Silvertown Cord Orchestra, "The Church Bells are Ringing for Mary" (Colby) (EA381).  
 12.0 midnight: New Year chimes.  
 Bagpipes—"Auld Lang Syne" (traditional).  
 Close down.

## Wednesday, January 1, 1930

### 1YA, AUCKLAND (900 KILOCYCLES)—WEDNESDAY, JANUARY 1, 1930.

11.45 a.m.: Results of Auckland Racing Club's meeting from Ellerslie, interspersed with gramophone items.

- 5.0: Children's session, conducted by Uncle Tom.
- 6.0: Dinner session: Columbia hour:  
 Eddie Thomas's Collegians, "Beautifal Ohio" (Earl) (02651).  
 Violin—Efrem Zimbalist, "Zapateado" (Sarasate) (04221).  
 Columbia Symphony Orchestra, "March of the Toys" (Herbert)
- 6.12: Tacet.
- 6.15: J. H. Squire's Celeste, "Everybody's Melodies" (arr. Sear) (02896).  
 Cello—W. H. Squire, "The Broken Melody" (Van Blene) (01480).
- 6.28: Tacet.
- 6.30: New Symphony Orchestra, "Hydropaten" (Gungl) (02672).  
 Band of H.M. Grenadier Guards, "Sir Harry Lauder Songs" (Lander).
- 6.49: Tacet.
- 6.57: Hawaiian—Rose Tribe, "What Aloha Means" (Alpin) (01258).  
 Banjo—Vess Ossman, "Drowsy Dempsey" (Regal G6098).  
 Instrumental—Musical Art Quartet, "To a Wild Rose" (MacDowell).  
 Band of the Royal Air Force, "Turkish Patrol" (Michaelis) (Regal).
- 6.57: Tacet.
- 7.0: News and market reports.
- 8.0: Chimes.  
 Overture—1YA Orchestra Octet, under the conductorship of Mr. Eric Waters, "Crown of Diamonds" (Auber).
- 8.11: Soprano—Miss Gladys Payne, "Over the Meadow" (Carew).
- 8.15: Comedian—Harry Lauder, "Portobello Lass" (Lander) (H.M.V.).
- 8.19: Vocal duet—Mr. and Mrs. Scott, (a) piano solo, "Kitten on the Keys" (Confrey); (b) song, "The Lute Player" (Allitsen); (c) piano solo, "Sequidilla" (Albeniz); (d) humorous song, "The Roast Beef of Old England" (Sam Mayo).
- 8.34: Instrumental—1YA Orchestral Octet, (a) "Haunting Humoresque" (arr. Black); (b) "How About Me?" (Flynn).
- 8.42: Comedian—Clarkson Rose, "Feminine Company" (Butler-Wright).
- 8.45: Nightingales and church bells—"A Summer Night Idyll" (H.M.V.).
- 8.48: Instrumental—1YA Orchestral Octet, "Two Hindoo Pictures" (Hansen-Lotter), (1) Approaching and Passing a Hindoo Temple; (2) Shepherdess of the Himalayas.
- 8.58: Weather report.
- 9.0: Baritone—Melville Gideon, "If You See Sally" (Donaldson) (H.M.V.).

- 9.3: Organ—Reginald Foort, "In the Heart of the Sunset" (Nicholls).
- 9.6: Mezzo-soprano—Miss Gladys Payne, (b) "A Brown Bird Singing" (Haydn Wood); (b) "Lovers in the Lane" (Lehmann).
- 9.13: Instrumental—1YA Orchestral Octet, "Summer Evening" (Waldteufel).
- 9.23: Comedian—Sir Harry Lauder, "Wee Hoose 'Mang the Heather" (Lauder) (H.M.V. D1623).
- 9.27: Piano and vocal—Mr. and Mrs. W. Scott, piano, "Valse in a Major" (Levitski); (b) vocal solo, "When the Sergeant-Major's on Parade" (Longstaffe); (c) vocal and piano medley of popular numbers.
- 9.42: Comedian—Leonard Henry, "Sh'shivering" (Doody) (H.M.V.).
- 9.45: Vocal duet—Walter Glynnne and Stuart Robertson, "The Gendarmes" (Offenbach) (H.M.V. B3030).
- 9.48: Instrumental selection—1YA Orchestral Octet, "Yeomen of the Guard" (Sullivan).
- 9.58: Columbia dance programme:  
 One-step—Debroy Somers's Band, "Casablanca" (Hargreaves).  
 One-step—Debroy Somers's Band, "Shinaniki Da" (Carlton) (01523).  
 Fox-trot—Debroy Somers's Band, "Sarita" (Glick) (01470).  
 Fox-trot—Reser's Syncopators, "I'm Wild About Horns on Automobiles" (Gaskill) (01543).
- 10.10: Tenor—Ernest McKinley, "Mamie Girl" (Libormio) (01562).  
 Fox-trot—Ipapa Troubadours, "Old-fashioned Lady" (Baer) (01646).  
 Fox-trot—Piccadilly Players, "My Mother's Eyes" (Baer) (01646).  
 Fox-trot—Paul Specht's Orchestra, "The Things that Were Made for Love" (Tobias) (01561).  
 Waltz—Cavaliers, "My Dear" (Kahn) (01561).  
 Waltz—Columbians, "Christina" (Gottler) (01585).
- 10.28: Humour—Will Hayes and scholars, "The Fourth Form at St. Michael's" (Hayes) (02852).  
 Fox-trot—Gelder's Kettner Five, "Happy Days and Lonely Nights" (Rose) (Regal G20476).  
 Fox-trot—Debroy Somers's Band, "The Egg Song" (Salisbury).  
 Waltz—Andy Danella's All-Star Trio, "Evangeline" (Jolson) (01630).  
 Waltz—The Cavaliers, "Lady Divine" (Shilkret) (01543).
- 10.43: Wurlitzer organ—Terence Casey, "Annie Laurie" (with variations) (arr. Casey) (02842).  
 Fox-trot—Ben Selvin's Orchestra, "My Sin" (De Sylva) (01525).  
 Fox-trot—Lombardo's Royal Canadians, "I Love to Bumpity Bump on a Bumpy Road with You" (Sherman) (01547).  
 Fox-trot—Ben Selvin's Orchestra, "Honey" (Simms) (01525).  
 Waltz—The Columbians, "Pagan Love Song" (Brown) (01585).  
 Waltz—The Cavaliers, "Bye and Bye, Sweetheart" (Ford) (01546).
- 11.0: Close down.

### 2YA, WELLINGTON (720 KILOCYCLES)—WEDNESDAY, JAN. 1, 1930.

- 3.0: Relay description of Wellington versus Canterbury cricket match from Basin Reserve, interspersed with selected studio items.
- 5.0: Children's session.
- 6.0: Dinner Session—"Parlophone" Hour:  
 Selection—Edith Lorand Orchestra, "La Boheme" (Puccini) (E10558).  
 Waltz—Edith Lorand Orchestra, "La Serenade" (Metra), (E10522).  
 Violin—Tosy Spiwakowsky, "Turkish March" (Beethoven) (A2501).
- 6.12: Tacet.
- 6.15: Waltz—Edith Lorand Orchestra, "Venetian Barcarolle" (Leoncavallo).  
 Trio—Djos Bela Trio, (a) "Traumerei" (Schumann); (b) "Chant D'Autonne" (Tschalkowsky) (E10573).  
 Cello—Gregor Platigorsky, "The Swan" (Saint-Saens), (A2628).
- 6.28: Tacet.
- 6.30: Fantasia—Dajos Bela Orchestra, "La Traviata" (Verdi) (A4027).  
 Waltzes—Royal Music Makers, (a) "Kiss Me Again" (Herbert); (b) "Ah, Sweet Mystery of Life" (Herbert) (A2722).
- 6.44: Tacet.
- 6.45: Suite—Paris Opera Comique Orchestra, "Ballet Egyptien" (Luigini).
- 6.57: Tacet.
- 7.0: News session, market reports and sports results.
- 8.0: Chimes.  
 Special New Year's Day programme:
- 8.1: Foxtrots—Allan's Dance Orchestra, (a) "An Old Italian Love Song" (Harrison); (b) "You're Just a Little Bit of Everything I Love" (Flippen).
- 8.9: Soprano—Miss Phyllis Liddell, "Nightingale of June" (Sanderson).
- 8.13: Foxtrots—Allan's Dance Orchestra, (a) "Where the Shy Little Violets Grow" (Kahn); (b) "The Sun is at My Window" (Lewis Young).
- 8.21: Baritone—Mr. Val Jones, "Trooper Johnny Ludlow" (Temple).
- 8.25: Waltzes—Allan's Dance Orchestra, (a) "Pagan Love Song" (Freed); (b) "Marie" (Berlin).
- 8.33: Tenor—Mr. Frank Amore, "Down The Vale" (Moir).
- 8.37: Foxtrots—Allan's Dance Orchestra, (a) "Breakaway" (Conrad); (b) "That's You, Baby" (Conrad).
- 8.45: Humour—Mr. Frank Moran, "Colonel Coldgeet" (MS).
- 8.52: Foxtrots—Allan's Dance Orchestra, (a) "The Toymaker's Dream" (Golden); (b) "Dusky Stevedore" (Johnson).
- 9.0: Weather report.
- 9.2: Popular songs—Miss Lily Charles, (a) "Smiling Irish Eyes" (Ruby); (b) "A Wee Bit of Love" (Ruby).
- 9.9: Foxtrots—Allan's Dance Orchestra, (a) "Is Izzy Azzy Woz" (Le Clerq); (b) "Outside" (Flynn).
- 9.17: Baritone—Mr. Val Jones, (a) "Lorraine, Lorraine, Lorraine" (Spross); (b) "Dear Old Pal O' Mine" (Rice).



- 9.24: Foxtrots—Allan's Dance Orchestra, (a) "A Room With a View" (Coward); (b) "I'm Just a Vagabond Lover" (Vallee).  
Waltz—Allan's Dance Orchestra, "Blue Hawaii" (Baer).  
9.36: Soprano—Miss Phyllis Liddell, (a) "The Lass With the Delicate Air" (Arne); (b) "Pirate Dreams" (Huerter).  
9.42: Foxtrots—Allan's Dance Orchestra, (a) "Louise" (Robbin); (b) "On Top of the World Alone" (Robbin), (c) "I Lift Up My Finger and Say Tweet Tweet" (Sarony).  
9.52: Humour—Mr. Frank Moran, "The Bullfighter" (Welden).  
9.59: Foxtrots—Allan's Dance Orchestra, (a) "You Were Meant For Me" (Brown); (b) "Broadway Melody" (Brown).  
Waltz—Allan's Dance Orchestra, "Desert Song" (Romberg).  
10.10: Tenor—Mr. Frank Amore, (a) "My Pretty Jane" (Bishop); (b) "If I Might Only Come to You" (Squire).  
10.16: Foxtrots—Allan's Dance Orchestra, (a) "The Wedding of the Painted Doll" (Brown); (b) "Misery Farm" (Wallis); (c) "Walking With Susie" (Conrad); (d) "Weary River" (Clarke).  
10.28: Popular song—Miss Lily Charles, "Honey" (Simons).  
10.32: Wurlitzer organ—Jesse Crawford, "You're the Cream in My Coffee" (de Sylva) (H.M.V. EA601).  
10.35: Foxtrots—Allan's Dance Orchestra, (a) "Laughing Marionette" (Collins); (b) "Sweet Sue" (Harris); (c) "Here Comes the Show Boat" (Rose).  
Waltz—Allan's Dance Orchestra, "Mississippi Moon" (Terese).  
10.47: Baritone—Maurice Chevalier, (a) "Louise" (Robbin); (b) "Wait Till You See Ma Cherie" (Robbin) (H.M.V. EA542).  
10.53: Foxtrot—Allan's Dance Orchestra, "Pickin' Cotton" (de Sylva).  
Waltz—Allan's Dance Orchestra, "Irving Berlin's Waltzes" (Berlin).  
11.0 : Close down.

### 3YA, CHRISTCHURCH (930 KILOCYCLES)—WEDNESDAY, JAN. 1, 1930.

- 11.30 a.m.: Results of Canterbury Park Trotting Club's meeting, interspersed with selected gramophone items.  
5.0 : Children's session conducted by Aunt Pat.  
6.0 : Dinner session—"Parlophone" Hour:  
Overture—Grand Symphony Orchestra, "Zampa" (Herold) (A4020).  
Waltz—Dajos Bela Orchestra, "Morgenblätter" (Strauss) (A4038).  
6.12: Tacet.  
6.15: Orchestra of the Opera Comique, Paris, "Scenes Pittoresques" (Masset) (A4057).  
Waltz—Edith Lorand Orchestra, "Vienna Waltz" (Drdla) (E10531).  
6.27: Tacet.  
6.30: Waltz—Dajos Bela Orchestra, "Marien Klänge" (Strauss) (A4037),  
Dajos Bela Orchestra, "Ideale" (Tosti) (A4015).  
Waltz—Edith Lorand Orchestra, "Merry Vienna" (Zishrer) (E10531).  
6.42: Tacet.  
6.45: Waltz—Edith Lorand Orchestra, "Song of Autumn" (Waldteufel).  
March—Queenie and David Kaili, "Hawaiian March" (Ellis) (A2372).  
Valse intermezzo—Edith Lorand Orchestra, "The Flowers' Dream" (Translatour) (E10570).  
Selection—H.M. Irish Guards, "The Desert Song" (Romberg) (A2433).  
6.57: Tacet.  
7.0 : News and information session.  
7.30: Sports results to hand.  
8.0 : Chimes.  
Overture—Studio Instrumental Octet under the conductorship of Mr. Harold Beck, "Folk Tune and Fiddle Dance" (Fletcher).  
8.10: Mezzo-soprano—Mrs. Daisy E. Pearce, (a) "When You Come Home" (Squire), (b) "My Own Wee House" (Munro).  
8.15: Wurlitzer organ—Reginald Foort, "In the Heart of the Sunset" (Nicholls) (H.M.V. B3044).  
8.18: Popular songs—Miss Alma Finnerty, (a) "Break o' Day" (Sanderson), (b) "Kentucky Home" (Meyer).  
8.24: Studio Instrumental Octet, (a) "La Traviata" Fantasia (Verdi).  
8.30: Baritone—Mr. Olive Hindle, "The Jester" (Lissenden).  
8.40: Cello—Pablo Casals, "O Star of Eve" (Wagner) (H.M.V. DB1012).  
8.44: Humorous recital—Miss Ruby Boot, "People I've Never Met" (Middlemiss).  
8.48: Wurlitzer organ—Reginald Foort, "For Ever" (Ager) (H.M.V. B3044).  
8.52: Tenor—Mr. C. R. Williamson, (a) "A Dream" (Bartlett), (b) "I Gave You a Gift" (M. Burns Loughnan).  
8.58: Studio Instrumental Octet, "Hymn to the Sun" (Rimsky-Korsakov).  
9.3 : Weather report.  
9.5 : Mezzo-soprano—Mrs. Daisy E. Pearce, (a) "Love is Meant to Make Us Glad" (German), (b) "Kamate" (Te Rangi Hikiroa).  
9.10: Studio Instrumental Octet, "Monsieur Beaucaire" Incidental Music (Rosse).  
9.20: Popular song—Miss Alma Finnerty, "Get Out and Get Under the Moon" (Shay).  
9.24: Selection—H.M. Coldstream Guards Band, "Martha" (Flowtow) (H.M.V. C1453).  
9.32: Baritone—Mr. Olive Hindle, (a) "The Showman" (James), (b) "I'm a Cornishman" (Henty).  
9.38: Studio Instrumental Octet, "Pulcinello" (Ern).  
9.43: Humorous recital—Miss Ruby Boot, "Little Tan Shoes" (Sullivan).  
9.48: Accordion solo—Pietro, "La Petite Tonkinoise" (Scott).  
9.54: Tenor—Mr. C. R. Williamson, "O Lovely Night" (Landon Ronald).  
9.58: "Brunswick" Dance Programme:  
Foxtrot—Colonial Club Orchestra, "Walking with Susie" (Gottler).  
Foxtrot—Copley Plaza Orchestra, "Old-Fashioned Lady" (Silvers).  
Foxtrot—Dave Rubinoff's Orchestra, "A Garden in the Rain" (Gibbons).

- Foxtrot—Colonial Club Orchestra, "That's You, Baby" (Gottler) (4317).  
Waltz—Dave Rubinoff's Orchestra, "Blue Hawaii" (Baer) (4344).  
10.13: Tenor—Allen McQuahie, "Mother Machree" (Young) (4332).  
Foxtrot—Copley Plaza Orchestra, "Dream Mother" (Lewis) (4323).  
Foxtrot—Copley Plaza Orchestra, "I Never Guessed" (Vallee) (4333).  
Foxtrot—Bob Haring's Orchestra, "My Cairo Love" (Zamecnik) (4316).  
Foxtrot—Copley Plaza Orchestra, "Lady of the Morning" (Messenheiner) (4338).  
Waltz—Bob Haring's Orchestra, "By-and-By, Sweetheart" (Yellen).  
10.31: Accordeon solo—Galla Rini, "Sicily of Mine" (Tanatola) (4060).  
Foxtrot—Colonial Club Orchestra, "Love Me or Leave Me" (Kahn).  
Foxtrot—Hal Kemp's Orchestra, "The Things That Were Made for Love" (Tobias) (4307).  
Foxtrot—Hal Kemp's Orchestra, "That's What I Call Heaven" (Solman) (4307).  
Waltz—Regent Club Orchestra, "Dear, When I Met You" (Brown).  
10.46: Piano solo with trumpet—Lee Sims, "Caressing You" (Klages) (4339).  
Foxtrot—Colonial Club Orchestra, "My Sin" (de Sylva) (4342).  
Foxtrot—The Cotton-Pickers, "Rampart Street Blues" (Robinston).  
Foxtrot—Cotton-Pickers, "Kansas City Kitty" (Leslie) (4325).  
Foxtrot—Slatz Randall's Orchestra, "I Get the Blues When It Rains" (Klauber) (4331).  
Waltz—Regent Club Orchestra, "Underneath the Russian Moon" (Kendis) (4314).  
11.0 : Close down.

### 4YA, DUNEDIN (650 KILOCYCLES)—WEDNESDAY, JANUARY 1, 1930.

- 3.0 : Town Hall chimes.  
3.1 : Selected gramophone items.  
4.25: Sports results to hand.  
5.0 : Children's session, conducted by Big Brother Bill.  
6.0 : Dinner session—"His Master's Voice" Hour:  
Overture—National Symphony Orchestra, "Light Cavalry" (Suppe).  
Waltz—Chicago Symphony Orchestra, "Roses of the South" (Strauss).  
Cello—Pablo-Casals, "Moment Musical" (Schubert) (DA776).  
6.12: Tacet.  
6.15: Hilo Hawaiian Orchestra, (a) "Kawaihau Waltz" (Kealaki); (b) "My Hula Love" (H2799).  
Medley waltz—Troubadours, "Popular Songs of Yesterday" (EB33).  
Cello—Pablo Casals, "Le Cygne" (Saint-Saens) (DA776).  
6.27: Tacet.  
6.30: Waltzes—International Concert Orchestra, (a) "The Merry Widow" (Lehar); (b) "Luxembourg Waltz" (Lehar) (EF9).  
Violin and guitar—Guilietta Morino, (a) "Harlequin's Serenade" (Drigo); (b) "Could I" (Poggis) (EE134).  
6.44: Tacet.  
6.45: New Light Symphony Orchestra, (a) "The Dancing Doll" (Poldini); (b) "At Dawning" (Cadman) (B2629).  
Wurlitzer organ—Jesse Crawford, "Carolina Moon" (Davis) (EA536).  
Royal Opera Orchestra, "The Sleeping Beauty" (Tschalkowsky).  
6.58: Tacet.  
7.0 : News session.  
8.0 : Town Hall chimes.  
8.1 : Relay from Empire Theatre of Christie organ numbers, played by Mr. Les V. Harvey.  
8.15: Baritone—Mr. W. Alloo, "Mountain Lovers" (Squire).  
8.19: Instrumental—Select Trio, "The Sunshine Girl" (Reubens).  
8.24: Recital—Mr. Wm. Yates, "Spinning a Yarn" (Middlemiss).  
8.30: Maori folk songs—Miss Ida Lungley, (a) "Pokarekare" (Arrgd. Ida Lungley); (b) "Hine E Hine" (Ti Rangi Pai).  
8.37: Instrumental—Select Trio, (a) "Narcissus" (Nevin); (b) "Cavalcade" (Rings).  
8.42: Soprano—Miss Veronica McKenzie, (a) "April is a Lady" (Phillips); (b) "A Heart That's Free" (Robyn).  
8.48: Pianoforte—Mrs. Ernest Drake, "Elegie" (Rachmaninoff).  
8.53: Male chorus—Famous Forty Elks, "Sylvia" (Scollard) (Bruns. 4300).  
8.56: Instrumental—Select Trio, "Angelus" (Godard).  
9.0 : Weather report.  
9.2: Baritone—Mr. W. Alloo, (a) "The Old Mother" (Greig); (b) "The Lute Player" (Allitson).  
9.7 : Instrumental—Select Trio, (a) "Russian Dance" (Friml); (b) "Serenade" (Jenson).  
9.13: Recital—Mr. William Yates, "A Few Short Stories" (Anon).  
9.19: Maori folk songs—Miss Ida Lungley, (a) "Poi Waka" (Hill); (b) "Titi Toreia" (Hill).  
9.23: Instrumental—Select Trio, (a) "The Toymaker's Dream" (Golden); (b) "Frühlings Lieder" (waltz) (Gungl).  
9.28: Soprano—Miss Veronica McKenzie, "In Those Soft Silken Curtains" (Puccini).  
9.31: "Columbia" Dance Programme:  
Foxtrot—Milt Shaw's Orchestra, "Walking With Susie" (Gottler).  
Foxtrot—Fred Rich's Orchestra, "Used to You" (de Sylva) (01565).  
Foxtrot—Milt Shaw's Orchestra, "Breakaway" (Gottler) (01553).  
Foxtrot—Fred Rich's Orchestra, "Why Can't You?" (de Sylva).  
9.42: Hawaiian—"Nani Kaula" (Alohihea) (01282).  
Foxtrot—Debroy Somers' Band, "The Egg Song" (Salisbury) (01523).  
Foxtrot—Harry Reser's Syncopators, "I'm Wild About Horns on Automobiles" (Caskill) (01543).  
Foxtrot—Campus Boys, "Jericho" (Meyers) (01586).  
One-step—Debroy Somers' Band, "Shinaniki Da" (Carlton) (01523).

- Waltz—Cavaliers, "Lady Divine" (Shilkret) (01543).
- 10.6 : Organ—Milton Charles, "Love's Old Sweet Song" (Molloy) (01161).
- Foxtrot—Dan Voorhees' Orchestra, "Ol' Man River" (Kern) (01406).
- Foxtrot—Campus Boys, "I've Got a Feeling I'm Falling" (Link).
- Foxtrot—Dan Voorhees' Orchestra, "Can't Help Lovin' Dat Man" (Kern) (01406).
- Foxtrot—Andy Sanella's All-Star Trio, "Perfumes of Roses" (Donovan) (Regal G20493).
- 10.15 : Vocal duet—Layton and Johnstone, "Carolina Moon" (Davis) (01550).
- Foxtrot—Ernie Golden's Orchestra, "She's Got Great Ideas" (Tobias).
- Foxtrot—Piccadilly Players, "I Lift Up My Finger" (Sarony).
- Foxtrot—Ernie Golden's Orchestra, "That's Her Now" (Ager).
- Waltz—The Cavaliers, "Underneath the Russian Moon" (Kendis).
- 10.30 : Organ—Milton Charles, (a) "From the Land of the Sky Blue Water"; (b) "At Dawning" (Cadman) (01161).
- Foxtrot—Cafe Royal Band, "Wake Up, Chill'un, Wake Up" (Trent).
- Foxtrot—Cafe Royal Band, "Me and the Man in the Moon" (Leslie).
- Foxtrot—All-Star Trio, "I'll See You Thru" (Kassel).
- Waltz—Eddie Thomas' Collegians, "Billie" (Henderson) (01584).
- 10.45 : Hawaiian—"Liliu E" (Kaulia) (01282).
- Tango—Anson Weeks' Orchestra, "Get Out and Get Under the Moon" (Shay) (07001).
- Foxtrot—Corona Dance Band, "I Faw Down an' Go Boom" (Brockman) (Regal G20492).
- Foxtrot—Paul Whiteman's Orchestra, "Evening Star" (Turk).
- Waltz—Cavaliers, "Bye and Bye, Sweetheart" (Valentine) (01546).
- Reel—O'Leary's Irish Minstrels, "Turkey in the Straw."
- 11.0 : Close down.
- 6.0 : Dinner session—"Columbia" Hour:  
Orchestre Symphonique de Paris, "L'Arlesienne Suite" (Bizet): (1) Prelude, (2) Entr'acte, (3) Chœurs (01324-5).
- 6.12 : Tacet.
- 6.15 : Selection—Columbia Symphony Orchestra, "Faust" (Gounod) (02708).
- Violin—Toscha Seidel, "Chanson Arabe" (Rimsky-Korsakov) (09505).
- 6.27 : Tacet.
- 6.30 : Orchestre Symphonique de Paris, "L'Arlesienne": (1) La Cuisine de Castelet, (2) Minuetto, (3) Le Carillon, (4) Adagietto (Bizet).
- 6.42 : Tacet.
- 6.45 : Orchestre Symphonique de Paris, "L'Arlesienne—Farandole" (Bizet).
- Band de Garde Republicaine France, "Carmen—Entr'acte" (Bizet).
- 6.56 : Tacet.
- 7.0 : News session, market reports and sports results.
- 7.40 : Lecturette—Hare Hongl, "Maori Pronunciation."
- 8.0 : Chimes. Novelty Programme by the "Radiolite Concert Party."
- Overture—"Pique Dame" (Suppe) (Columbia 02730).
- 8.9 : Opening chorus—"Radiolites."
- 8.12 : Baritone—"Jack's the Boy" ("The Geisha"—Jones).
- 8.16 : Violin—"Romance" (d'Ambrósio).
- 8.21 : Sketch—"Reggie Makes a Complaint" (Peach).
- 8.31 : Balalaika Orchestra, "Fantasy on 'Song of India'" (Rimsky-Korsakov) (Brunswick 77006).
- 8.35 : Tenor—"Bonnie Mary of Argyll" (traditional).
- 8.39 : Selection—Orchestra, "Love's Garden of Roses" (Haydn Wood) (Zono).
- 8.43 : The Soubrette in something fresh.
- 8.46 : Violin solo—The Violinist, "Indian Love Call" ("Rose Marie"—Friml).
- 8.50 : Humour—Entertainer at the piano, "Otherwise She's Mother's Kind of Girl" (MS.).
- 8.55 : Soprano—"The Dancing Lesson" (Ducelle).
- 8.58 : Orchestral selection, "Good Old Songs" (H.M.V. C1592).
- 9.6 : Weather report.
- 9.8 : Vocal duet—"Tenor and Baritone" (Lane Wilson).
- 9.12 : Violin solo—"Le Souvenir" (Dancila).
- 9.17 : Sketch—"Love or Lucre" (Peach).
- 9.29 : Instrumental Novelty—"Sleepy Valley" (Dowling) (Parlophone A2833).
- 9.32 : Entertainer at piano—"You Mustn't Do It After Eight o'Clock" (MS.).
- 9.38 : Violin and piano—Pianist and Violinist, "Medley of Popular Hits."
- 9.49 : The Soubrette will entertain.
- 9.53 : Soprano and baritone duet—"Song of Love" (Schubert).
- 9.57 : Selection—Columbia Symphony Orchestra, "March of the Bojaren" (Halvorsen) (Columbia 02622).
- 10.2 : Close down.

## Thursday, January 2

### 1YA, AUCKLAND (900 KILOCYCLES)—THURSDAY, JANUARY 2, 1930.

- 11.45 : Relay of results of Auckland Racing Club's meeting at Ellerslie, interspersed with studio items.
- 5.0 : Children's session, conducted by "Peter Pan."
- 6.0 : Dinner Session—"His Master's Voice" Hour:  
San Francisco Symphony Orchestra, (a) "Liebesleid" (Kreisler); (b) "Serenade" (Moszkowski); (c) "Aubade" (Auber) (ED6).
- Band of H.M. Coldstream Guards, "In a Persian Market" (Ketelbey).
- 6.12 : Tacet.
- 6.15 : Concerted—Light Opera Company, gems from "Rose Marie" (Friml).
- Marek Weber's Orchestra, "Tosca" Potpourri (Puccini, arrgd. Tavan).
- 6.27 : Tacet.
- 6.30 : Victor Symphony Orchestra, "Queen of Sheba" (Gounod).
- International Concert Orchestra, (a) "Sari" waltz (Kalman); (b) "The Waltz Dream" (Strauss) (Zonophone EF18).
- 6.42 : Tacet.
- 6.45 : Violin—Fritz Kreisler, "Tango" (Albeniz, arrgd. Kreisler) (DA1009).
- Organ—Reginald Foort, "A Brown Bird Singing" (Haydn Wood).
- International Novelty Orchestra, "Y Como Le Va?" (Valverde).
- Band of H.M. Coldstream Guards, "Raymond Overture" (Thomas).
- 6.57 : Tacet.
- 7.0 : News session and market reports.
- 8.0 : Chimes.
- 8.1 : Selection—Reg. Morgan's Orchestra, "Canary Cottage" (Friml).
- 8.8 : Contralto—Miss Kay Christie, (a) "The Little Silver Ring" (Chaminade); (b) "Good Morning, Brother Sunshine" (Lehmann).
- 8.14 : Entertainer—Mr. T. T. Garland, Humour).
- 8.19 : Violin solo—Mr. G. A. Fowler, "Molly on the Shore" (Grainger).
- 8.24 : Vocal trio—Snappy Three, (a) "Honey" (Simons); (b) "Breakaway" (Conrad).
- 8.30 : Instrumental—Reg. Morgan's Orchestra, (a) "On With the Dance" (Donaldson); (b) "The Toymaker's Dream" (Golden).
- 8.37 : Xylophone solo—Mr. Reg. Morgan, "Danny Boy" (arrgd. Bridge).
- 8.40 : Intermezzo—Reg. Morgan's Orchestra, "Legend of a Rose" (Reynauld).
- 8.48 : Song at piano—Mr. Reg. Morgan, "The Desert Song" (Romberg).
- 8.52 : Trumpet solo—Mr. R. Sprowl, "Les Folies" (Deppen).
- 8.56 : Contralto—Miss Kay Christie, "Down Here" (Brahme).
- 9.0 : Weather report.
- 9.2 : Instrumental—Reg. Morgan's Orchestra, (a) "The Merry Widow" (Lehar); (b) "The Breakaway" (Conrad).
- 9.9 : Humour—Mr. T. T. Garland, "A Fireside Chat."
- 9.15 : Piano medley—Miss Beryl Poulton, "Medley."
- 9.18 : Vocal trio—Snappy Three, (a) "Walking With Susie" (Conrad); (b) "Blue Night" (Rollins).
- 9.26 : Violin—Mr. G. A. Fowler, "Danse Espagnola" (Sarasate).
- 9.31 : Programme of dance music by Reg. Morgan and his orchestra, commencing with, "Building a Nest for Mary" (Greer), "Cherrio, Cherry Lips" (Dixon).
- 11.0 : Close down.

### 2YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, JAN. 2, 1930.

- 3.0 : Chimes.
- 3.1 : Selected studio items.
- 3.30 : Lecturette—Miss Flora Cormack, "Care of the Skin and Eyes."
- 3.40 : Studio items.
- 5.0 : Children's session conducted by Aunt Gwen.

### 3YA, CHRISTCHURCH (980 KILOCYCLES)—THURSDAY, JAN. 2, 1930.

- 11.30 a.m. : Results of Canterbury Park Trotting Club's meeting at Addington, interspersed with selected gramophone items.
- 5.0 : Children's session conducted by Uncle John.
- 6.0 : Dinner session—"His Master's Voice" Hour:  
March—American Legion Band, "The Conqueror" (Telke) (Zono. 2909).
- Selection—Savoy Orpheans, "Lido Lady" (Rodgers) (C1310).
- 6.12 : Tacet.
- 6.15 : New Light Symphony Orchestra, "Rustic Wedding Symphony" (Goldmark) (C1210).
- Victor Olaf Sextet, "To a Water Lily" (Macdowell) (B2690).
- New Light Symphony Orchestra, "Spanish Dance" (Moszkowski).
- Wurlitzer organ—Reginald Foort, "Just Like a Darby and Joan" (Gilbert) (B2775).
- 6.29 : Tacet.
- 6.30 : Jack Hylton's Orchestra, "The Selfish Giant" (Coates) (C1253).
- Victor Olaf Sextet, (a) "To a Wild Rose," (b) "In Autumn" (Macdowell) (B2690).
- Violin and Wurlitzer organ—De Groot and Terence Casey, "Parted" (Tosti) (B2920).
- 6.44 : Tacet.
- 6.45 : Victor Symphony Orchestra, "Dance of the Hours" (Ponchinelli) (Zonophone ED12).
- Wurlitzer organ—Reginald Foort, "Love Lies" (Kellard) (B2775).
- March—American Legion Band, "Iowa Corn Song" (arrgd. Beeston) (Zonophone 2909).
- 6.58 : Tacet.
- 7.0 : News and information session.
- 8.0 : Chimes.
- Overture—Royal Opera Orchestra, "1812 Overture" (Tchaikowsky) (H.M.V. C1280-1).
- 8.13 : Vocal quartet—Grand Opera Quartet, "Shepherdess and Beau Brocade" (Montague Phillips).
- 8.17 : Mezzo-contralto, Miss Mavis Spiller, "The Diver" (McMillen).
- 8.20 : Pianoforte—Miss Frances Hamerton, (a) "Longing" (Mendelssohn), (b) "Study No. 2" (Mendelssohn).
- 8.25 : Bass—Mr. James Filer, "My Lodging is the Cellar Here" (Old German).
- 8.29 : Royal Opera Orchestra—"Marche Hongroise" (Berlioz) (H.M.V.).
- 8.33 : Tenor—Mr. Ernest Rogers, "The Spirit Flower" (Tipton).
- 8.37 : Violin—Mr. Arthur Gordon, "Romanza Andaluza" (Sarasate).
- 8.43 : Soprano and mezzo-contralto duet—Grand Opera Duo, "Sunbeam" (Landon Ronald).
- 8.47 : Recital—Miss Dorothy Jenkin, "The French Peasant" (Anon.).
- 8.52 : Organ—Reginald Goos-Custard, "The Question" (Wolstenholme) (H.M.V. E415).
- 8.55 : Bass—Mr. James Filer, "The Wanderer" (Schubert).

- 9.0 : Weather report.  
 9.2 : Selection—Detroit Symphony Orchestra, "Spanish Rhapsody" (Chabrier) (H.M.V. E522).  
 9.8 : Soprano—Madame Gower-Burns, "Hush, Little One" (Bevignani).  
 9.12 : Pianoforte—Miss Frances Hamerton, (a) "Fantasie No. 3," (b) "Fantasie No. 1" (Mendelssohn).  
 9.18 : Tenor and bass duet—Grand Opera Male Duo, "Love and War" (Cooke).  
 9.22 : Organ—Reginald Goos-Custard, "The Answer" (Wolstenholme), (H.M.V. E415).  
 9.25 : Mezzo-contralto—Miss Mavis Spiller, (a) "Eleanore" (Coleridge-Taylor), (b) "Yesterday and To-day" (Spross).  
 9.32 : Violin—Mr. Arthur Gordon, (a) "Berceuse" (Cui), (b) "Viennese Melodie" (Kreisler).  
 9.38 : Tenor—Mr. Ernest Rogers, (a) "To Daisies" (Quilter), (b) "Take Stars Above" (Quilter).  
 9.43 : Recital—Miss Dorothy Jenkin, "The Thousandth Man" (Kipling).  
 9.48 : Instrumental trio—Kreisler, Kreisler, and Raucheisen, "Marche Miniature Viennoise" (Kreisler) (H.M.V. DA961).  
 9.51 : Soprano—Madame Gower-Burns, "Mia Piccarella" (Gomes).  
 9.55 : Vocal quartet—Grand Opera Quartet, "Fly, Singing Bird, Fly" (Elgar).  
 9.59 : New Light Symphony Orchestra, "La Poupée Valsante" (Poldini) (H.M.V. B2629).  
 10.3 : Close down.

#### 4YA, DUNEDIN (650 KILOCYCLES)—THURSDAY, JANUARY 2, 1930.

SILENT DAY.

## Friday, January 3

#### 1YA, AUCKLAND (900 KILOCYCLES)—FRIDAY, JANUARY 3, 1930.

- 3 p.m.: Afternoon session, selected studio items.  
 4.0 : Literary selection by the Announcer.  
 4.8 : Studio items.  
 5.0 : Children's session, conducted by Nod and Aunt Jean.  
 6.0 : Dinner session—Columbia hour:  
 Ketelbey's Concert Orchestra, "Three Fanciful Etchings" (Ketelbey); (1) A Passing Storm; (2) The Ploughman Homeward Plods His Weary Way" (02691/2).  
 6.12 : Tacet.  
 6.15 : Ketelbey's Concert Orchestra, "Three Youthful Etchings," "Quips and Cranks and Wanton Wiles" (Ketelbey) (02692).  
 Budapest Philharmonic Orchestra, "Hungarian Rhapsody No. 1 in F" (Liszt) (02723).  
 6.27 : Tacet.  
 6.30 : Pianoforte—Leopold Godowsky, "Nocturne in B Major" (Chopin).  
 Halle Orchestra, "Rosamunde Overture" (Schubert) (04197).  
 6.42 : Tacet.  
 6.45 : Viola—Lionel Tertis, "Sonata in F" (Allegro) (Handel) (04248).  
 Royal Philharmonic Orchestra, "Symphony No. 6 in C Major—Finale" (Atterberg) (04219).  
 6.57 : Tacet.  
 7.0 : News session and market reports.  
 7.40 : Talk—Mr. W. G. E. Wheeler, "Esperanto."  
 8.0 : Chimes.  
 Relay of concert from Lewis Eady Hall.  
 8.31 : Organ solo—Reginald Goss-Custard, "Romanza" (Wolstenholme).  
 8.35 : One-act play, Mrs. Zoe Bartley-Baxter and Company, "The School for Sympathy" (Lucas).  
 8.45 : Contralto—Miss Irene Frost, (a) "Where Corals Lie" (Elgar); (b) "Death and the Maiden" (Schubert).  
 8.52 : Instrumental—Studio Trio, a "Valse in A Major" (Levitzi); (b) "Polacca" ("Mignon") (Thomas).  
 9.0 : Weather report.  
 9.2 : Pianoforte—Wilhelm Backhaus, "Studies Op. 56" (Chopin) (H.M.V.).  
 9.6 : One-act play, Mrs. Zoe Bartley Baxter and Company, "Over the Hills" (Palmer).  
 9.26 : Cello—Miss Molly Wright, (a) "La Bandoline" (Couperin); (b) "Gavotte" (Couperin).  
 9.31 : Contralto—Miss I. Frost, "O Lovely Night" (Landon Ronald).  
 9.35 : Instrumental—Philadelphia Symphony Orchestra, "March of the Caucasian Chief" (Ippolitoff-Ivanoff) (H.M.V. E521).  
 9.38 : One-act play, Mrs. Zoe Bartley Baxter, "In the Dark" (Peach).  
 9.48 : Instrumental—Studio Trio, "Valse des Fleurs" (Tschalkowsky).  
 9.56 : Instrumental—London Symphony Orchestra, "Les Preludes" (Symphonic Poem) (Liszt) (H.M.V. D1616).  
 10.12 : Close down.

#### 2YA, WELLINGTON (720 KILOCYCLES)—FRIDAY, JANUARY 3, 1930.

- 3.0 : Chimes.  
 Programmes of gramophone items.  
 5.0 : Children's session, conducted by Big Brother Jack.  
 6.0 : Dinner Session:  
 Selection—Debroy Somers' Band, "The Desert Song" (Romberg).  
 Waltz—Eddie Thomas' Collegians, "Moments With You" (Shilkret).  
 Mandolin Band—"Turn to Surriento" (de Curtis) (Columbia 01210).  
 6.12 : Tacet.  
 6.15 : Waltzes—International Concert Orchestra, (a) "Over the Waves" (Rosas); (b) "Danube Waves" (Ivanovici) (Zonophone EF3).  
 Hilo Hawaiian Orchestra, (a) "Kawaihau Waltz" (Kealakali); (b) "My Hula Love" (H.M.V. B2799).

- 6.27 : Tacet.  
 6.30 : Wurlitzer organ—"Merchant of Venice" Suite (Rosse).  
 Mandolin Band—"Stephanie Gavotte" (Ozibulka) (Columbia 01210).  
 Saxophone—Rudy Wiedoeft, "Serenade" (Drigo) (Columbia 01180).  
 6.42 : Tacet.  
 6.45 : Waltz—International Concert Orchestra, "Gipsy Love" (Lehar).  
 New Light Symphony Orchestra, (a) "Barcarolle" (Offenbach); (b) "Intermezzo" ("Cavalleria Rusticana" (Mascagni).  
 Waltz—International Concert Orchestra, "Sweetheart" (Strauss).  
 6.59 : Tacet.  
 7.0 : News session, market reports and sports results.  
 7.40 : Lecture—Miss J. Dalton, Diploma Guide, Girl Guides' Association, "Girl Guides."  
 8.0 : Chimes.  
 Overture—2YA Orchestra, under conductorship of Signor A. P. Truda, "Italians in Algeria" (Rossini).  
 8.9 : Vocal duet—Harmonic Duo, "The Best Solace" (Mercadante).  
 8.13 : Band of H.M. Grenadier Guards, "La Benediction Des Poignards" (Meyerbeer) (Columbia 02981).  
 8.17 : Bass—Mr. J. M. Caldwell, (a) "The Old Bard's Song" (Boughton); "When a Maiden Takes Your Fancy" (Mozart).  
 8.24 : Selection—2YA Orchestra, "La Traviata" (Verdi).  
 8.34 : Soprano—Miss Jeanette Briggs, L.A.B., "Under the Deodar" (Monckton).  
 8.38 : Cello—W. H. Squire, (a) "Ave Verum" (Mozart); (b) "Sarabande" (Sulzer) (Columbia 04283).  
 8.46 : Tenor—Mr. Will Hancock, "Gipsy Love" (Lehar).  
 8.50 : Selection—2YA Orchestra, "Veronique" (Messager).  
 8.58 : Weather report.  
 9.0 : Talk—Mr. E. Norman Torry, the well-known lecturer and author—"How to Write Fiction."  
 9.30 : National Military Band, "March—Tannhauser" (Wagner).  
 9.34 : Vocal duet—Harmonic Duo, "Barcarolle" (Offenbach).  
 9.38 : Bass—Mr. J. M. Caldwell, "Within These Sacred Bowers" (Mozart).  
 9.42 : Selection—2YA Orchestra, "The Gypsy Princess" (Kalman).  
 9.50 : Mezzo-contralto—Miss Ngairé Coster, "The Jewel of Asia" (Jones).  
 9.54 : Tenor—Mr. Will Hancock, "Golden Days" (Romberg).  
 9.58 : Concert waltz—2YA Orchestra, "Waltz Militaire" (Waldteufel).  
 10.4 : Close down.

#### 3YA, CHRISTCHURCH (980 KILOCYCLES)—FRIDAY, JAN. 3, 1930.

- 3.0 : Afternoon session—selected gramophone items.  
 4.25 : Sports results to hand.  
 5.0 : Children's session, conducted by "Storyman."  
 6.0 : Dinner Session—"His Master's Voice" Hour:  
 Selection—New Mayfair Orchestra, "Lilac Time" (Schubert-Clutsam).  
 Royal Opera Orchestra, "Carmen Ballet No. 1" (Bizet) (C1424).  
 6.12 : Tacet.  
 6.15 : National Symphony Orchestra, "William Tell" (Overture) (Rossini).  
 6.27 : Tacet.  
 6.30 : Royal Opera Orchestra, "Sylvia Ballet—Pizzicato and procession of Bacchus" (Delibes) (C1418).  
 Royal Opera Orchestra, "Carmen Ballet No. 2" (Bizet) (C1424).  
 6.42 : Tacet.  
 6.45 : Detroit Symphony Orchestra, "Spanish Rhapsody" (Chabrier).  
 Philadelphia Symphony Orchestra, "Nocturne No. 2—Fetes" (Debussy).  
 6.57 : Tacet.  
 7.0 : News and information session.  
 8.0 : Chimes.  
 Overture—Edith Lorand Orchestra, "Johann Strauss Fantasia" (Strauss) (Parlophone A4044).  
 8.13 : Dance music—Bailey-Marston Dance Orchestra, "The Sun is at My Window" (Young).  
 8.16 : Baritone—Mr. Robt. Allison, (a) "Sincerity" (Clarke); (b) "Wim-men" (Phillips).  
 8.22 : Organ—Leslie Harvey, "Flower of Love" (Mendoza).  
 8.25 : Mezzo-contralto—Mrs. E. H. Davies, "Memories at Eventide" (Gibson).  
 8.29 : March—Band of H.M. Grenadier Guards, "Regimental March Medley."  
 8.35 : Humorous recital—Mr. L. T. J. Ryan, "The Street Watchman's Story" (Winter).  
 8.40 : Dance music—Bailey-Marston Dance Orchestra, "Irving Berlin's Waltzes" (Berlin).  
 8.44 : Tenor—Mr. Arthur T. Couch, (a) "Over the Mountains" (Quilter); (b) "The Sea Gypsy" (Willeby).  
 8.51 : Grand Symphony Orchestra, "Zampa" (Herold).  
 8.59 : Weather report.  
 9.1 : Dance music—Bailey-Marston Dance Orchestra, (a) "Sunrise to Sunset" (Nichols); (b) "When Summer is Gone" (Whilite).  
 9.9 : Popular songs—Mrs. Moana Lawrence, (a) "The Glory of the Garden" (Boanas); (b) "Dream Days" (Simpson).  
 9.15 : Organ—Leslie Harvey, "Where the Shy Little Violets Grow" (Warren), (Parlophone A2695).  
 9.18 : Baritone—Mr. Robt. Allison, "The Lass of Richmond Hill" (Hook).  
 9.22 : Dance music—Bailey-Marston Dance Orchestra, (a) "That's You Baby" (Gottler); (b) "Breakaway" (Gottler).  
 9.30 : Mezzo-contralto—Mrs. E. H. Davies, (a) "Dream Boat" (Novello); (b) "Ramona" (Wayne).  
 9.36 : Hawaiian—David Kaili, "Honolulu March" (trdtl.).  
 9.39 : Humorous recital—Mr. L. T. J. Ryan, "Cohen on His Ocean Voyage" (Hayman).  
 9.44 : Dance music—Bailey-Marston Dance Orchestra, (a) "Jericho" (Myers); (b) "Sweetheart of All My Dreams" (Lowe).

- 8.52: Tenor—Mr. Arthur T. Couch, "On Promise Me" (De Koven).  
 9.56: Dance music—Bailey-Marston Dance Orchestra:  
 "Outside" (Flynn).  
 "This is Heaven" (Yellen).  
 "Shoo, Shoo, Boogie Boo" (Whiting).  
 "Walking With Susie" (Conrad).  
 "Louise" (Robin).  
 "I'm Just a Vagabond Lover" (Vallee).  
 "The Toymaker's Dream" (Golden).  
 "Laughing Marionette" (Collins).  
 "Mean to Me" (Turk).  
 "Ever So Goosey" (Wallace).  
 "Broadway Melody" (Brown).  
 "You Were Meant for Me" (Brown).  
 Dance music by the Bailey-Marston Dance Orchestra will continue until 11 p.m.  
 11.0: Close down.

#### 4YA, DUNEDIN (650 KILOCYCLES)—FRIDAY, JANUARY 3, 1930.

- 3.0: Town Hall chimes.  
 3.1: Selected gramophone items.  
 4.25: Sports results to hand.  
 5.0: Children's session, conducted by Aunt Sheila.  
 6.0: Dinner session—"His Master's Voice" Hour:  
 Selection—Kaufman's Orchestra, "The Gipsy Baron" (Strauss).  
 Waltz—La Vittoria Orchestra, "Wedding of the Winds" (Hall) (EF21).  
 6.12: Tacet.  
 6.15: Piccadilly Orchestra, "If Only I Had You" (Davies) (B2713).  
 Piccadilly Orchestra, "Lolita" (Ferrete) (B2713).  
 Kolomoku's Honoluluans, "Aliha Oe" (Liliuokalani) (EF23).  
 Piccadilly Orchestra, "Charmaine" (Rapee) (B2526).  
 6.27: Tacet.  
 6.30: New Mayfair Orchestra, "Tis Year of Grace" (Coward) (EB37).  
 Waring's Orchestra, "Ah, Sweet Mystery of Life" (Herbert) (EB37).  
 Kolomoku's Honoluluans, "Three O'Clock in the Morning" (Robledo).  
 6.42: Tacet.  
 6.45: Victor Concert Orchestra, "Minuet in G" (Paderewski) (EA240).  
 Victor Concert Orchestra, "Amaryllis" (Thys) (EA240).  
 Piccadilly Orchestra, "Bird Songs at Eventide" (Coates) (B2528).  
 Waltz—International Concert Orchestra, "Blue Danube" (Strauss).  
 6.57: Tacet.  
 7.0: News session.  
 8.0: Town Hall chimes.  
 8.1: Overture—Celeste Quintet under the direction of Mr. Roy Spackman, "Italians in Algeria" (Rossini).  
 8.9: Baritone—Mr. L. North, (a) "Sea Gipsy" (Willeby); (b) "Fishermen of England" (Phillips).  
 8.16: Instrumental—Celeste Trio, "Grand Trio, (Lachner).  
 8.20: Recital—Miss Nellie Warren, "At the Forge" (Anon.).  
 8.25: Flute concerto—John Amadio, "Andante and Finale" (Mozart).  
 8.33: Mezzo-soprano—Miss Mollie Fenton, (a) "Spin, Spin" (Jungst); (b) "Death and the Maiden" (Schubert).  
 8.37: Instrumental—Celeste Quintet, "Scenes Pittoresques" (Massenet).  
 8.44: Tenor—Mr. L. E. Dalley, (a) "Celeste Aida" (Verdi); (b) "I Wept, Beloved" (Hue).  
 8.51: Instrumental—Celeste Quintet, "Nell Gwynn Dances" (German).  
 9.0: Weather report.  
 9.2: Chorus—Russian State Choir, "Storm on the Volga" (Pastshenko).  
 9.10: Viola and piano—Mr. and Mrs. C. Roy Spackman, "Glöckermann Concerto" (Second Movement) (Glöckermann).  
 9.22: Baritone—Mr. L. North, "The Two Grenadiers" (Schumann).  
 9.26: Recital—Miss Nellie Warren, "Cheering Up Maria" (French).  
 9.32: Instrumental—Celeste Quintet, "Funeral March of a Marionette" (Gounod).  
 9.37: Mezzo-soprano—Miss Mollie Fenton, (a) "Four by the Clock" (Mallinson); (b) "Dedication" (Franz).  
 9.44: Instrumental—Celeste Trio, "Lamento" (Radousse).  
 9.49: Tenor—Mr. L. E. Dalley, "Onaway, Awake, Beloved" (Coleridge-Taylor).  
 9.53: Instrumental—Celeste Quintet, "Un Giorno in Venezia" (Nevin).  
 10.3: Close down.

## Saturday, January 4

#### 1YA, AUCKLAND (900 KILOCYCLES)—SATURDAY, JANUARY 4, 1930.

- 2.0: Afternoon session—Selected studio items.  
 4.0: Literary selection by the Announcer.  
 4.8: Studio items.  
 5.0: Children's session conducted by Cinderella.  
 6.0: Dinner session—"Parlophone" Hour:  
 Dajos Bela Orchestra, "Electric Girl" (Holmes) (A2009).  
 Organ—Sigmund Krumgold, "Indian Love Call" (Friml) (A2339).  
 Orchestra Mascotte—"The Flower's Dream" (Translateur) (A2559).  
 Dajos Bela Orchestra, "Eldgaffeln" (Landen) (A4009).  
 6.13: Tacet.  
 6.15: Edith Lorand Orchestra, "The Vagabond King" (Selection (Friml).  
 Orchestra Mascotte—"Whispering of the Flowers" (Von Blon) (A2559).

- Organ—Sigmund Krumgold, "Gipsy Love Song" (Herbert) (A2339).  
 6.27: Tacet.  
 6.30: Dajos Bela Orchestra, "The Grenadiers" Waltz (Waldteufel) (A4081).  
 Piano and orchestra—Raia da Costa Ensemble, "Funny Face" Selection (Gershwins) (A4074).  
 Waltz—Orchestra Mascotte, "Siren Magic" (Waldteufel) (A2650).  
 6.42: Tacet.  
 6.45: Grand Symphony Orchestra, "Cavalleria Rusticana—Intermezzo" (Mascagni) (A4033).  
 Dajos Bela Orchestra, (a) "Moonlight on the Alster" (Fetras), (b) "Schatz Waltz" (Strauss) (A4110).  
 6.57: Tacet.  
 7.0: News session and market reports.  
 8.0: Chimes.  
 8.1: Overture—1YA Orchestral Octet under the conductorship of Mr. Eric Waters, "Undine" (Lortzing).  
 8.11: Baritone—Mr. Frank Campbell, "The Fortune-Hunter" (Willeby).  
 8.15: Recital—Miss Maisie Carte-Lloyd, assisted by Tess Carte-Lloyd, "Entertaining the Neighbour's Child" (Fisk).  
 8.21: Vocal quartet—New Zealand Four, "De Sleep Boat" (Parks).  
 8.25: Instrumental—1YA Orchestral Octet, "Sigmund's Love Song" (Wagner-Baumgartel).  
 8.32: Vocal duet—Mr. Duncan Black and Mr. Roy Dormer, "Nocturne" (Denza).  
 8.36: Humour—The Two Black Crows, "In Hades" (Columbia 01364).  
 8.42: Instrumental—1YA Orchestral Octet, (a) "Lilting Lucia" (arrgd. Black), (b) "Laughing Marionette" (Collins).  
 8.48: Tenor—Mr. James Simpson, (a) "Audacity" (Eville), (b) "You in a Gondola" (Phillips).  
 8.55: Pianoforte duet—Jean Wiener and Clement Doucet, "Why do I Love You?" (Kern) (Columbia 01563).  
 8.58: Bass—Mr. Duncan Black, (a) "The Blind Ploughman" (Clarke), (b) "Morven" ("Songs of the North"—Clarke).  
 9.4: Weather report.  
 9.6: Suite—1YA Orchestral Octet, "Romanesque" (Besley): (1) Prelude, (2) Scherzo, (3) Air, (4) Valse.  
 9.14: Baritone—Mr. Frank Campbell, "Megan" (Davies).  
 9.18: Accordeon—Jean Davey, "In a Persian Market" (Ketelbey) (Regal).  
 9.24: Recital—Miss Maisie Carte-Lloyd, "Love's Offering Came Too Late" (Barclay).  
 9.30: Vocal duet—Messrs. James Simpson and Duncan Black "Song of the Sword" (Gilbert).  
 9.34: Organ—Gatty Sellars, "Gipsy Caravan" (Oscheir) (Columbia 01384).  
 9.37: Tenor—Mr. Roy Dormer, "The Lark Now Leaves" (Hatton).  
 9.41: Selection—1YA Orchestral Octet, "The Boy" (Monckton-Talbot).  
 9.51: Humour—Gillie Potter, "Mr. Potter Visits Southend" (Potter) (Col.).  
 9.57: Vocal quartet—New Zealand Four, "Evening" (Emerson).  
 10.0: "His Master's Voice" Dance Programme:  
 Foxtrot—Gus Arnheim's Orchestra, "Lovable and Sweet" (Clare).  
 Foxtrot—Ted Weem's Orchestra, "What a Day" (Woods) (EA606).  
 Foxtrot—Gus Arnheim's Orchestra, "One Sweet Kiss" (Jolson).  
 Tango—International Novelty Orchestra, "El Choclo" (Vilhelde).  
 Waltz—Reisman's Orchestra, "When You Come to the End of a Day" (Kahn) (EA581).  
 Waltz—Victor Arden, Phil Ohman, and Orchestra, "Twelve o'Clock" Waltz (Rose) (EA557).  
 10.19: Tenor—Chick Endor, "Good Little, Bad Little You" (Green) (EA613).  
 Foxtrot—Gus Arnheim's Orchestra, "Now I'm in Love" (Shapiro).  
 Foxtrot—Ted Weem's Orchestra, "Am I a Passing Fancy?" (Silver).  
 Foxtrot—All Star Orchestra, "My Dream Memory" (Clare) (EA608).  
 Waltz—Jack Hylton's Orchestra, "Spanish Rose" (Pearson) (B5481).  
 Waltz—Arcadians Dance Orchestra, "Just a Little Fond Affection" (Nicholls) (Zonophone 5216).  
 10.38: Vocal duet—Billy Murray and Walter Scanlon, "Oh, Baby, What a Night" (Brown) (EA613).  
 Foxtrot—Park Central Orchestra, "True Blue Lou" (Robin) (EA610).  
 Foxtrot—Geo. Olsen's Music, "Out Where the Moonbeams are born" (Davis) (EA611).  
 Foxtrot—Ted Weem's Orchestra, "Here We Are" (Warren) (EA602).  
 10.51: Soprano—Helen Clark, "Smiling Irish Eyes" (Ruby) (EA598).  
 Foxtrot—Ted Weem's Orchestra, "Piccolo Pete" (Baxten) (EA602).  
 Foxtrot—Coon Sanders' Orchestra, "The Flippity Flop" (Coslow).  
 11.0: Close down.

#### 2YA, WELLINGTON (720 KILOCYCLES)—SATURDAY, JAN. 4, 1930.

- 3.0: Chimes.  
 Programme of selected gramophone items.  
 5.0: Children's session, conducted by Uncle Toby and Aunt Gwen.  
 6.0: Dinner session—"Columbia" Hour:  
 Medley—H.M. Grenadier Guards Band, "Sir Harry Lauder" medley (Lauder) (02750).  
 Waltz—Symphony Orchestra, "Doctrinen" (Strauss) (02529).  
 6.12: Tacet.  
 6.15: Pianoforte solo—Gil Dech, "Wedding of the Painted Doll" (Freed).  
 Pianoforte solo—Constance Mering, "So Dear" (Caesar) (01224).  
 Waltz—Medley, Eddie Thomas' Collegians, (02904).  
 Saxophone—Rudy Wiedoeft, "Minuet" (Beethoven) (01176).  
 6.22: Tacet.  
 6.30: Mandolin band—"La Traviata—Prelude Acts 1 and 4" (Verdi).  
 Waltz—Symphony Orchestra, "When the Lemons Bloom" (Strauss).  
 6.42: Tacet.



- 6.45: Musical Art Quartet, "Mighty Lak' a Rose" (Nevin) (01506).  
Saxophone—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft) (01176).  
Pianoforte solo—Gil Dech, "I Kiss Your Hand, Madame" (Erwin).  
Eddie Thomas' Collegians, "Beautiful Ohio" (Earl) (02904).  
6.57: Tacet.  
7.0: News session, market reports and sports results.  
8.0: Chimes.  
Overture—2YA Salon Orchestra, under the conductorship of Mr. M. T. Dixon, "Life on the Ocean Wave" (Binding).  
8.9: Relay from Winter Show Building of evening performance of Messrs. Wirth Brothers' Circus.  
10.0 (approx.): "His Master's Voice" Dance Programme:  
Foxtrot—Rhythmic Eight, "Don't Be Like That" (Gottler) (EE154).  
Foxtrot—Jack Hylton's Orchestra, "Sweetheart of All My Dreams" (Fitch) (EA540).  
Foxtrot—Arcadians' Dance Orchestra, "Pokee-Okee-Oh" (Butler).  
Foxtrot—Jack Hylton's Orchestra, "I Lift Up My Finger and Say Tweet Tweet" (Sarony) (EA540).  
10.12: Wurlitzer organ—Jesse Crawford, "A Precious Little Thing Called Love" (Davis) (EA536).  
Foxtrot—Geo. Olsen's music, "I'm Bringing a Red, Red Rose" (Kahn).  
Foxtrot—Nat Shilkret's Orchestra, "One for All, All For One" (Trent).  
Foxtrot—Heldt's Orchestra, "I'm Ka-Razy For You" (Trent).  
Waltz—Arcadians Dance Orchestra, "Anita" (Pollack) (EE154).  
Waltz—Arcadians' Dance Orchestra, "That Old-Time Organ Melody" (Carlton) (EE155).  
10.30: Contralto—Lupe Velez, "Mi Amado" (My Beloved) (EA535).  
Foxtrot—Geo. Olsen's Music, "Come West, Little Girl, Come West" (Kahn) (EA537).  
Foxtrot—Nat Shilkret's Orchestra, "I'm Thirsty for Kisses, Hungry for Love" (Davis) (EA528).  
Foxtrot—Nat Shilkret's Orchestra, "Some Sweet Day" (Shilkret).  
Foxtrot—Waring's Pennsylvanians, "My Mother's Eyes" (Gilbert).  
10.45: Wurlitzer organ—Jesse Crawford, "Carolina Moon" (Davis).  
Foxtrot—"Kassels in the Air"—"He, She and Me" (Newman).  
Foxtrot—Park Central Orchestra, "Sally of My Dreams" (Kernell).  
Waltz—Connecticut Yankees, "Coquette" (Berlin) (EA532).  
Waltz—Nat Shilkret's Orchestra, "Lady Divine" (Shilkret) (EA531).  
11.0: Close down.

### 3YA, CHRISTCHURCH (980 KILOCYCLES)—SATURDAY, JAN. 4, 1930.

- 3.0: Afternoon session—Selected gramophone items.  
4.25: Sports results to hand.  
5.0: Children's session, conducted by Chuckle and Aunt Pat.  
6.0: Dinner session—"Columbia" Hour:  
Intermezzo—Milan Symphony Orchestra, "Cavalleria Rusticana Intermezzo" (Mascagni) (02841).  
Selection—Herman Finck's Orchestra, "Schubertiana" (arrgd. Finck).  
6.12: Tacet.  
6.15: Selection—Herman Finck's Orchestra, "Schubertiana" (arrgd. Finck).  
Rio Marimba Orchestra, "Three O'Clock in the Morning" Waltz (Robledo) (02685).  
6.27: Tacet.  
6.30: Bayreuth Festival Orchestra, "Siegfried—Prelude Act 3" (Wagner).  
Waltz—Eddie Thomas' Collegians, "Moonlight on the Danube" (Gay).  
Wurlitzer organ—Stanley MacDonald, "La Rosita" (Dupont).  
6.48: Tacet.  
6.45: Selection—Regal Orchestra, "Pagliacci" (Leoncavallo) (Regal).  
Rio Marimba Orchestra, "My Isle of Golden Dreams" (Blaufuss).  
6.57: Tacet.  
7.0: News and information session.  
8.0: Chimes.  
Overture—Edith Lorand Orchestra, "Donnansagen" (Fucik) (Parlo).  
8.5: Jazz song—Miss Betty Hilliard, "A Little Love, A Little Kiss" (Silesu).  
8.9: Humour—Mr. J. J. Flewellyn, "Two Embarrassing Situations" (Anon.).  
8.14: Tenor—Mr. Harry Francis, (a) "Uncle Rome" (Homer); (b) "Omaha" (Nicholls).  
8.20: Violin—Miss Gladys Vincent, "Hornpipe" (Mistowski).  
8.24: Sketch—Mr. and Mrs. J. W. Bailey, "Light and Shade" (Anon.).  
8.34: Instrumental trio—Miss Gladys Vincent, Mr. Francis Bate and Miss May Garden, "Pas de Fluor" (Delibes).  
8.42: Soprano—Miss Rose Horrell, "Dance Away" (Oliver).  
8.46: Hawaiian—Miss Elaine Moody's Hawaiian Trio, (a) "Love Boat" (Freed); (b) "A Precious Little Thing Called Love" (Davis); (c) "Blue Hawaii" (Baer).  
9.0: Weather report.  
9.2: Jazz songs—Miss Betty Hilliard, (a) "Carolina Moon" (Davis); (b) "Coal Black Mammy" (St. Helier).  
9.10: Humour—Mr. J. J. Flewellyn, "On Strike" (Up-to-date) (MS.).  
9.15: Tenor—Mr. Harry Francis, "Banjo Song" (Horner).  
9.19: Violin—Miss Gladys Vincent, "Rondino" (Beethoven).  
9.23: Dramatic sketch—Mr. and Mrs. J. W. Bailey, "Brass Doorknob" (Boulton).  
9.37: Instrumental trio—Misses Gladys Vincent and May Garden, "Two Eastern Songs" (Lamb).  
9.46: Soprano—Miss Rose Horrell, (a) "In the Time of Roses" (Reichardt); (b) "Heart's Delight" (Clarke).  
9.52: Hawaiian—Miss Elaine Moody's Hawaiian Trio, (a) "Tired Hands" (MS.); (b) "The Wedding of the Painted Doll" (Freed); (c) "Plaintive Melody" (MS.).

### 10.0: "Brunswick" Dance Programme:

- Foxtrot—Bob Haring's Orchestra, "Louise" (Robin) (4359).  
Foxtrot—Bob Haring's Orchestra, "Peace of Mind" (Dyrenforth).  
Foxtrot—Colonial Club Orchestra, "Huggable, Kissable You" (Bibo).  
10.10: Violin—Frederick Fradkin, "A Kiss in the Dark" (de Sylvia) (4318).  
Foxtrot—Al Goodman's Orchestra, "Yours Sincerely" (Rodgers).  
Foxtrot—Colonial Club Orchestra, "The One in the World" (Little).  
Waltz—Colonial Club Orchestra, "My Heart is Bluer than Your Eyes" (Bryan) (4364).  
10.23: Male trio—Earl Burnett's Biltmore Trio, "Love Me or Leave Me" (Kahn) (4336).  
Foxtrot—Bob Haring's Orchestra, "Fioretta" (Romilli) (4288).  
Foxtrot—Ray Miller's Orchestra, "In My Garden of Memory" (Buckley) (4352).  
Novelty foxtrot—Anglo-Persians, "Dance of the Paper Dolls" (Tucker).  
10.36: Male trio—Earl Burnett's Biltmore Trio, "A Garden in the Rain" (Gibbons) (4336).  
Foxtrot—Ray Miller's Orchestra, "Moonlight and Roses" (Lemare).  
Novelty foxtrot—Anglo-Persians, "The Toymaker's Dream" (Golden).  
Waltz—Bob Haring's Orchestra, "Dream Boat" (Henry) (4288).  
10.49: Violin—Fredric Fradkin, "Nola" (Arndt) (4318).  
Foxtrot—Pleasure Bound Orchestra, "Just Suppose" (Silvers) (4357).  
Waltz—Regent Club Orchestra, "Just Another Kiss" (Davis) (4357).  
11.0: Close down.

### 4YA, DUNEDIN (650 KILOCYCLES)—SATURDAY, JANUARY 4, 1930.

- 3.0: Town Hall chimes.  
3.1: Selected gramophone items.  
4.25: Sports results to hand.  
5.0: Children's session conducted by Aunt Anita.  
6.0: Dinner session—"Columbia" Hour:  
Overture—Basle Symphony Orchestra, "Der Freischutz" (Weber).  
6.12: Tacet.  
6.15: J. H. Squire's Celeste Octet, "Grasshoppers' Dance" (Bucalossi) (3608).  
J. H. Squire's Celeste Octet, "The Butterfly" (Bendix) (3608).  
Musical Art Quartet, "To a Wild Rose" (McDowell) (01506).  
Violin—Yvonne Curti, "Madrigale" (Simonetti) (01529).  
6.27: Tacet.  
6.30: J. H. Squire's Celeste Octet, (a) "I Love the Moon" (Rubens), (b) "Two Eyes of Grey" (McGeoch) (01213).  
J. H. Squire's Celeste Octet, (a) "Amoureuse" Valse (Berger), (b) "Valse Bleue" (Margis) (3643).  
6.42: Tacet.  
6.45: J. H. Squire's Celeste Octet, "Valse Caprice" (Rubinstein) (02581).  
Cello—W. H. Squire, "Sarabande" (Seilzer) (04283).  
J. H. Squire's Celeste Octet, "Perpetuum Mobile" (Weber, arrgd. Crooke) (02581).  
6.57: Tacet.  
7.0: News session.  
8.1: Relay of 3YA Christchurch (Vaudeville programme).  
10.0: "Brunswick" Dance Programme:  
Foxtrot—Six Jumping Jacks, "The Whoopee Hat Brigade" (Siegel).  
Foxtrot—Cotton-Pickers, "No Parking" (Chase) (4440).  
Foxtrot—Six Jumping Jacks, "Piccolo Pete" (Baxter) (4457).  
Waltz—Bob Haring's Orchestra, "I Love You" (Fisher) (4458).  
10.12: Vocal—Al Jolson, "Liza" (Kahn) (4420).  
Foxtrot—Cotton-Pickers, "St. Louis Gal" (Robinson) (4440).  
Foxtrot—Cotton-Pickers, "Moanin' Low" (Dietz) (4446).  
Foxtrot—Lyman's Californian Orchestra, "Suzzanna" (Ward) (4423).  
Foxtrot—Al Goodman's Orchestra, "After Thinking It Over" (Davis).  
Foxtrot—Bob Haring's Orchestra, "Song of Siberia" (Lewis) (4493).  
10.30: Organ and vibraphone—Lew White, "Honey" (Simons) (4386).  
Foxtrot—Lyman's California Orchestra, "Junior" (Donaldson) (4423).  
Foxtrot—Bob Haring's Orchestra, "The Moonlight March" (Newman).  
Foxtrot—Bob Haring's Orchestra, "At Close of Day" (Klages) (4458).  
Waltz—Colonial Club Orchestra, "My Song of the Nile" (Bryan).  
10.45: Vocal duet—Dixie Stars, "Sweet Mandy" (4459).  
Foxtrot—Carl Fenton's Orchestra, "The World's Greatest Sweetheart" (Razaf) (4467).  
Foxtrot—Colonial Club Orchestra, "If You Believed In Me" (Gilbert).  
Foxtrot—Carl Fenton's Orchestra, "Smiling Irish Eyes" (Ruby) (4467).  
Foxtrot—Carl Fenton's Orchestra, "Love is a Dreamer" (Green).  
11.0: Close down.

## Sunday, January 5

### 1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, JANUARY 5, 1930.

- 3.0: Afternoon session—Selected studio items.  
4.0: Literary selection by the Announcer.  
4.8: Studio items.  
6.0: Children's session conducted by Uncle Leo.  
6.55: Relay of service from St. Matthew's Church (Preacher, Canon Grant Cowan; Organist, Mr. J. H. Philpott).  
8.30 (approx.): Relay from Albert Park of concert by the Auckland Municipal Band under the conductorship of Mr. Christopher Smith.  
9.45: Close down.

**2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JANUARY 5, 1930.**

- 8.0 : Afternoon session—Selected gramophone items.  
 4.30 : Close down.  
 6.0 : Children's song service, conducted by Uncle George.  
 7.0 : Relay of service from St. Andrew's Presbyterian Church. Preacher, Rev. R. Howie, B.A. Organist and choirmaster, Mr. Frank Thomas.  
 8.15 : (approx.) Studio concert by the Port Nicholson Silver Band, under the conductorship of Mr. J. J. Drew, and assisting artists.  
 Hymn—Band, "Roseate Hues" (Hume).  
 Selection—Band, "Down South" (Myddleton).  
 Soprano—Mrs. Amy Dunn, "Jerusalem" ("St. Paul") (Mendelssohn).  
 J. H. Squire Celeste Octet, "Memories of Mendelssohn" (arrgd. Sear).  
 Baritone—Mr. Ernest Short, "Glory to Thee, My God, This Night" (Gounod).  
 Cornet solo with band accompaniment—Bandsman T. Goodall, "Titania" (Rimmer).  
 Contralto—Miss Hilda Chudley, "For Ever and a Day" (Mack).  
 Selection—Band, "Old English Sea Songs" (Bailey).  
 Soprano—Mrs. Amy Dunn, (a) "Ave Maria" ("Cavalleria Rusticana") (Mascagni); (b) "Lilies" (Barry).  
 Vocal duet—Gladys Cole and Barrington Hooper, "Speak to Me of My Mother" ("Carmen") (Bizet) (Zonophone G087).  
 Egyptian serenade—Band, "Amina" (Lincke).  
 Baritone—Mr. Ernest Short, (a) "Give a Man a Horse He Can Ride" (Thomas); (b) "Tally Ho" (Leoni).  
 Organ—F. Rowland Tims, F.R.C.O., (a) "At Dawning" (Cadman); (b) "Shepherd's Lullaby" (Hewitt) (H.M.V. B3021).  
 Contralto—Miss Hilda Chudley, (a) "Let Miss Lindy Pass" (Rogers); (b) "The Wind Song" (Rogers).  
 Selection—Band, "Prelude" (Rachmaninoff).  
 Vocal duet—Bessie Jones and Barrington Hooper, "Now I Will Dance but to Please Thee" ("Carmen") (Bizet) (Zonophone G087).  
 March—Band, "Invercargill" (Lithgow).  
 Close down.

**3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, JAN. 5, 1930.**

- 8.0 : Afternoon session—selected gramophone items.  
 5.30 : Children's song service (children of the Methodist Sunday Schools).  
 6.15 : Hymn tunes from studio.  
 6.30 : Relay of service from St. Alban's Methodist Church, Rugby Street.—Preacher: Rev. L. B. Neale. Deputy Organist: Mr. Sydney Jones.  
 7.45 : Studio programme:  
 Overture—San Francisco Symphony Orchestra, "Midsummer Night's Dream" (Mendelssohn) (H.M.V. D1626-7).  
 7.57 : Soprano—Miss Sylvia Angus, "Beyond the Dawn" (Sanderson).  
 8.1 : Male choir—Don Cossacks, "Three Folk Songs" (arrgd. Dobrowsen).  
 8.5 : 'Cello—Mr. Francis E. Bate, "Lamento" (Gabriel Marie).  
 8.10 : Baritone—Mr. Leslie Fleming, "Ideale" (Tosti).  
 8.14 : Organ—Edouard Commette, "Fantasie in G Minor" (Bach).  
 8.22 : Instrumental Trio—Misses Gladys Vincent and May Garden and Mr. Frances Bate, (a) "Extase" (Gaune), (b) "Serenade" (Haydn).  
 8.31 : Contralto—Mrs. Nellie Whitworth, "Christmas Bells" (Liddle).  
 8.35 : Choir—Berlin Union of Teachers, "The Lorely" (Silcher).  
 8.39 : Piano and orchestra—Karol Szreter and Berlin State Opera Orchestra, "Hungarian Rhapsody No. 2" (Liszt), (Parlophone A4109).  
 8.47 : Soprano—Miss Sylvia Angus, (a) "Life" (Curran), (b) "The Almond Tree" (Schumann).  
 8.53 : 'Cello—Mr. Frances E. Bate, "Menuet" (Boellmann).  
 8.57 : Baritone—Mr. Leslie Fleming, (a) "Route Marchin'" (Stock), (b) "Dream Tryst" (Cadman).  
 9.3 : Boys' Choir—Hofburg Chapel, Vienna, "Joy, Queen of the Wise" (Mozart) (Parlophone R20021).  
 9.7 : Instrumental trio—Misses Gladys Vincent and May Garden and Mr. Frances Bate, "Trio in F—Allegro and Animato" (Gade).  
 9.16 : Contralto—Mrs. Nellie Whitworth, (a) "To a Nightingale" (Brahms), (b) "True Love" (Brahms).  
 9.22 : Chorus and orchestra, Berlin State Opera, "Aida—Triumphal March" (Verdi) (Parlophone R20018).  
 9.30 : Close down.

**4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, JANUARY 5, 1930.**

- 8.0 : Town Hall chimes.  
 8.1 : Selected gramophone items.  
 5.30 : Children's song service, conducted by Big Brother Bill.  
 6.30 : Relay of service from Knox Presbyterian Church.—Preacher: Rev. L. McMaster, B.D., of Christchurch. Organist: Mr. C. Roy Spackman.  
 7.55 : Weather report.  
 8.5 : Relay from Band Rotunda, St. Kilda, of concert by the St. Kilda Band.  
 9.15 : Close down.

## Moving-Coil Speaker Manufacture

### An Interesting Process

IN this modern age of mechanical achievement we are inclined to take everyday machinery and apparatus for granted rather than pause a moment and consider in detail its complicated construction. An interesting case in point is the modern dynamic loud-speaker, and the following description of the manifold and intricate details involved in its construction is both interesting and enlightening.

The initial operation in the construction of these speakers is the shaping of the field cases. This is accomplished by means of complicated and powerful presses which bend and shape stout steel casing as easily as a child moulds clay. It is essential that these machines should be accurate to a hair-breadth, for even a slight variation in the field casing would produce a great variation in the "driving force," and thus a tremendous distortion in the sound from the speaker.

In the construction of many of the parts the raw materials are fed to a line of machines, each of which has its own particular operation to perform, and thus finally the completed speaker part is produced. For example, the cone housings pass through the many operations necessary—the blanking of the steel, the forming operation, and finally by many stages to the last, precise blow that makes them just the right height, the right diameter, and the correct angle.

The manufacture of a completed speaker from raw materials necessitates over 200 inspections, as carried out in the Magnovox factory. An inspection takes place after every machine operation, and in addition there are many inspections during the assembly of the unit. One of the most interesting phases of the manufacture lies in the automatic lathes, which turn, cut, drill, tap and finish cores without a workman near.

The problem of dynamic speaker design is a fascinating one, and explains why some speakers are superior to others, though all are operated on the basis theory. In a theoretical dynamic speaker the diaphragm would be massless, of infinite size, totally rigid, and would operate without friction and with no load except the resistance of the air. In addition, there is the problem of keeping the electrical factors constant. A speaker should furnish a pure resistance load equal to twice the output valve impedance. These, and other theoretical specifications, which practically are impossible to adhere to, are ingeniously overcome by designers of dynamic speakers by making the errors compensate for each other.

Though it is impossible to obtain a weightless diaphragm, it can be ap-

proximated by the use of a light paper cone which is both strong and rigid. The weight is compensated for by suspension. Similarly, other irregularities in design are corrected by further compensating factors.

The most important object to be attained in dynamic speaker manufacture is, of course, perfect reproduction. This is governed by many factors, chief among which is the strength of the field coil, which is determined chiefly by the dimensions of the air gap in which the moving-coil operates.

The whole design and construction of Magnavox dynamic speakers is the result of many years of research and experimentation; seldom do people pause to appreciate the wonderful background of inventive and creative reasoning that lies behind these everyday appliances which we buy in a store, set on the table, and then forget about, except to enjoy their performances.

## Radio Communication for Aeroplanes

### Development in America

BOTH aviation and radio interests are now fully alive to the need for better radio communication facilities for aeroplanes, whether engaged commercially or privately. In this respect America lags far behind Europe, but recently much interest has been displayed in that country, especially by air transport companies, in radio as an aid to air navigation.

Many air transport companies have now installed two-way communication in their planes, while many well-known radio engineers are experimenting with a view to improving the special type of apparatus used. An aeroplane was recently purchased by the Radiomarine Corporation to assist in the development of aircraft radio apparatus. It is proposed to tour America in this plane and demonstrate to those interested the newly-designed equipment which the plane carries.

Most of the radio apparatus has been compactly assembled on a light but rugged duralumin frame fastened in the fuselage. This equipment includes two transmitters deriving their power from a wind-driven generator, and two receivers, one of which is intended for use with special short-wave stations. The other is a beacon receiver to enable the plane to keep on a given course in any weather. The latter receiver is mounted in the tail of the plane, and is operated by remote control. The aerial consists of a short copper rod which extends about six feet above the fuselage.

## High-Powered American Stations

(Continued from last week.)

|                                    |     |      |
|------------------------------------|-----|------|
| WNBR—Memphis, Tennessee—500 watts  | 200 | 1430 |
| *WOV—New York City, New York—1 kw. | 265 | 1130 |
| *WOW—Fort Wayne, Indiana—10 kw.    | 258 | 1160 |
| WTAD—Quincy, Illinois—500 watts    | 208 | 1440 |
| *WTAM—Cleveland, Ohio—3½ kw.       | 280 | 1070 |
| KVOO—Tulsa, Oklahoma—5 kw.         | 263 | 1140 |

**Mullard**  
THE MASTER VALVE

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

## Fading and "Dead Spots"

### Research in the Antarctic

AT the present time a series of tests is being jointly carried out by station KDKA, Pittsburgh, America, and the Byrd Expedition in the Antarctic, with a view to securing a better understanding of one of the most mysterious phenomena connected with radio "blind spots" or "dead areas."

There are many small areas throughout the world where certain broadcasting stations can be heard only with difficulty, if at all, although the same stations are quite clearly received all around these areas. While some of these "dead spots," as these areas are called, are caused by peculiarities of land configuration, others cannot be explained away so easily, and many scientists believe that the trouble is chiefly due to the so-called "Heaviside layer."

The "Heaviside layer," according to theory, is a stratum, possibly magnetic in character, which surrounds the earth. Radio waves normally do not pass through it, but are reflected back to earth by it, just as light rays are reflected by a mirror. In some places, waves thus reflected are the ones chiefly received, and this applies especially to long-distance broadcasting; at other places, the waves sent out directly by the transmitter are the ones that convey the messages; but in certain places both sets of waves are received together, and it is thought to be due to the interference of these two sets that dead spots, and possibly fading, are caused.

Tests indicate that the Heaviside layer encircles the earth at an average height of approximately 250 miles, but there is reason to assume that at either the North Pole or the South Pole, or both, this layer approaches close to the earth, or perhaps actually touches it. Definite confirmation or refutation of this theory is the object of these tests.

These are being sponsored by the United States Navy, not merely in the interests of pure science, but also for

purposes of national defence. It is curious to note that dead spots occur on sea as well as on land, and in time of war these areas would seriously interfere with naval operations.

The investigation in the Antarctic is being carried out with the aid of an instrument known as the "Osiso," invented by the late Mr. J. W. Legg. This makes photographic records of radio signals and other electric waves, and is so sensitive that it will measure time differences of only a few millionths of a second. By means of the Osiso records can be made of the reception of both direct radio signals and their echoes, as reflected by the Heaviside layer, and by measuring the time difference between them it will be possible to determine the height of the Heaviside layer near the South Pole.

Mr. Hanson, the radio expert accompanying the Byrd expedition, has already accomplished a considerable amount of experimental work along this line, and he recently took a ten-mile trip out of camp with two companions in order to continue his investigations. Hanson carried the Osiso on his back and packed the necessary dry batteries inside his shirt to keep them from freezing.

On his return from this trip he transmitted the following message to New York:—"Osiso giving splendid results in temperatures down to 70 below zero with ski and knapsack and dog-sled transportation. Suggest KDKA co-operate oscillographic study by sending special signals to us, co-operating with Dr. Taylor, of Bellevue." The KDKA experts, having received Dr. Taylor's suggestions, arranged with Mr. Hanson to send him a long, powerful signal, on exactly 25.4 metres, which enabled him to make more accurate measurements than was possible with ordinary radio signals. It is confidently expected that these investigations will reveal hitherto unknown causes of many phenomena connected with radio transmission and reception.

## Useful Hints

### A Test for Overloading.

WHEN testing with a milliammeter for overloading, it should be noted which way the needle kicks. If it goes to the left it is a definite sign that the overloading in that particular valve is caused by the incoming signals making the grid too much positive, and that grid current is occurring. So, sometimes, by altering the grid bias to a larger negative voltage, this particular kick can be eliminated, and the overloading stopped. If, however, the kick of the milliammeter is to the right, it shows we have too much grid bias and partial rectification is occurring, and we either have to increase the B battery supply or decrease the grid bias. It is to be assumed, of course, that the overloading is not so great as would cause an overload which ever way the grid bias was altered, making the milliammeter kick in both directions.

### Discarded Hand-drills.

IF you happen to have an old hand-drill, which has been discarded either because it has seen its best days or because its chuck will not take 3/8-in. drills, the tool, or rather a part of it, may be given a fresh lease of useful life. In most patterns, the shank of the chuck is held in place by a pin running through the boss of the lower small bevel gear wheel. File off the riveted-over end of this pin and punch it out. The chuck and its shank can then be withdrawn. If you have to deal with any small round piece of work, which requires to be firmly held, place the shank of the chuck in the jaws of the bench vice and use the chuck itself to grip the work.

WHEN overhauling your earth connection remember that just as the strength of a chain is that of its weakest link, so is the efficiency of an earth connection largely determined by the soldered joint with the earth wire.

# RADIO DIRECTORY

## What to Buy and Where

### CITIES

- AERIAL MASTS** ..... Domestic Radio Co., Ltd.,  
300 Queen Street, Auckland.
- ALTONA & HAMMARLUND-ROBERTS SETS.** Johns, Ltd.  
Chancery Street, Auckland.
- AMPLION LOUDSPEAKERS** . All Radio Dealers.
- BURGESS RADIO BATTERIES,** All Radio Dealers.
- CROSLEY RADIO RECEIVERS** G. G. Macquarrie, Ltd.,  
120 Willis Street, Wellington.
- CROSLEY RADIO** ..... Abel, Smeeton, Ltd. Rep.: G. MOSES,  
James Street, Mangarei.
- CROSLEY RADIO** ..... Abel, Smeeton, Ltd.,  
27-29 Customs St. E., Auckland.
- EMMCO RADIO PRODUCTS** Johns, Ltd.,  
Chancery St., Auckland.
- EMMCO RADIO PRODUCTS** Thos. Ballinger & Co., Ltd.,  
Victoria St., Wellington.
- EMMCO RADIO PRODUCTS** L. B. Scott, Ltd.,  
Worcester St., Christchurch.
- KING RADIO RECEIVERS** ... F. J. W. Fear & Co.,  
63 Willis Street, Wellington.
- LISSEN RADIO PARTS AND KITS** ..... All Radio Dealers.
- LOUDSPEAKER AND TRANSFORMER REPAIRS** ..... A. E. Strange,  
404 Worcester Street, Christchurch.
- MAJESTIC RADIO RECEIVERS** Kirkcaldie & Stains,  
Chief Wellington Agents, Lambton Quay.
- MULLARD VALVES** ..... All Radio Dealers.
- PILOT 1930 PARTS AND KITS, ETC.** ..... Abel, Smeeton, Ltd.,  
27-29 Customs Street East, Auckland.
- PILOT 1930 PARTS—PILOT SUPER WASP KITS, GILFILLAN, KELLOGG and ATWATER KENT SETS** ..... Harrington's, N.Z., Ltd.,  
138-140 Queen St., Auckland.  
40-42 Willis St., Wellington.
- RADIOLA RECEIVERS and Expert Radiola Service.** Farmers' Trading Co., Ltd.,  
Hobson Street, Auckland.
- RADIO REPAIRS AND SERVICE** ..... E. G. Shipley,  
185 Manchester Street, Christchurch.

### COUNTRY TOWNS

- CROSLEY RADIO** ..... J. C. Davidson,  
Main Street, Pahiatua.
- CROSLEY SETS** ..... Abel, Smeeton, Ltd. Rep.: C. Euscoe,  
409 Devon Street, New Plymouth.
- CROSLEY RADIO** ..... D. A. Morrison & Co.,  
Victoria Avenue, Wanganui.
- MAJESTIC ELECTRIC RADIO** Berryman's, The Home of Music,  
Palmerston North.
- MAJESTIC, ATWATER-KENT AND RADIOLA ELECTRIC SETS** Radio House, Hamilton.  
G. S. Anchor, Manager.
- PHILIPS VALVES AND APPARATUS** All Good Radio Dealers.

# A Power Pack for "250" Valves



THIS is the description of a band eliminator or A.C. power-pack designed by the writer, and run successfully for several months. The apparatus as described will deliver up to about 130 mills of current, but in order to draw more than this it would be necessary to slightly alter the chokes, as dealt with elsewhere. Most constructors will make a demand of perhaps 70 to 80 mills at the most, and at this output high efficiency will be obtained.

The word "super" might well be applied to this eliminator, because it will fill the requirements of a push-pull stage employing any of the "super" power valves at present offering. The transformer secondaries are together capable of delivering up to 200 mills of current at a voltage of 400 to 500, according to the number of turns decided upon.

Although the eliminator is capable of heavy work, employing a pair of UX 281's type rectifiers it would be a good plan for any constructor to build it for immediate use with a Raytheon valve at 300 volts, with suitable taps on the secondaries, and at a later period with the enlargement of the amplifier, the highest plate voltage could be used and a pair of large rectifiers installed in place of the Raytheon.

Two variable grid-bias voltages, a high and a low, are provided, so that dry cells are entirely dispensed with, and bias can be adjusted to a nicety. Careful tests have shown that bias obtained in this way for both stages of the A.C. amplifier gives results quite equal to when a bias battery is used for the first amplifier valve.

This eliminator is in every way suited for all-electric operation, as several filament windings may be put

## Supplies all Current for A.C. Receivers

By "MEGOHM"

THIS week we commence the description of the most comprehensive power unit yet described in the "Radio Record." It has been designed by "Megohm," whose description of this fine piece of apparatus may be followed by the novice. Owing to the size of the article, it will be extended over several consecutive issues.

on the transformer for either immediate or future use. Most constructors will find it convenient to adopt the idea of making their broadcast outfit in three separate units—eliminator, amplifier, and R.F. tuner.

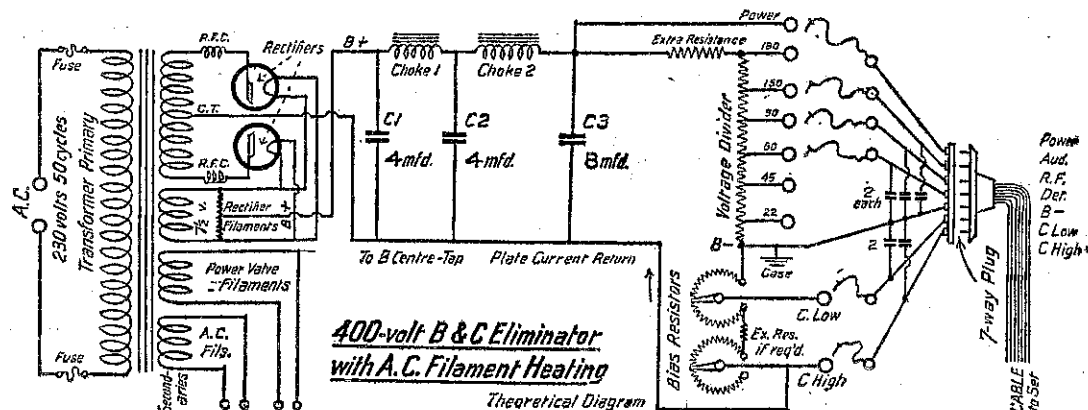
The two features of the exterior design are the placing of the two recti-

flap which is easily raised when adjustment of voltages is required; this idea imparts a neat and finished appearance to the whole.

Regarding the actual circuit of the eliminator, it contains nothing new, but the arrangement of the output voltage control has been specially

favour placing two sockets for the lower voltages, so that two leads may be plugged into the same voltage at the same time. Close to this row of sockets will be seen the various leads for the several stages of the receiver. These leads consist of suitable rubber-covered thin flexible wire, terminating in a plug, the top of which may be insulated with adhesive tape. These leads pass through holes in the panel, and continue through the baseboard and along to the output plug, where they also connect to one side of the corresponding output condenser.

The larger, or right-hand portion of the panel may be of metal, preferably sheet-iron. At the lower portion of it will be seen two 400-ohm wire-wound potentiometers connected in series to form the two grid-bias outputs, each arm providing a voltage. The one connected to "B—" gives the low voltage,



Theoretical Diagram.

planned for convenience, and will give as much variation of voltage as the constructor wishes to provide. The idea of stowing the condensers in a box under the base has already been published in the "Listeners' Guide," and in use has proved extremely convenient.

THE actual construction of the transformer and chokes will only be briefly dealt with, as reference to the "Listeners' Guide" will give details of the various operations. Dimensions and any special features will be fully dealt with here.

The whole of the materials, excluding rectifiers, should be purchased for about £9, which is a very reasonable figure for an eliminator of this voltage.

### The Panel and Container.

REFERRING to the general view of the eliminator, it will be seen that the front flap which usually hangs in front of the panel, has been raised. The left-hand portion of the panel consists of a strip of ebonite or other insulator, drilled to take any required number of flush sockets, one for each voltage provided, including grid bias voltages. This method of tapping voltages is convenient for experimenting, and well worth carrying out, although it would be quite practicable to connect output leads direct to the respective voltage-divider taps, dispensing with the sockets. Some constructors may

and the other the high. Potentiometers are used here because they will efficiently carry both the "waste" current and the whole of the last stage plate current as well. This is a point for special notice, and is the reason for not employing composition resistances.

Most voltage-dividers provide for 90, 65, 45, and perhaps 22½ volts, in addition to the full voltage for the last stage. Any voltages between these may be provided for by means of a variable resistance of 3000 to 5000 ohms, one end connected to (say) the 90-volt tap, and the arm to an additional socket which might be marked 60 volts, though it would be variable from 90 volts downwards, depending upon the resistance value used. Any output lead plugged into this extra socket, would then give a variable voltage. There is plenty of room on the panel for any such resistances that may be required.

At the left of the container is a ledge upon which the rectifying valves are held in suitable sockets.

At the left also is the output plug which allows the cable running to the receiver to be readily disconnected at any time. Should this convenience not be considered necessary, the various leads could emerge through one hole and be formed into a cable to continue to the receiver. A plug with seven connections is suitable, providing for R.F., detector, audio, power, C1, C2, and B—. Such plugs can now be purchased, but in case of dif-

You have not seen the latest in Radio Receivers until you have inspected the . . .

## PEERLESS

Employing the improved  
SCREENED GRID, POWER DETECTOR,  
:: PUSH-PULL AMPLIFIER ::

And the Greatest of all Improvements

## The Kylectron Speaker

Full details and prices from—

**THOS. BALLINGER & CO., LTD.**  
58-62 VICTORIA STREET, WELLINGTON

DEALERS! Distributors will be appointed in each district. If your district has not already been allotted, ask for details of our distributors' policy—It has special features.



sembly they can be constructed, using an old bakelite dial for the pins and a square of ebonite to hold the sockets, this being screwed to the side of the case. A solder-tag is placed on each pin, and all wires come through a hole drilled in dial knob, and are soldered to the tags. One pin should be out of regular position, so that the plug may only be inserted correctly. Flexible metal gas-tubing is used to contain the cabled wires leading to the receiver. This tubing should be earthed, and in case of being unable to procure a seven-way plug, then instead a six-way plug, could be used, with an extra loose pin, to connect B— to earth.

From the back of the baseboard emerge the twisted flex leads for mains current and A.C. valve heaters.

The lower portion of the container is merely a wooden box to hold the condensers, the front and back being of 7-8 rimu and the remainder 3-8in. The lid, which forms the baseboard, is strengthened by screwing underneath two strips of 1in. by 1. The whole should be firmly screwed together and may be lined with tin, though this is not essential. The cover and front flap are made of strong tin or thin sheet-iron, the heavier the better, and both metal and wood parts of the container are coated with black Sapolin. If a coat of shellac is first rubbed into the wood, a bright finish will be imparted to the Sapolin.

The top of the cover should not be much less than one inch above the transformer core, or a vibratory hum may be imparted to the cover. A strip of 24's copper sheet bent to L section and bolted inside the top of the cover will cut out any slight hum that may develop.

Constructors who have built a small eliminator will find that in handling the higher voltage and greater current there are more chances of trouble that must be watched.

The dimensions of the original are given, but may be altered at the outset to suit components. The condensers should all be purchased before deciding upon the size of the lower containers.

In the original the condensers used were T.C.C. 4 mfd. of 800 volt test, and Western Electric 2 mfd. of 500 volts test. Any reliable makes of condensers of not less than the same test and capacity may be used. The

space occupied by the T.C.C. is 2 x 2 x 5 5-8, this latter dimension including the terminals. Some condensers have projecting lugs for screwing to a baseboard, but as these will not be required, any that interfere with compact stowing may be cut off.

The baseboard is hinged to the front of the condenser container, allowing of instant access to the condensers at any time. The total inside height of this container should not be less than three inches, which allows for the 1in. strips under baseboard, and a space above the 2in. condensers for leads.

All leads from the upper to the lower portion are taken through the baseboard at the front, where the hinges are placed, so that they will not interfere with the free movement of the baseboard when lifted.

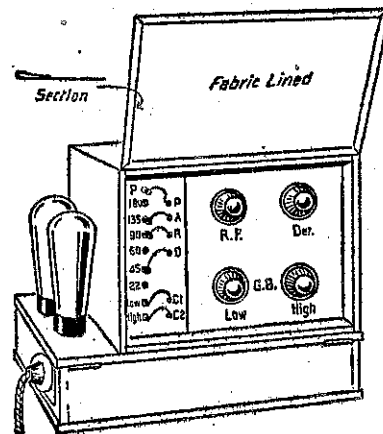
The baseboard may measure 14½ by 10½ inches, allowing 1-8in. overhang all round.

The diagram shows how a wooden frame is constructed from strips 1 x 3-8in., and screwed to the front of baseboard. The panel is screwed to the back of this frame, and the front flap is hinged to the top, either by means of brass hinges, soldered to the flap, or by a hinge made by cutting the top edge of the flap, and a strip of tin with corresponding spaces, the projections being curled over a piece of 14's wire to form the hinge.

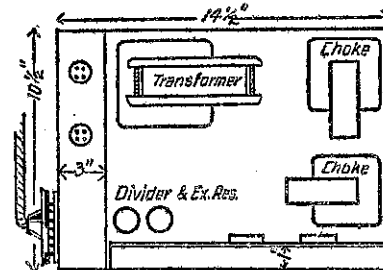
The flap should project 1-8in. beyond the frame at each side, and about ½in. below top of baseboard at lower edge. Edges of flap and cover should be turned in, and a layer of cloth or other insulator secured to the inside of flap, so that when holding it up with one hand and altering tappings with the other, there will be no chance of receiving a shock if a connection is accidentally touched. A good rule with eliminators is always to turn off the supply current before making changes. The flap and cover are connected to B—, the cover by resting upon the metal tray, with edges turned up half an inch, forming the floor upon which the transformer and chokes are to rest. This tray may be of brass, copper, aluminium, or any other non-magnetic metal, in order to avoid hum from the stalloy cores. The tray also connects to B—, and is attached to the baseboard with ½in. screws.

When all connections have been made under the baseboard, a sheet of stout

cardboard and then a square of sheet iron are attached by short screws to the clamps under baseboard, leaving a ½in. space for connections. Under the transformer an extra piece of ½in. strip should be secured, so that the board and iron may be attached to it with additional screws in order to prevent any chance of hum from the transformer core. Before putting the clamps on they should be drilled or grooved side-



1 Front View  
Panel Cover Raised



2 Plan

ways, where required, so that filament and plate leads may be passed through the holes.

The container as described makes a very suitable housing for an eliminator purchased in "kit" form, being greatly superior in appearance and convenience to the "breadboard" style of construction.

#### MATERIALS REQUIRED.

7½ doz. 1½in. stalloy strips (3ft.).  
1½lb. 32's s.w.g. enamelled wire.

1½lb. 24's s.w.g. enamelled wire.  
4lb. 30's s.w.g. enamelled wire.  
1½lb. 18's s.w.g. d.c.c.  
4 lengths 3-16 threaded rod and 16 nuts.  
4 iron clamps.  
Rectifier sockets (unsprung U.X.).  
12 pins and sockets.  
1 voltage divider (sometimes known as tapped resistance).  
1 extra do. or 12,000 ohms resistance.  
2 potentiometers, 400 ohms.  
4 4-mfd. condensers, 800 test.  
5 2-mfd. condensers, 500 test.  
7-way plug and cable.  
Sheet iron, bolts, screws, flexible wire, fibre, spaghetti, washers, timber, tape.

#### The Transformer.

THE core of the transformer is constructed of strips of stalloy 1½in. wide, built to 1 3-8in., so that the wooden former will be 1½ by 1 3-8 by 3½in., the latter being the outside length of spool. The 1½ dimension must be a shade over, so that the stalloy will slip in without forcing. The spool ends are 3½ by 3½in., which gives an even depth all round. The long piece of stalloy is cut 5 1-8in. and the short piece 2 5-8in., but the latter would be slightly increased if any constructor finds it necessary to provide a greater number of windings than are specified. The stalloy may, of course, be cut up by the constructor, or ordered to be cut by a supply house, where this service is undertaken. Every piece should be shellaced on both sides after cutting.

Details of transformer building are fully dealt with in the "Listeners' Guide," so only necessary extra particulars will be given here.

Before commencing winding, strips of medium weight uncreased brown paper must be prepared to place between every layer of wire. Between every separate winding place not less than one layer of overlapping tape and two thicknesses of brown paper.

The wide strips must be a fit for the inside of the spool, 3 9-16 in the original. About 20ft. length of this will suffice for the primary and between other windings. The narrow strips for the secondary will be a bare 1½, which should leave a space of 1-8in. between the two secondaries. About 40 feet of this width will be required.

When assembling the laminations, and the centre of the spool is getting full, slip in a strip of tin 1 1-8in. wide,

(Continued from page 4.)

guard the plant and see that the purely mechanical equipment functions properly. The entire staff consists of only sixty persons. The enlargement of the station made possible a very considerable increase in its efficiency. This is due chiefly to the improvement of the short-wave transmitter, which makes possible the transmission of from 150 to 200, and under special circumstances, as many as 300 words per minute.

The latest stage in the advance in wireless communication was the introduction at the end of last year of wireless telephony with Buenos Aires, a distance of some 7300 miles. This service is to be extended to cover the entire Argentine and also to other South American stations. And the next step will be the transmission of pictures, which now, after long experimentation, is about ready for practical use.

#### Indoor Antennae.

FROM the point of view of reception, the indoor aerial is better than a loop antenna. The pick-up of the latter is small, and, in consequence, an extra radio-frequency valve is usually necessary to compensate for this. An indoor aerial, on the other hand, while not possessing the sensitivity of the outdoor arrangement, is nevertheless capable of giving good results, especially on the higher frequencies. It is as well to carry out experiments with indoor aerials of various types, since the disposition of the wires frequently has a marked effect upon signal strength.

#### Home Construction.

THE wiring up of a receiver will be found a great deal easier if the components are prepared before they are mounted. This is done by filing clean and tinning all soldering lugs and other points to which connections are to be made. After tinning a small

"blob" of solder should be placed on each lug. This will be sufficient for making the connection and it will not be necessary to add any more while wiring.

#### Working Moulded Ebonite.

SHARP drills are essential for working moulded ebonite, and the smallest possible pressure should be applied. When it is necessary to make a hole through a thin moulded flange or through one of the ribs of a ribbed coil former, it will be found safest to make a preliminary hole without a drill. Take a fairly stout needle (it need not be sharp), heat it red hot and push it through the ebonite, holding it in a pair of pliers. It will be found necessary to withdraw the needle and re-heat it several times before the hole is complete. Finally, if a moulded ebonite component is to be screwed to the baseboard of a receiver, avoid screwing the component down too tight-

ly as moulded ebonite sometimes behaves like porcelain, splitting if the least bit too much pressure is put on a weak point.

#### An Earthing Precaution.

MANY amateurs use two earth contacts of different kinds under the impression that such an arrangement gives better results. If a copper and a zinc plate are buried in different positions and connected, an electric cell with its two plates of dissimilar metals is formed. The electrolyte is composed of the moisture and acid in the soil and the outside circuit consists of the earth leads. A microammeter (or even a milliammeter in some cases) placed in one of the earth leads will indicate a flow of current, and this current can be produced only by disintegration of one of the plates. Further, such an arrangement may quite possibly be the cause of background noises in a sensitive receiving set.

turned up at one end as shown in a diagram and sufficiently long to turn up  $\frac{1}{4}$  in. at the other end when through. This forms a protection to the inside of the spool, and renders easier the process of inserting the last few strips.

Iron clamps at least 1-16 in. thick should be used if they can be procured,  $\frac{1}{4}$  in. wide against the laminations, and  $\frac{1}{2}$  in. for the flange, which should have a hole near each end for bolting to the baseboard. The length of the clamps need not exceed  $\frac{1}{4}$  in., drilled at each end for  $\frac{1}{4}$  in. bolts,  $\frac{1}{4}$  in. from centre to centre of holes.

The spool ends must be marked with the approximate position of all lead-out holes so that all may be brought out at the correct place as winding is completed. The positions are given in a diagram, which should be followed if trouble at a later stage is to be avoided. The actual holes are made with a fine bradawl or drill, as required during the process of winding. All holes must be marked before winding with title of the winding, and this should be clear and distinct. Note carefully the position of the lamination space when marking out.

The number of primary turns of 24's enamelled wire is 1125, the number having been slightly raised in order to compensate for the comparatively heavy gauge of wire. The first few layers may be wound to the ends, provided that the papers are truly cut, and fit well. With careful winding, the primary will just fill eight layers. The following figures give the total number of turns at the end of each layer in the original. First layer 140 turns, second 280, third 425, 567, 708, 846, 996, and at the end of the eighth layer 1125 turns.

Tap the primary at 1100 turns.

This primary is for 230 volts, 50 or 60 cycles.

After a layer of tape and double paper, the rectifier filament winding is put on. This consists of 47 turns of 18's s.w.g. d.c.c. wire, which almost fills one layer. Shellac well and allow to dry. This may be centre-tapped at the 24th turn with a thin wire, say 24's or 26's, from which to draw the

rectified high voltage current, unless this is to be taken from a tapped resistance across the rectifier filaments. The latter method is described, but either may be used. Needless to say, this part of the circuit must be carefully insulated. This filament winding will give  $7\frac{1}{2}$  volts when  $2\frac{1}{2}$  amps. are drawn.

Tape and double paper prepares the way for the secondary windings, the two being put on separately. Solder on a 26's wire for lead-in, and commence winding the left-hand section, keeping the paper strips close against the spool end, and leave a space of 1-16 in. at each end of the turns in each layer. The greatest number that will go in one layer is 130 turns, but the average number may be 115 to 120, occupying 20 layers. In the original,  $\frac{1}{4}$  lb. of wire ran out at 1025 turns, and  $\frac{1}{4}$  lb. at 1991.

The paper strips may be cut to lengths in readiness, the first about 8 5-8 long, each one increasing by about 1-8th inch, the twentieth being about  $11\frac{1}{4}$  in. long.

These operations are repeated for the second section.

A space of about 1-8 in. will remain between the two windings, and this is conveniently filled in by running in thin twine, accompanied by a liberal application of shellac.

The number of turns of 32's s.w.g. to be put upon each secondary is 2400 for 400 volts and 2850 for 500 volts. These figures allow 60 to 70 volts for drop in chokes and other losses. Also allowing for losses, 1850 turns will give 300 volts. The full 500-volt winding may be put in, and the lower voltages provided for by means of taps.

If there are no taps on the secondaries, the end of the first is connected to the beginning of the second, and from this connection the centre-tap is taken.

It may interest constructors to know the time actually taken in preparing the stallo lamination for the original transformer. Cutting with snips  $1\frac{1}{2}$  hours, flattening ends 40 minutes, shellacking all pieces 1 hour.

A fuse panel is provided, measuring about 6 by  $1\frac{1}{4}$  in. This is drilled near each end to fit over the projecting threads of the bolts, and is secured by an extra nut on each. See diagram. The pair of 1-8 in. brass bolts for each fuse may be placed in holes with centres one inch apart. For both mains and high-tension fuses use 40's wire with the insulation cleaned off.

### The Diagrams.

No. 1 shows the general arrangement of panel and case, viewed from the front. The flap in front of panel is shown raised. The edges of this tin panel are turned in flat to a width of about half an inch; a square of fabric may be secured with seccotine, and the edges turned down upon it all round. The object of the fabric, or cardboard if preferred, is to allow of the flaps being held up by the hand without contacting the earthed metal. The narrow ebonite panel is seen on the left, with sockets for various voltages.

The holes marked P, A, R, D, are those through which the flexible leads with pins on the end are brought from the outputs, power, audio, radio and detector. A similar plug-in arrangement is provided for the grid-bias voltages for convenience in experimenting. Constructors may leave out any of these conveniences that they do not require, connecting the output leads direct to the suitable tap on the voltage divider. At the top of the right-hand panel are shown two variable resistances, should variable voltages be required. The values could be 5000 ohms for the r.f., and 500,000 for the detector.

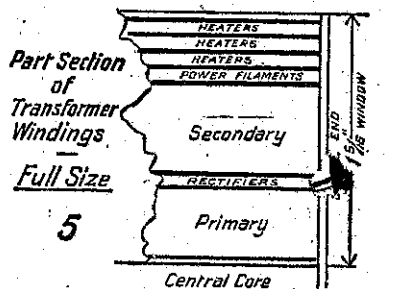
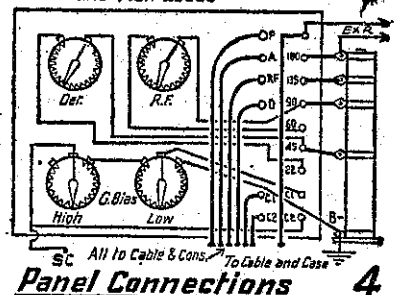
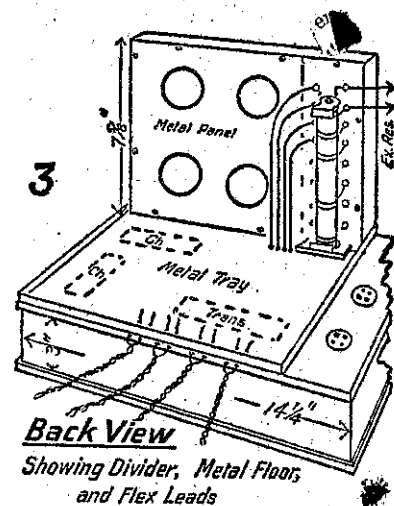
No. 2 shows in plan the positions of rectifiers, transformer, and chokes.

No. 3 shows the general arrangement, omitting transformer and chokes for clearness. The metal tray is shown, and should continue under the front upright frame, which is screwed down through holes in the tray. The panels are screwed upon the back of the frame. The method of bringing in the flexible leads is here shown. A  $\frac{3}{16}$  hole is drilled in the back edge of the base for each separate wire, grouping in pairs, another hole being drilled through the metal tray about an inch from the edge, to meet the horizontal hole. The ends of the flex are then treated with seccotine to prevent fraying of the braiding, and when this is dry, the end is pulled through the hole, only a short end being required to solder to the filament leads coming out on the lower side of the spool. Where found more convenient, the flex may be taken down under the baseboard and there joined to filament leads. The sockets for the rectifiers are screwed under the baseboard, the top coming out through a hole of suitable size, allowing the socket to appear almost flush with the top of the baseboard, which may be covered with tin well secured with screws, and provided with holes to coincide with the sockets.

No. 4 shows connections to grid-bias resistors on back of panel, and also connections for optional variable resistances, should they be required. In this and the previous diagram, the extra resistance is not shown, but the connections appear. The constructor will decide upon the form of this resistance as dealt with elsewhere. Note that B—end of the divider is connected to the beginning of bias resistances, to the metal tray, one side of output condensers (not to the 4 mfd smoothing

condensers) and through the cable to earth. The six flexible plug-in leads go down through the baseboard, where each connects to a cable socket, and all but "power" also connects to one side of its output condenser. The lead marked "SC" goes down through the baseboard and connects to one side of all the high-test smoothing condensers and to the transformer centre-tap. This lead is well insulated throughout, although it is common to one side of several condensers.

No. 5 shows a section the actual size of a portion of the transformer windings, so that constructors may check up the space occupied as winding progresses. The spacing could be marked inside one of the spool ends before



winding. Provision is shown for three layers of 18's heater windings, but for the average a.c. receiver, only two layers will probably be required. As these windings are outside, they can be altered at any time without disturbing the fine wire windings.

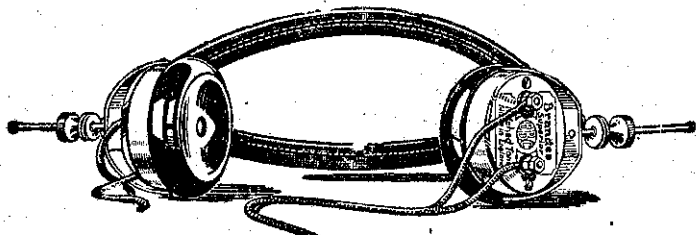
The theoretical diagram also appearing shows clearly the whole of the connections and output arrangements.

(Further constructional details will be given in next week's issue.)

A MISTAKE occurred in Harrington's advertisement in our issue of last week. "Super-Wasp" Receiving Set for a.c. operation was quoted £24/15/- (power pack extra). This price includes the power pack.

# Brandes

The Name to know in Radio



Made in England  
Price 15/-

OBTAINABLE FROM ALL RADIO DEALERS or  
INTERNATIONAL RADIO Co. Ltd., Ford Bldgs., Wellington

## A New Receiver

## Recent American Invention

A NEW type of radio receiver which combines a specially designed valve with a radically different electrical circuit was demonstrated recently in America. The unique part of the device is that it avoids most of the engineering practices and methods of construction and operation upon which other present-day receivers depend for their operation.

Part of the instrument employs six valves of the 199 type. The audio-amplifier unit has two valves of the new type developed by the inventor. Before the radio frequency amplifier, which employs no tuning circuit to adjust the receiver to the desired wavelength, is placed a special "filter circuit" to exclude all the broadcast energy except that of the station desired.

In enumerating these departures from current radio designs, the inventor stated that his valves, instead of employing negative "C," voltages employ a method of biasing by means of a positive voltage or battery. This method, he explained, combined with the new circuit, affords very large signal gains, or amplification. All of the valves are of the three-element type, using internal parts known to the radio world as "grid," "plate," and "filament." However, the elements are said to function in a quite different way from the ordinary internal parts of a standard radio valve.

The receiver functions as an amplifier over a very wide band of frequencies, without distortion, and the only frequency limiting device in the entire set is the band selector ahead of the radio amplifier and a transformer coupling device which links the set to the loudspeaker. Thus the set would be applicable to radio-vision reception, as well as for broadcast programmes. A majority of the radio-vision test programmes are being broadcast in channels 100 kilocycles wide, whereas the broadcasts of audible programmes are transmitted in channels only ten kilocycles in width.

WHEN using a many-turn tuning coil as an R.F. choke remember that its magnetic field must not extend to other apparatus, or unwanted coupling effects will arise that would not be troublesome if the spacing were O.K.

## Storing Spare Wire.

EXPERIMENTS involving the construction of special coils often lead to an accumulation of insulated wire of various gauges. An excellent method of storing lengths of wire of this kind is to wind them on a wooden pole, about an inch in diameter and three feet long. Holes are drilled in the rod at intervals of an inch or so for its complete length. The spare lengths of wire are then wound separately on the pole, and the ends passed through the drilled holes. The rod may then be conveniently supported on two brackets on the wall and left free to rotate so that the particular length of wire wanted may be easily pulled off.

## Set-Building Hints.

WHEN building a set if a centre-punch is employed before drilling the necessary holes the accuracy of their positions will be ensured. With very large holes such as those of 3-in. diameter as used for one-hole fixing components, it sometimes simplifies drilling if a small guide hole is made first. In order to ensure that the panel and baseboard will fit nicely into the cabinet, it is best to screw the panel and the terminal strip to the baseboard with all three in place in the cabinet. This should be done before the components are mounted on the baseboard but after those which go on the panel are in place.

## Simplifying Tinning Operations.

THE tinning of the ends of the lengths of wire used in wiring a receiver, especially fine or flexible wires, will be greatly facilitated if the soldering iron is adapted for the purpose. The usual trouble encountered in this operation

## A Correction

AN error occurred in an article on "Power Transformer Design and Construction," published in last week's issue. In the printed diagram 280 type rectifiers are specified, but not only are these rectifiers incapable of standing the plate voltages called for, but the filament voltage required for them is 5 instead of the 7.5 provided by the transformer. Two half-wave rectifiers (type 281) could be employed in a full-wave rectifying circuit. Valves recommended for use are Marconi or Osram U8 rectifying valves. These are the only full-wave rectifying valves capable of standing up to 500 volts input.

## Tips and Jottings

is that it is difficult to put a good coating of solder on the wire without rubbing it about on the iron. If a fairly deep V-shaped groove is filed in one of the faces of the bit (at right angles to the handle) a considerable amount of solder can be melted into it without any risk of its running off.

## Using Fixed Condensers.

IN ALL straight circuits with the reaction coil in series with an impedance or resistance, it is advisable to provide a by-pass condenser to ensure satisfactory control with a suitably small reaction coil. In certain other circuits, even though reaction is not used, it is often found that the inclusion of a small fixed condenser will give improved results, and an example of this fact will be found in most reflex circuits where the 'phones are connected in the anode circuit of the reflexing valve. When, on the other hand, no reaction is used, a telephone condenser does not become a necessity, except in special circuits. It may, however, sometimes be found to improve the tone of signals, and for this reason is sometimes provided, though generally in the case of telephone reception the actual improvement is hard to detect.

## For Fine Soldering.

WHEN fine wires have to be soldered in a rather inaccessible position, it is often difficult to place the tip of a soldering-iron of ordinary size down into position. A useful method of overcoming this difficulty is to bind a few turns of really stout wire round the head of the iron, leaving a projecting tip. This can be turned, and makes quite a satisfactory iron for soldering fine wires in grooves where the iron itself is too big to enter.

## America on Short-Wave

## Schedule of W9XF

HAVING just received confirmation from W9XF, Chicago, I thought that the information which they sent me might be of interest to short-wave enthusiasts.

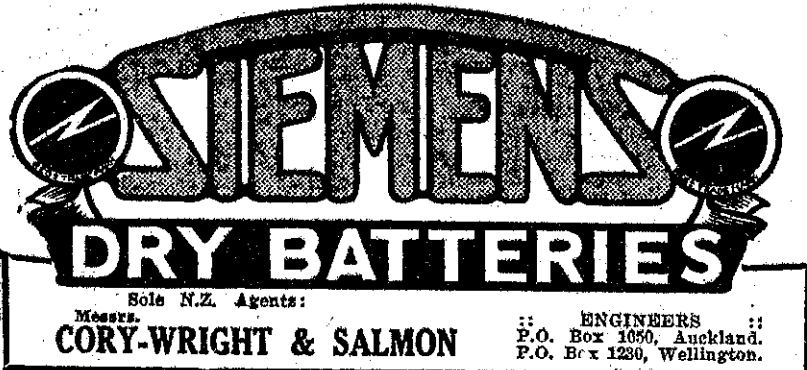
"The transmitter is located at the site of the WENR transmitting station, which is three and one-half miles south of Downers Grove, Illinois, or about twenty-three miles south-west of Chicago. The power output is 5000 watts. The transmitter is operating on a frequency of 6020 k.c.'s at the present time. We are authorised to use the frequencies of 11,800 and 20,500. Separate transmitters will be built at a later date to operate on these frequencies.

"Schedule of WENR and W9XF. Monday:—10.00 a.m. to 10.30 a.m., The Sunshine Hour; 11.15 a.m. to 11.25 a.m., The Sunshine Hour (continued); 11.25 a.m. to 11.45 a.m., Home Service Feature; 5.00 p.m. to 5.30 p.m., The Air Juniors; 7.15 p.m. to 7.30 p.m., Farmer Rusk with 'AG' Talk; 11.00 p.m. to 12.20 a.m., Music Parade; 11.30 p.m. to 11.40 p.m., Comedians.

"This applied to every day of the week except Tuesday 9.00 p.m.—10.00 p.m., when the Utility Securities Concert Orchestra play, and Saturday 12.00 midnight to 2.00 a.m., when DX Air Vaudeville programme is given, and Sunday, when appropriate concerts are given."

I would be very pleased if any short-wave enthusiast would write to me and exchange notes.—H. D. Adcock ("Braeburn," Church Street, Masterton).

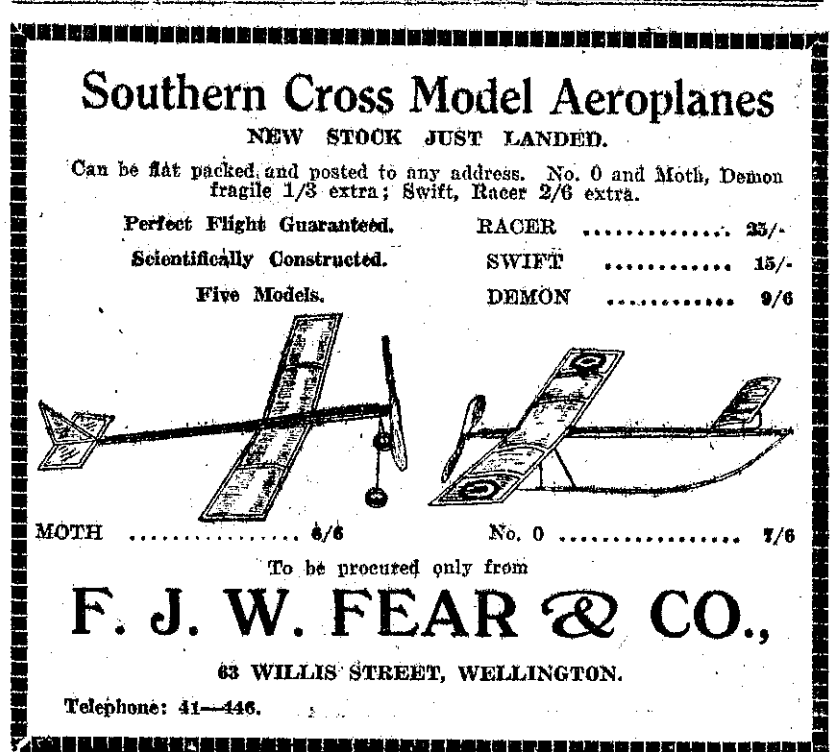
WHEN changing coils remember that if the metal pins on these touch the wrong sockets, or other metal, you may burn out a valve, short a battery, or do other damage.



**SIEMENS**  
DRY BATTERIES

Sole N.Z. Agents:  
Messrs. **CORY-WRIGHT & SALMON**

ENGINEERS  
P.O. Box 1050, Auckland.  
P.O. Box 1230, Wellington.



**Southern Cross Model Aeroplanes**  
NEW STOCK JUST LANDED.

Can be flat packed, and posted to any address. No. 0 and Moth, Demon fragile 1/3 extra; Swift, Racer 2/6 extra.

|                             |             |      |
|-----------------------------|-------------|------|
| Perfect Flight Guaranteed.  | RACER ..... | 25/- |
| Scientifically Constructed. | SWIFT ..... | 15/- |
| Five Models.                | DEMON ..... | 9/6  |

MOTH ..... 6/6      No. 0 ..... 7/6

To be procured only from  
**F. J. W. FEAR & CO.,**  
63 WILLIS STREET, WELLINGTON.  
Telephone: 41-446.

### Prague Transmitter.

THE Prague short-wave transmitter regularly transmits on Wednesdays and Saturdays between 7.30 a.m. and 9.30 a.m., New Zealand summer time, on a wavelength of 58 metres. The call-sign is OKIMPT.

### Germany and U.S.A.

GERMANY has concluded a contract with America for the interchange of radio programmes. The service commenced on October 7, a special concert being transmitted through the Königswusterhausen station on 31.38 metres.

This was clearly received in U.S.A., and rebroadcast through KDKA, one of the pioneer broadcasters. There have been no reports of this concert having been tuned in by any New Zealand or Australian listeners.

### G5SW in Australia.

COMMENTING on reception in Australia of G5SW, the short-wave writer of "Listen In" says: "G5SW has been excellent in the evenings with its midday lunch-time programme (10.30 to 11.45 p.m., Melbourne time), (12.30 a.m. to 1.45 a.m. New Zealand summer time). This station, however, is absolutely indecipherable in the mornings." This is our experience in New Zealand just now.

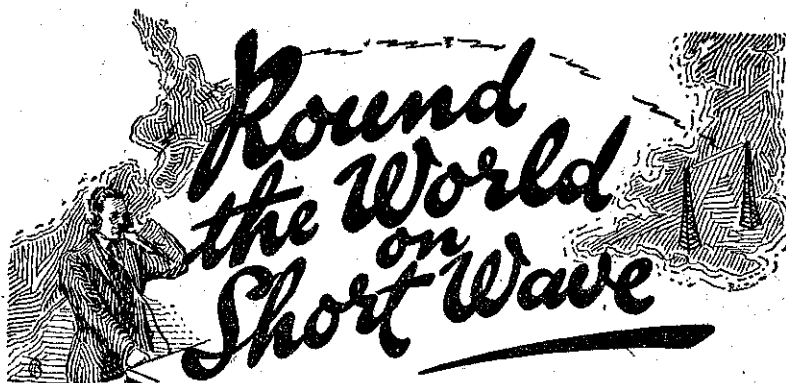
### Reception During Week Ending December 21, 1929.

RA97, Siberia, 70 metres.—Static has been very bad all through the week on this wave-band, so that the Russian has been almost impossible.

W2XBH, Brooklyn, N.Y., 54 metres, reported by Mr. Morrison last week, was logged on Wednesday at 7.30 p.m. Volume was weak, about R3. Signals were gushy, but the call-sign was identified.

W9XF, Chicago, 49.83 metres.—Reception of this station varies quite a lot. On Wednesday at 7.30 p.m. they were R8-9 with excellent modulation, but other evenings strength was poor.

W2XE, Long Island, New York, 49.02 metres.—This station was tuned in at 7.30 p.m. on Tuesday, when they were testing. The power was given as 750 watts and reports were asked for from the West Coast (U.S.A.), "if we are getting out that far." The transmitter was described and technical notes from Q.S.T. were read.



This transmitter belongs to the Columbia broadcasting system. Reports asked for to be addressed to P.O. Box (?), Ozone Park, Long Island, New York. Reception, considering the power used, 750 watts, was quite good, being R4 and 100 per cent. readable most of the time. After 8 p.m. strength and readability went off.

Mr. Wiffen, of Blenheim, reported good reception of this station, but like myself, was not sure of the post office box number.

W3XAL, Boundbrook, New Jersey, 49.7 metres, was heard on Sunday at 6.30 p.m. at R4, increasing to R6 by 7 p.m. They were still going strong at 9.15 p.m., but static had become too bad to continue listening to them.

W2XAF, Schnectady, 31.4 metres.—On Sunday they were not audible till about 3.30 p.m., after which strength gained fairly rapidly to R7 by 5 p.m.

PCJ, Holland, 31.4 metres.—This popular Dutch station was transmitting a special programme on Thursday morning when I tuned them in at 5.40 a.m. They were received at R9 with slight static. A man was singing the "Marsellaise." At 6 a.m. the Dutch National Anthem was played and the transmission concluded.

A station was just audible on this wavelength on Friday morning, but too weak to be certain if it was PCJ. On Saturday they commenced just after 6 a.m. at R7-8, weakening to R4 by 7 a.m. Static was very bad. The afternoon programme was inaudible till 4.30 p.m., when they were R2, reaching R8 by 6 p.m. Static again was very bad.

Essen, Germany, 31.38 metres, was only heard once during the week, that

was on Monday morning early, when they were R6.

7LO, Nairobi, 31 metres, has been very poor all the week. The best day was Tuesday, when a play was being broadcast at 6.15 a.m., received at R4. Volume was R5 by 6.30 a.m., but rapid fading spoilt reception.

VK2ME, Sydney, 28.5 metres and GBX, England, 27.5 metres (about) are still to be heard at good strength mornings and evenings on duplex telephony.

KZRM, Radio, Manila, 26 metres (about).—This station continues to come through well from 10 p.m., but has been spoilt on most evenings by static.

G5SW, England, 25.53 metres, has not been worth listening to any morning. An announcement was heard on Wednesday in reference to the Christmas holidays, but was not intelligible on account of rapid fade. Strength was R5.

KDKA, Pittsburgh, 25.4 metres, was first heard at 1.30 p.m. on Sunday, when the carrier only was audible. Volume was up to R5 by 5 p.m., when Christmas and New Year greetings were being transmitted to the Far North. No sign of KDKA was heard on Saturday (December 21).

FW or PTT, St. Assise, France, 24 metres.—This old friend was heard after some weeks' silence on Monday morning at 6 a.m. Talk only was heard with "Allo! Allo! Ici Paree" at intervals. Strength R4-5.

W6XN, California, 23.35 metres.—On Sunday this station was heard at good strength—R8 at 5 p.m. This was the maximum; by 7 p.m. it was down to R3-4.

W2XAD, Schnectady, 19.5 metres, was heard at 6 a.m. on Tuesday at R3.

PHI, Huizen, Holland, 16.88 metres.—I tuned in this sister station of PCJ on Tuesday soon after 10 p.m., when the "Blue Danube Waltz" was coming in at R9. Reception was perfect. Announcements were made in English and Dutch. They were still as good at 10.30 p.m. when I closed down.

PLF, Java, 16.8 metres, was heard on several evenings at good volume, but with a strong generator hum.

PLE, Java, 15.74 metres, was on duplex on Wednesday, Friday and Saturday evenings. The latter evening they were calling 2ME, Sydney, till 11.10 p.m., but could not get a reply.

PKC, Holland, 16.3 metres, was on when the above stations were working duplex with them.

LP3, Monte Grande, 15.03 metres, is heard on most evenings at good strength.

### Unidentified Stations.

THE 20.5-metre station often reported, is, I believe, a trans-Atlantic telephony transmitter. On Tuesday morning "Hullo, London" was called, followed by reading from a newspaper.

On Wednesday morning, just before 6 o'clock, a business talk was heard from this station, concluding with: "I am going to Chicago for a holiday. See you next week. Good-bye."

## Short-Wave Notes

### Two Well-known Stations

ON Tuesday, 17/12/29, W2XE, New York, were testing their transmitter, which had just been reconstructed. Volume R 7-8. This station is owned and operated by the Columbia Broadcasting System, and transmits 16 hours daily, from 7 a.m. to 1 a.m. E.S.T. W2XE works on a frequency of 6120 k.c., or 49.02 metres, using a 750 watt transmitter, which is crystal controlled. Their address was given as W2XE, P.O. Box 13, Ozone Park, Long Island, New York.

Saturday, 14/12/29, Bangkok, Siam, was heard relaying KZRM, Manila, at R9. I have heard this station since September, and heard its call for the first time this evening. At about 12 p.m. I heard the announcement, "Allo, Allo, 2BK, Bangkok, Siam, relaying KZRM Radio, Manila." Later, in English, "Hullo, hullo, 2BK Bangkok, Siam, calling," was heard. I am sure of the call 2BK, as I heard it at least half-a-dozen times during the evening.—A. D. Rogers (Wellington).

Have you procured your copy of

"N.Z. Radio Listener's Guide?"

Dealers and Booksellers 2/6; Post Free 2/9—P.O. Box 1032, Wellington.

Now Available.

## FOR SALE OR EXCHANGE

The rate for small advertisements under this heading is 2/- cash for 20 words, and twopence for every other word thereafter.

TWO-VALVE AMPLIFIER, in guaranteed condition, first-class components, £2/10/- less valves. "Brand New," Box 1032, Wellington.

METRODYNE ELECTRIC challenges any Set for distance, selectivity, quality, value. Nine valves, five condensers. Importers, Royds-Howard Co., 553, Colombo Street, Christchurch.

LOWEST priced Radio Gramophone, also Temple Exponential and Magnetic Speakers. Ask your dealer or call. Royds-Howard Co., 553 Colombo Street, Christchurch.

STALLOY-TRANSFORMER. — Strips 36 x 1 inches, 2/- doz. Other widths proportional. Also supplied cut, punched. Special quantity quotations. Johns, Ltd., P.O. Box 471, Auckland.

Printed and published for the New Zealand Radio Publishing Company at the registered office, Wakefield Street, Wellington, of the Wellington Publishing Company, Ltd., by George Thompson, of 7 Rimu Road, Kaitiaki, Printer, and Roy Cecil Temple, of Te Kaitiaki, Kaitiaki, Publisher, Wellington, FRIDAY, DECEMBER 27, 1929.

## AT MACK'S RADIO—

YOU CAN BUY A BEAUTIFUL

Precision-made, Damaskene Finish  
**Steel Cabinet**

ALREADY DRILLED, FOR YOUR SHORT-WAVE SET, 2, 3, 4 or 5 VALVES.

PRICES: 25/- and 30/- EACH.

Like Mack's Short-wave Sets, none imported are as good.

NEW ZEALAND-MADE IS MADE FOR YOU—TRY THEM!

## Mack's Radio Service

Repairs Our Speciality. Distance No Object.

76 KENT TERRACE, WELLINGTON.

PHONE: 20-798.