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Brilliant Orchestra Engaged for 2YA

"All-Star" Combination to Take the Air on May 1

WE venture to predict that listeners will be delighted with the orchestral combination engaged for 2YA to commence on May 1. Every member is an outstanding artist and soloist, and there is unquestionably no similar combination of musicians anywhere in the Dominion, for each one is a leader in his or her particular department.

The personnel is as follows:—

AVA SYMONS, leader, violin.	SIDNEY BARRETT, clarinet.
W. E. McLEAN, obligato violin.	LESLIE PROBERT, drummer.
FRANK HUGGINS, bass.	HARRY BERRY, trumpet.
CLARENCE TUCKER, flute.	F. C. J. FORREST, trombone.
M. T. DIXON, pianist.	GEO. ELLWOOD, 'cellist and conductor.

FOR the first month, so that this fine combination will be under immediate control for broadcasting purposes, the baton will be taken by the Radio Broadcasting Coy's musical director, Mr. W. J. Bellingham, this by arrangement with the permanent conductor of the combination, Mr. Geo. Ellwood, who thereafter will have charge. From May 1, listeners, in line with the details given in the article below, may look for a series of musical treats.

GRATIFICATION will be felt on all sides that it is now possible for the Radio Broadcasting Company to engage for 2YA quite the most outstanding collection of musical talent in New Zealand as a permanent orchestra. This progressive move will certainly be welcomed by listeners, and unquestionably will strengthen the general programme service. The personnel of the orchestra is outlined above and is in itself impressive. Details of the careers of each performer are appended to the respective photographs and will substantiate and endorse the claims made on behalf of the combination.

HOW will the orchestra be used? Some original plans are in contemplation for getting the best out of the orchestra and, what will, we think, appeal particularly to listeners, the public is to be asked to co-operate in the nomination of the numbers to be played. This is an innovation which will be watched with interest in its outcome, as it constitutes a direct invitation to the public to declare what its taste in orchestral music is. The method of nominating the music chosen is outlined later.

FOUR NIGHTS A WEEK.

THE programme devised is as follows:—The orchestra will be on the air four nights a week

—Monday, Tuesday, Friday and Saturday. The fields to be covered each evening are allocated thus:—

MONDAY:	CLASSICAL.
TUESDAY:	OPERATIC.
FRIDAY:	POPULAR:
SATURDAY:	VAUDEVILLE.

The orchestra on Monday night will always play a certain number of classical or standard works. On Tuesday there will be a proportion of operatic selections, but on both these nights there will also be specially chosen orchestral numbers of general interest, in addition to the featured

music. Friday will be devoted to a general popular orchestral programme chosen from the whole gamut of orchestral works, including a proportion of the most popular musical comedy selections, and the latest fox trots and jazz waltzes, and novelties. On Saturday, the programme will consist of light music of a vaudeville character, and will finish with three-quarters of an hour of jazz.

THE PUBLIC'S CHOICE DESIRED.

IN outlining the capacity of the orchestra to us and stressing the high quality of the professional artists engaged, Mr. W. J. Bellingham, musical director, stated that they would have at command a complete range of orchestral music, and would be able to give a finished interpretation of any conceivable orchestral composition from symphony to jazz.

We immediately saw in this claim an opportunity for satisfying the demand of the public for variety, and testing out the capacity of the orchestra, which Mr. Bellingham had stressed, desired to make its services of the most popular character. We therefore suggested that the public be given the opportunity, regularly, of selecting two of the items to be played each evening—one item to be a free request for any musical item of the same type as the evening's programme, and the other to be a request for a repetition of the most popular



—S. P. Andrew, photo.

MISS AVA SYMONS.

MISS AVA SYMONS, the unusually gifted violinist, who will lead the orchestra, is a New Zealander. She showed exceptional talent during her early studies with Max Hoppe, when she won first prize at the Napier Competitions, and also attained a similar distinction at the Auckland Competitions in the open class in the same year (1911). Her first orchestral experience was obtained at the age of 15, when, as a member of the Sheffield Orchestra she toured New Zealand. Miss Ava Symons was the only non-professional member of the orchestra. Whilst in Italy, where she received special tuition from Maestro Poltronieri, principal violin master of the Milan Conservatoire of Music, a great privilege was extended to this gifted violinist in that she was permitted to attend all rehearsals of the Poltronieri Quartet (string). In England she entered the Royal Academy, and studied there under the well-known violinist and exponent of the Auer School, Mr. Spencer Dyke. In 1919 Miss Symons in London was fortunate enough to receive tuition from the famous French violinist, Mdlle. Rene Chemet. It was this great artist who was responsible for Miss Symons securing the beautiful "Grand Nicola Amati" violin which she now possesses. Since her return to the Dominion, Miss Symons has been heard at many concerts, and has given recitals with Mr. Frank Hutchens, Miss Constance Leatham, and, in Wellington, a series of most successful sonata recitals. Her fame and ability are beyond question.



MR. W. J. BELLINGHAM, musical director of the Radio Broadcasting Company, who will control and conduct the 2YA Orchestra for the first month of operation. —Photo, by Capitol Studio, Auckland.



MR. GEO. ELLWOOD, 'cellist and permanent conductor of 2YA Orchestra.

—S. P. Andrew, photo.

Brilliant Orchestra Engaged for 2YA

CONTINUED FROM FRONT PAGE

item on the same evening of the preceding week. This last would act as a perpetual popular vote on the items played, and would ensure repetition of the items most enjoyed. Further, by being made applicable to both combined and solo items would act as a stimulus to the performers to give of their best. The other nomination of an item to be chosen would give scope for the direct record of the public taste.

MR. Bellingham immediately accepted the tacit challenge of this offer, and agreed that two blanks would be provided in the programmes of each evening on which the orchestra appeared—the first to be the popular nomination of any item of the same class programme and the other a repetition of the most popular item from the

programme of the same evening in the preceding week.

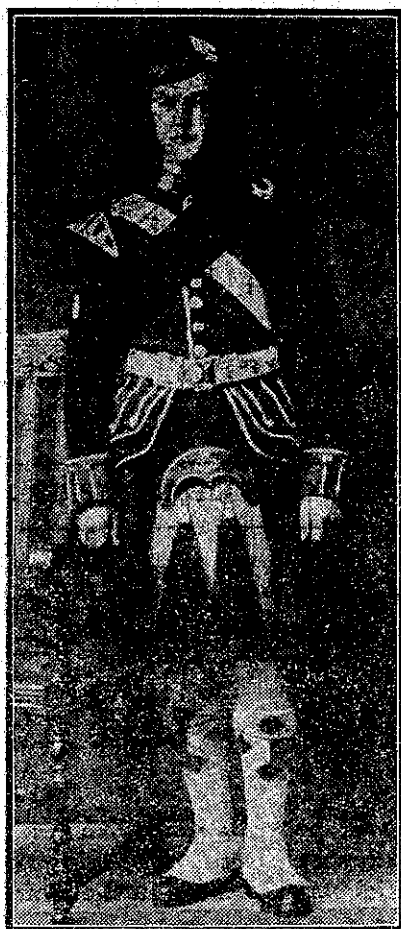
AS a means of allowing the public to express its wishes, we offered to receive the requests of the public, analyse them, and make known the result to the station director and orchestra a few hours before the evening performance. This was accepted, and details of the scheme of procedure will be found on Page 5. The object of this procedure is that the work of the station shall not be interrupted by an unduly heavy mail or by telephone requests. No telephone messages in this connection will be taken, either by ourselves or the station—requests must be in writing.

TO LEARN BY EXPERIMENT.

THE company has in mind, simultaneously with the institution of the orchestra, to experiment for a period in the direction of reducing the amount of announcing in order to give more music and less talk. This experiment will probably take the form of merely announcing the nature of the next item. The psychological reaction will be carefully watched in order to judge of its acceptability to the public. The present system of broadcast announcement is much like Topsy—it has "just grown"—and experiment may give a procedure which will eliminate delays and produce greater satisfaction to the listening public.

ANOTHER experiment contemplated by the company has a very important bearing upon the capacity of receiving sets to give listeners the best quality of reception, and is designed to enable them to detect whether their sets are catching and conveying to them all the sound put into the air by the station. As every listener knows, different sounds are conveyed at different vibration rates, and the finer tones require the highest rates of vibration. Some components of sets are not adapted to reproduce the finer tones, hence that listener loses those sounds and is not in a fit position to judge the music that is being broadcast. The test the company has in contemplation is to

vious the owner cannot get satisfactory reception and appreciate the quality of the music given. Listeners in general are coming to appreciate this,



MR. S. BARRETT.

ONE of the youngest members of the orchestra, Mr. S. Barrett, rose to the dizzy heights as a clarinetist whilst on tour with the Argyll and Sutherland Highland Band. Mr. Barrett was born in London, and commenced his musical career with the study of the clarinet at the age of eight, and has continued in this direction for about seventeen years. At the age of fourteen he joined the Argylls, and was associated with them for nine years, and it was during this time that he received all his instrumental knowledge. During this nine years of association with the Argyll and Sutherland Highland Band, he went on tour with them some seven or eight times. England, Scotland and Ireland were some of the points visited, whilst an extended tour of six months was conducted in France. In 1925, during the Dunedin Exhibition, the Argylls came to New Zealand and participated in the band contest which was held in Dunedin at that time. Afterwards a tour of New Zealand was also conducted, Mr. Barrett acting as soloist during this time. When the band returned to Scotland Mr. Barrett went with them, only to return to New Zealand about eighteen months ago. His first engagement was with the Empress Orchestra. Later he joined the Paramount Theatre Orchestra, and only leaves them to take up his new duties as a member of the 2YA Orchestra.



MR. FRANK HUGGINS.

—S. P. Andrew, photo.

AT an early date Mr. Frank Huggins, the double bass of the new 2YA Orchestra, displayed undoubted ability as a fine musician. His first instrument was the violin, and at the age of fourteen he made his debut in orchestral work by appearing with the Theatre Royal Orchestra in Timaru. Later on he undertook the study of the cello and double bass. Not satisfied with this he also made a study of the trombone and monstre bass, a wind instrument of huge proportions. For seven years he was associated with the North East Valley Band, Dunedin, as trombone soloist. He has filled positions on the leading theatre orchestras both in Dunedin and Wellington, having for many years held a seat with the Grand Opera House Orchestra as 'cellist, which was in itself a distinction, as a new orchestra was employed for each performance as it came along. Mr. Huggins studied under Richard Langdon and Signor Squarise, and has had some thirty years' experience as an orchestral player. He declares he finds a great deal of satisfaction in playing the double bass. Such a versatile player should prove of great value to the 2YA Orchestra.

broadcast different vibration frequencies embodying the ranges employed in the production of the musical tones of a standard orchestra. Full details of this proposed test will be given later, but its utility in enabling listeners to test for themselves the efficiency of their equipment in reproducing the full range of musical notes will be obvious.

A BEARING ON POPULAR TASTE.

THE point raised here has quite a bearing upon the popular demand for jazz as a broadcast item in comparison with orchestra items and high-class music. Jazz represents rhythm in music, and no matter what sort of set is used, rhythm can be heard, but poor sets would miss much of the best in high-class music. With the steady improvement that has been taking place in reception sets, there has arisen a demand for better music, this being due to the greater purity of the reproduction, and the full use made of the wider range of tones. The better class of music depends upon the quality of tone, harmony, and melody, and unless the listener has an effective set which is reproducing quality, it is ob-

and unquestionably there is a wider movement in favour of first-class reception components. The same principle applies in the case of gramophones. In the old-fashioned records the high overtones could not be reproduced, and it was impossible to tell one instrument of an orchestra from another. With the better reproduction now available, and the flexibility of the electrical pick-up, etc., modern gramophone reproduction is an entirely different thing.

ORCHESTRA AND CONDUCTOR.

AS a factor in entertainment the new 2YA orchestra will take premier rank. Through it listeners generally will receive a wide range of balanced and popular music. The public will be given what it wants—in fact, under the scheme outlined the public will largely arrange its own programmes, and we anticipate a hearty welcome and a brilliant career for the new orchestra under the permanent conductorship of Mr. Geo. Ellwood, whose career is so well known as to really require little recapitulation. He was born in Yorkshire, England, but came to New Zealand at such a very early age that he may well be regarded as a New Zealander. When only seven years old, he commenced the study of the 'cello, and under Mr. Hugo Gorlitz, a family trio later toured with remarkable success, young George being termed by the Press "a pocket edition of Gerardy." After this tour the trio proceeded to Europe to study. London held them for a few weeks, and then, armed with a letter of introduction to Jean Gerardy, they proceeded to Brussels, Gerardy, after hearing the lad of eleven play, sprang from his chair, exclaiming "I will teach him for nothing!"—a very great privilege, as Gerardy's fee was 24 s. an hour.

In addition to taking these private lessons, George Ellwood entered the Liege Conservatoire, and was admitted into Gerardy's "master class." On the conclusion of nine months' study he entered for the scholarship, and gained the "Premier Prix." The only time



MR. F. C. J. FORREST.

MR. S. J. FORREST started the study of the trombone just because his people wanted him to take up something else. When he was twelve years old he joined a brass band. He received his education at Marlborough College, South Island. Whilst in the South Island he was a member of the 10th Mounted Regimental Band as trombonist, and came to Wellington some years later. He was a member of the 1st Battalion Band and Waterside Workers' Band at the same time, playing soloist in both. Later he joined the Port Nicholson Silver Band. He commenced his orchestral work when he joined the Jazzola Band. He was with the popular "Dixie Boys' Six" jazz band, which was one of the first jazz bands in Wellington, and was the rage five or six years ago. From dance orchestra to grand orchestra work was but another step in this brilliant trombonist's career, and he subsequently joined the Wellington Professional Orchestra as soloist, staying with them for about three years. He then joined the Regent Orchestra from its inception, and was with it until February of this year. Mr. Forrest then reverted to dance music, when he joined the Cabaret Gaiety Palais de Dance. He became a member of the Fuller Orchestra, and leaves them to join the new 2YA orchestra. He toured New Zealand with the Walter George Sunshine Players in 1923.



MR. M. T. DIXON.

—Hardie Shaw, photo.

MR. M. T. DIXON, the pianist of the new orchestra at 2YA, was born in Durham, England, and received his secondary education at Bede College. At a later date he finished his musical studies under Mr. York Bowen, of the Royal Academy of Music. Coming to New Zealand, he undertook concert tours with J. and N. Tait as solo pianist and accompanist.

The following are a few excerpts from newspaper criticisms:—Lytelton Times: "Much might be written of Mr. Matthew Dixon, who is a fine exponent of the pianoforte. As a soloist and accompanist he leaves little to be desired." Auckland Star: "A pianist of more than ordinary calibre." New Plymouth Herald: "Proved himself a highly proficient pianist." Hawke's Bay Herald: "Plays with considerable insight and clear execution." Christchurch Press: "Displayed delicacy of tone, taste and feeling." Later Mr. Dixon was associated with theatrical work, acting as orchestral conductor at various theatres, finally being appointed musical director at the new Regent Theatre, which position he held until accepting the appointment with 2YA.

Amongst his well-known pupils at that time was Mr. Harold Beck, the 'cellist of the talented trio who nowadays broadcast from 8YA, Christchurch. In 1918 Mr. Ellwood once more turned his face towards Europe, proceeding to Brussels, where he commenced a course of composition, instrumentation, and conducting, with Joseph Jongen, the director of the Brussels Conservatoire, also studying singing and choir training with Maurice Weynaudt. Mr. Ellwood on this occasion remained on the Continent for nearly four years.



MR. L. W. PROBERT.

—S. P. Andrew, photo.

MR. L. W. PROBERT, drummer, dropped into the drumming business years ago, more by accident than design, his musical career commencing with the piano as a boy. His hobby has always been music, and as a recreation from mundane things, and as the result of a request by the old Garrison Band, under Lieut. T. Herd, he commenced playing the big brass drum for them, and incidentally earned the nickname of "Banghard" from his friends.

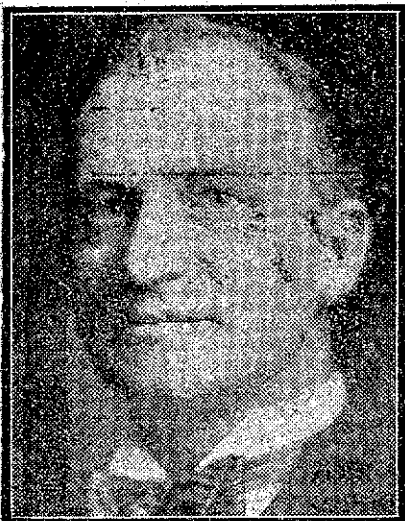
This recreation was pleasure enough until he found that when playing at outside performances, the Tramway Department had built all the trams too narrow at the conductor's end to take the big bass drums. As the department couldn't see its way clear to alter the tram entrance, and as the band couldn't alter the drum, Mr. Probert decided to learn the side drum, which would be more convenient to carry. With this end in view he received first lessons in manipulating the sticks from Tommy McGregor, a well-known side drum player in Wellington, and at a later date he continued these studies under the late Mr. Herbert Bloy, an expert on percussion instruments. Somewhere about 1911 or 1912 Mr. Probert applied to Mr. Walter Fuller at the old Theatre Royal, Lambton Quay, for a job in the orchestra, and was asked to attend rehearsal. This he did, with disastrous results. The band had finished the last notes of a lively march whilst he was still looking at the first few bars. The manager very kindly told him to have about a year's practice and then come back. Twelve months later he again applied, and was fortunate in securing an engagement in the new His Majesty's Theatre, when it opened in Courtenay Place. Under the excellent guidance of Mr. Frank Crowther, he progressed famously with the drumming business, and since that time has played for almost every conceivable class of performance, from light popular numbers to grand opera. Mr. Probert has given up playing time and again, but the demand has always brought him back again.



MR. CLAUD TUCKER.

—S. P. Andrew, photo.

MR. CLAUD TUCKER, the well-known Wellington flautist, should be a decided acquisition to the 2YA Orchestra. He has principally appeared as a soloist, and is well known to the Wellington concert-goer. For some years past Mr. Tucker has been first flute of the Wellington Professional Orchestra. A pupil of Signor A. P. Trada, who considered Mr. Tucker his most promising pupil, he has made a special feature of obligato playing. During the tour of the celebrated flautist, John Amadio, some six years ago, Mr. Tucker was complimented by this gentleman for his very fine performance. Mr. Tucker has appeared in the Wellington Competitions at different times, and secured three first prizes as soloist. He commenced his studies of this instrument at the early age of ten, and at twenty-six has accomplished as fine a tone and finesse which should contribute largely to the success of the orchestra.



MR. HARRY BERRY.

—S. P. Andrew, photo.

IT is not very often that a small boy of seven commences his musical studies on the trumpet and continues with that instrument throughout his musical career. Such, however, is the history of Mr. Harry Berry, the cornetist of the new 2YA Orchestra. Winner of numerous championships, about 23 all told, Mr. Berry has also the distinction of being a champion of champions, which title he won in Sydney. Mr. Berry first came to New Zealand on tour with the First Australian Band (Redfern) as soloist, and was with this band when it won the championship title in Dunedin in 1923, returning to Australia where, in 1924, he captured the gold medal for an original composition. In 1925 Mr. Berry returned to New Zealand under special engagement to the Wanganui Garrison Band, in which he played as professional cornet when they won the Dominion Championship in the band contest held in Dunedin at the time of the Dunedin Exhibition. Again Mr. Berry returned to Australia, only to be brought over some months later (1926) for the purpose of reorganising the Wellington Tramway Band, which he conducted for about twelve months prior to accepting a position at Fuller's. In 1928 Mr. Berry was engaged by the Woolston Band as professional cornet. Mr. Berry has acted in the capacity of professional cornet and conductor since the age of twelve, at which time he formed and conducted a brass band of twenty-two youthful enthusiasts at Warrnambool, Victoria. Mr. Berry has also had about twelve months' experience in broadcasting, having appeared before the microphone of 2FC, whilst in Sydney. Following are a few press notices:—Sydney News: "Mr. Harry Berry created a world's record for high range playing. Has a compass of 5½ octaves. Etc., etc. Australian Musical News: 'Meet Mr. Harry Berry, the magician of the cornet.' Lyttelton Times: "His dainty call-like tone provided the crystal gem of the evening."



MR. W. E. MCLEAN.

—S. P. Andrew, photo.

MR. W. E. MCLEAN, who for the past two and a half years has been the leading violinist at the Paramount Theatre, has also joined the new 2YA orchestra. Mr. McLean is a gifted violinist, with many years of orchestral work to his credit, having held the position of leading violinist at the Public Hall, Redditch; Temple Theatre, Dudley; Cinema De Luxe, Chester; the Picture House, Birmingham. (Eight years orchestral experience.). Mr. McLean was a student at the Birmingham Conservatoire for two years, where he studied under Mr. Hytch. Locally he has continued his studies under Miss May Donaldson, Premier Prix, Brussels.

New Points For Listeners and Dealers-- By "Meter"

The aim of this section is to give listeners information of new and interesting devices and sets on the local market. It is free of advertising intent or influence and to the best of our ability will convey only absolutely reliable statements. Names, prices and sources of supply are mentioned for the benefit of readers and to save individual inquiry.

THE name of the Radio Corporation of America has always been associated with the highest standards in radio wares, and this tradition holds good in respect to the company's 100-A loudspeaker, which I have subjected to a fortnight's testing. This loudspeaker has proved itself in every way a monarch among its competitors in the astonishing faithfulness of its reproduction on all audible tones, and in its sensitivity. With its instrumental and vocal music is a new delight. The bass notes are superbly rich and clear, and the treble leave nothing to be desired. Under the terrific strain of band music broadcast from 2YA, Wellington, I found it impossible to make the loudspeaker "chatter," although the music was passed through six valves at relatively close range to the big station. The 100-A R.C.A. loudspeaker is of the mantel-piece clock design, housed in a metal container. It embodies a new type of corrugated cone, which is completely weather-proof. Its pole pieces and armature are extra heavy, permitting great volume without saturation. A large-size permanent magnet of special alloy steel gives greater sensitivity and volume throughout the whole musical scale. It is claimed that this magnetic strength will not decline with age, resulting in decreased sensitivity, as is the case with some loudspeakers. An electrical filter is also provided, which removes distortion produced by high-frequency harmonics and summation tones. The metal case acts as a baffle-plate, and preserves the deep, full tones, while a light felt lining destroys obnoxious resonant effects and insures uniform response throughout its frequency range. This speaker is retailed at £12 10s. It was through the courtesy of the National Electrical and Engineering Co., Ltd., 42 Customhouse Quay, Wellington, that I have been able to test the R.C.A. 100-A loudspeaker.

COMMERCIAL CONDENSERS.

IN many instances the size of variable condensers is given in microfarads, and in still more cases it is given in number of plates. The number of plates is no gauge to the exact capacity of the condenser, as the size of plates differs with different makes as well as the spacing between plates. As a rule, however, the requirements for variable condensers are not exacting as to size, the size specified being the maximum capacity when the plates are all in. In general the relation between number of plates and capacity is as follows:

Number of plates.	Capacity of Microfarads.
11	0.00025
23	0.0005
43	0.001
65	0.0015

The mere fact that a condenser has metal end plates does not mean that it is a better condenser or a "low loss" condenser. There are just as many poor condensers with metal end plates as with insulation end plates. There are just as good or better condensers with insulation end plates as with metal end plates. The name of the manufacturer is your best guarantee.

The plates should be thick and stiff, preferably of aluminium or brass, equally spaced, and the frame construction rugged. A vernier dial such as "velvet grip" or "easy tune" is better than a separate vernier plate, as a rule. Usually small plates mean a better made condenser. A pig tail connection is not necessarily better than sliding contact, but do not oil the bearings on a condenser which has no pig tail.

With so many good condensers to choose from you should pay more at-

tention to mechanical construction and strength, especially in the bearings where slackness soon develops.

CORRECT RHEOSTATS.

THE problem of determining the correct resistance of rheostats often confronts a buyer who likes to design and build his own equipment. The proper resistance to use depends on the voltage of the "A" battery and the normal current that the valve operates on most satisfactorily.

For WD-11 and WD-12 tubes on 1½ volts a 6-ohm rheostat is satisfactory. For single C-301-a or UX-201-a tubes or any ½ ampere tubes on 6 volts a 30-ohm rheostat is proper.

For two C-301-a or UX-201-a tubes in parallel a 20-ohm rheostat will suffice. For four of these tubes in parallel a 6-ohm rheostat will be sufficient.

For UX-199 or C-229 tubes on ½ volts use a 30-ohm rheostat.

For UX-112 and UX-171 tubes use a 15-ohm rheostat on 6 volts.

For UX-112-a and UX-171-a tubes use a 30-ohm rheostat. These are the new quarter-ampere valves.

RADIO service men should interest their clients in the protection of their loudspeaker. Due to the increased clarity of signals, as well as to the additional power which may be obtained, many owners of receiving sets are incorporating power valves in sets which were not originally built to accommodate them. It has been the sad experience of many of these fans to find out that after a short period the loudspeaker would go on a "strike" due to the windings of the electro-magnet coils burning out.

This condition arises from the fact that the additional current necessary to operate these power valves is really more than the windings of the speaker can stand, with the result that a powerful surge induced by a loud burst of music will cause the fine wires to fuse.

Damage to the loudspeaker can be prevented in a very simple manner by the use of an output circuit, one type of which is described herewith. It is not necessary to place this apparatus in the cabinet, as it may easily be mounted right on the base of the loudspeaker.

The apparatus necessary is a choke coil and two 1mf. fixed condensers. These are connected in the following manner: First, they are mounted, with the two condensers in parallel. From one side of the output going to the speaker, connect a wire to one side of this condenser bank. From the other side of this condenser bank a wire goes direct to one side of the choke coil, and continues from there to one terminal of the set output.

From the other output terminal of the set connect a wire to the other side of this choke coil and to terminal for the output to the loudspeaker.

"NEW" CIRCUITS.

THE home constructor is confronted with "new" circuits in nearly every radio magazine, and he is often tempted to tear down his set and test the latest circuit, only to find it is no better than the last. An American radio writer says:

"When a radio wave coming through the air at the rate of 186,000 miles per second comes in contact with the wire of an aerial it sets up in that wire a current which, after a great deal of amplification, emerges as sound energy from the loudspeaker. Whether this sound is a faithful reproduction of what took place in the broadcast studio is merely a matter of engineering, and as we generally assume that there is no distortion between the studio and the receiving aerial, the main troubles are encountered most often in the receiving sets themselves.

"As has been intimated, the problem of distortion is one that has been engaging the attention of engineers ever since the start of broadcasting. Sets of all types, circuits, number of valves, etc., have been tried with the idea in mind that distortion was to be reduced to a minimum or eliminated entirely. New circuits were brought out, which upon inspection proved to be nothing more than old hook-ups dressed up in new clothes, and many of these newcomers were little better than their forerunners.

"So many of these so-called 'new' circuits have been foisted upon the radio public that every time something really worth while is put on the market the thinking portion of the radio enthusiasts look at it askance. It is seldom that anything radically new is presented to the radio constructor as something that is actually new in every sense of the word."

TO FIT A VOLTMETER.

RADIO traders who build high-class sets should equip them with the best voltmeters. They add greatly to the finish of a set.

A voltmeter is a very handy instrument to have on the panel of a set using five or more valves, for with it you can tell the condition of both A and B batteries at any time.

Some set builders have not fitted a voltmeter on account of the apparent difficulty of cutting the large hole necessary to take the instrument. If this has proved a difficulty to you, the following instructions will show you how to make any size of hole in the panel.

Mark off panel with a pair of dividers the exact size of the hole desired, then mark out a second circle ½ inch inside. Now mark off the inside circle in ¼-inch sections all round, then take a Bradawl or the point of a sharp file and spot each hole.

The next operation is to drill a hole at each ¼-inch mark with a ¼-inch drill. We take a ¼-inch drill, and drill into each of the ¼-inch holes. If you have marked off your ¼-inch sections correctly, you will find that when you have finished with the ¼-inch drill that the piece of panel in the centre will fall out.

Finish off the hole with a half-round file.

THE VALUE OF SOLDERING.

THE radio service man, professional and amateur builder, should solder connections in a set wherever possible.

One cannot receive unless the energy is transmitted through proper contact from metal to metal.

An invisible coating or film of air surrounds every metal, no matter how tight it may be pressed against another metal. Or worse, this film of air coats the metal with an invisible oxide. All oxides are notoriously bad conductors of current. In fact, nearly all oxides are insulators. So proper contact must be assured if the tiny surges of current are to be led from one part of a set to another.

With poor contact a surge of current cannot build up so as to produce oscillation. One must remember that a complete oscillation is a cycle of current running 0 degrees minimum to then to 180 degrees, where a reversal 90 degrees, the maximum in strength, of polarity occurs, and on to a similar change with opposite polarity. Now, poor contact is had, the current cannot build up from 0 degrees to 90 degrees, consequently no current will flow and no signals will be heard.

So the wise radio builder will see that good contact is made and kept by soldering every place in his set where current flows from one metal part to another. The soldering must be properly done, the joint first cleaned by scraping and sand-papering, then the parts cleaned, using a small amount of non-corrosive rosin flux, and finally the parts soldered together, using just enough solder to make a good electrical connection which has mechanical strength.

Every joint should be mechanically strong, as well as electrically conductive. If one inserts his hand into the

set for any reason, and brushes against the wire, the joint, if not mechanically strong, may break.

GOOD EARTH ESSENTIAL.

SERVICE men who received complaints about poor reception should never fail to examine their clients' earth connections. It generally requires a few months to educate the average radio novice on the necessity for providing an efficient earth connection. The directions given in the radio books, magazines, etc., read "attach the ground wire to a water pipe, hot-water radiator, etc." In the hurry to get the set into operation the new enthusiast makes a very quick job of the earth connection, then wonders why his set will not operate properly. The ground wire does not have to be covered with insulation, although it would be better if it were, but it should be made of a fairly heavy gauge pure copper wire of about 12 or 14 gauge. Secure an earth as near your set as possible, as the shorter the distance from set to the earth the better will be your results.

A cold water pipe makes the best place to connect the earth wire. First scrape or file about 1 inch: round the pipe, then with a piece of sandpaper brighten the copper wire. Wrap from 10 to 15 turns of the wire round the scraped part of the pipe, pulling it up tight with a pair of pliers.

The wire should be soldered to the pipe, and then wrap the joint with black friction tape or adhesive plaster. This will keep out the air, and prevent the bright part of the pipe and wire from oxidising and so reducing the efficiency of the earth in a short time.

WEIGHT OF COPPER WIRE.

THE following table showing the number of feet per pound of copper wire, should prove handy to dealers:

WIRE TABLE OF FEET PER POUND.		B & S Single Double Single Double		gauge cotton cotton silk silk Enamel	
20	311	298	319	312	321
21	309	370	389	389	404
22	488	461	503	493	509
23	612	584	636	631	642
24	762	746	800	779	810
25	957	903	1,005	966	1,019
26	1,192	1,118	1,265	1,202	1,286
27	1,488	1,422	1,590	1,543	1,620
28	1,852	1,759	1,972	1,917	2,042
29	2,375	2,297	2,570	2,486	2,570
30	2,960	2,834	3,145	3,039	3,240
31	3,804	3,668	4,043	3,923	4,082
32	4,875	4,737	5,150	5,013	5,132
33	6,290	6,169	6,610	6,469	6,645
34	8,050	7,927	8,400	8,254	8,439
35	9,820	9,697	10,200	10,059	10,243
36	11,860	11,737	12,270	12,129	12,313
37	14,390	14,267	14,850	14,709	14,893
38	17,430	17,307	17,900	17,759	17,943
39	21,090	20,967	21,570	21,429	21,613
40	25,390	25,267	25,870	25,729	25,913

LOFTY STATION TOWERS

DANGER TO AVIATORS.

To eliminate a serious hazard to aviation which is developing rapidly in commercial centres, the United States Federal Radio Commission state they may find it necessary to order owners of broadcasting stations to mark their towers in order to increase the visibility to flyers.

Aeronautical experts of the United States Army, Navy, and Commerce Departments have approved methods of marking air navigation obstruction such

as radio masts, transmission towers, and flag poles in the immediate vicinity of an airport, intermediate landing field or civil airway.

Three methods of painting are recommended: For the maximum desired visibility, towers less than 250 feet in height should be painted alternate bands of white and chrome yellow separated by black bands one-half the width of the white and chrome yellow bands.

As an alternative, the towers could be painted with bands of chrome yellow and black. As another alternative, the towers could be painted with bands of black and white or black and aluminium. From sunset to sunrise, the towers should be marked with red lights, making 80 to 120 flashes a minute. In order to afford adequate protection to aircraft the experts recommend that lights of higher candle power be used on major obstructions in the vicinity of landing fields.

Additional fixed red lights using 50-watt lamps are suggested for radio towers, one being placed at two-thirds of the height of the tower. These lights would be arranged so as to be visible from any angle of approach.

CLEAN YOUR SET

EXIT DIRT AND DUST.

A clean radio set is most important if best results are required, and now that many listeners are cleaning their sets, the correct method of cleaning should be fully understood by every amateur. Outside of the regular testing of batteries, valves, aereals, and earth, dust and corrosion must be carefully removed.

The first thing that the serious broadcast listener should do is to dismantle his aerial system, wash the insulators in carbon tetrachloride or some other agent, which will remove the heavy accumulation of dirt and dust. Then examine the aerial itself. Is the lead-in joint tight and making good connection? Has natural oxidation made a poor connection? Wouldn't it be worth while to put up a new wire and attach a new lead-in? Wouldn't it be worth while to change the direction in order that some of those long-distance stations be received? Whilst these matters seldom occur to the average radio set owner, nevertheless they are very important.

Use the Vacuum Cleaner.

Then on the set itself. Take it out of the cabinet, and if a vacuum cleaner is handy, use the long hose attachment and carefully clean every last trace of dirt and dust from the set. Use a pipe cleaner folded double and clean the plates of the condensers thoroughly, and see that the socket connections are bright and shiny, and that the movable connections are all solid, and will last.

Thoroughly clean the set from aerial to earth, cleaning all connections, brushing out dirt from the corners, cleaning off all surfaces where connections are made, testing all valves, and in short, giving your set a house cleaning. You will find out that much better results will be obtained from a set if it is given these periodical cleanings than if it is just dusted off from the inside with little or no attention paid to the inside.

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(2 VOLTS)		(6 VOLTS)	
A209 (10 AMP) GEN PURPOSE	13/6	A209 (10 AMP) GEN PURPOSE	13/6
A208 (10 AMP) AUDIO	13/6	A208 (10 AMP) AUDIO & POWER	13/6
A207 (10 AMP) POWER	15/6		
FOR 2 ACCUMULATOR CELLS		FOR RESISTANCE COUPLING	
(4 VOLTS)		(4 VOLTS)	
A409 (10 AMP) GEN PURPOSE	13/6	A228 (10 AMP) TWO VOLT	15/6
A408 (10 AMP) AUDIO	13/6	A229 (10 AMP) FOUR VOLT	15/6
A407 (10 AMP) POWER	15/6	A230 (10 AMP) SIX VOLT	15/6
		A418 (10 AMP) THE FOURTEENTH 20"	

PHILIPS RADIO

THE NEW ZEALAND Radio Record

PUBLISHED WEEKLY.

Printed Tuesdays to permit of effective distribution before the week-end, with full copyrighted programmes for the succeeding week. Nominal date of publication Friday.

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ADVERTISING RATES.

Schedule of Advertising Rates available from all advertising agents in New Zealand, or write: "Advertising Manager," Box 1032, Wellington.

Advertisements requiring setting should be in hand not later than Friday of each week to ensure publication in succeeding issue. Stereos and blocks, providing space has been arranged beforehand, can be accepted up to midnight Monday. Contract advertisements not changed will be repeated.

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

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

P.O. Box 1032.

Dominion Buildings, Mercer Street, Wellington.

FRIDAY, APRIL 27, 1928.

QUALITY AND VARIETY IN PROGRAMMES.

We would particularly draw the attention of readers to a pronouncement on the vexed question of quality versus variety in programmes, which has been made by an experienced programme organiser in the United States, Mr. Robert Hurd, of KFI. This is reproduced in toto on page 5, and contains points which are particularly applicable to the Dominion. From this statement it is plain that the United States in spite of its greater resources in talent and population, has experienced the same complaint from listeners as regards lack of variety in programmes as have been experienced in this country. The broadcasting stations have been faced with the problem of giving variety in the personnel of performers, and thus necessarily sacrificing quality, or maintaining quality of performance at the risk of incurring charges of monotony and lack of variety. The observations of Mr. Hurd are so applicable to our circumstances that we need do little more than direct attention to them. As a musical director his definite choice falls in favour of maintaining quality in performer. A comparison that he makes with the daily newspaper and the moving picture is quite pertinent and interesting. One daily paper, he points out, is much the same as another, and the vast percentage of its news to-day is written by the same pens that supplied it yesterday. In the moving picture halls the same stars are featured to-day as dominated the scene recently. Quality in personnel is maintained, and variety secured by a widened appeal. The lesson to our mind is wholly in favour of the finished performer being encouraged to widen his or her repertoire to the fullest possible extent. This is not to be taken as withholding opportunity from aspiring performers—but these aspirants must, in our opinion, in justice to the listener, be required to measure up to the standard desired before being broadcast. Variety of performer in itself has no virtue.

The measures being taken to secure variety in regard to the new professional orchestra for 2YA seem likely to give practical satisfaction. It is hoped they will do so. As to the quality of this orchestra there can be no question. It is in essence an all-star cast, and takes rank as the premier combination in the Dominion. Small in numbers—ten performers—it is, however, fully capable of rendering finished interpretations, and with the scope being given for public selection of items, it would seem that a considerable degree of satisfaction should result. In essence the public is to be given the task of pleasing itself.

CHRISTCHURCH JUBILEE

LOST AND FOUND

Diamond Jubilee celebrations will take place in Christchurch May 23-29. Many forms of entertainment have been arranged, and several of them will be broadcast by 3YA.

3YA recently broadcast a description of a child that had strayed away from home. Some time later the mother rang up and thanked 3YA for having been the means of securing the return of the little one.

2YA's New Orchestra

PUBLIC TO CHOOSE ITEMS

OUTLINE OF PROCEDURE

As explained in our front page article descriptive of 2YA's new professional orchestra, it has been arranged that the public shall have the opportunity of expressing its wishes and choosing certain items to be broadcast by the orchestra. The choice is to be a double-barrelled one, and is to apply to each of the four evenings a week that the orchestra will be on the air.

Places will be left in the programme each evening for two items to be selected by the public. One is to be a perfectly free choice from the whole range of music in harmony with the calibre of the programme arranged for that evening, and the other is to be a request for a "repeat" of the most popular item given by the orchestra or any member thereof—i.e., any instrumental item—on the corresponding evening of the preceding week. This is necessary in order to maintain the character of the evening's programme.

The nature of the programmes to be broadcast each evening are as follow:—

Monday	Classical
Tuesday	Operatic
Friday	Popular
Saturday	Vaudeville

Nominations for the items to be played are to be sent in writing to the "Radio Record," P.O. Box 1032, Wellington, either on the coupon inserted on page 5 in this issue for the convenience of readers, or separately in writing. Telephone messages in respect of this nomination cannot be accepted either by ourselves or by the Broadcasting Company. We are undertaking responsibility for conducting this regular expression of the taste of the public for two reasons—first, in order not to unduly hamper the work of the station staff; and, secondly, to give an independent selection of the public's desire. Readers of our article on pages 1 and 2 will note that the development of this opportunity for making a choice of items, arose from the claim that the new orchestra was of such calibre as to be able to give a finished interpretation of any orchestral work from symphony to jazz. By thus giving the public the opportunity of nominating works, a practical test of this claim will be made.

It is the special desire of the orchestra to keep in close accord with the wishes of the public in regard to the popularity of the music to be played, and they are looking forward with interest to the outcome of this nominative system that we are inaugurating. We think the public will appreciate the willingness of the musical director, and the orchestra in falling in with our suggestion, and we personally look for interesting results from the system. An element of expectancy and surprise will thus be introduced into the programmes which will, to a large extent, meet the desire for variety.

Nominations may now be forwarded for the request items of the week covering the orchestra's first appearance. Repeat items, of course, cannot be nominated till after that week has commenced. Address nominations—Editor, "Radio Record," P.O. Box 1032, Wellington.

WELLINGTON RADIO SOCIETY

ANNUAL MEETING.

The annual meeting of the Amateur Radio Society of Wellington is to be held at 8 p.m. on Monday, May 7, in the Conference Hall (ground floor) of the Dominion Farmers' Institute Buildings, corner of Featherston and Ballance Streets.

The agenda paper comprises the following items:—

Presentation of report re past year's work of the society.

Presentation of financial statement.

Discussion of officers for ensuing year.

Special instructive and interesting addresses by experts; display of radio records and demonstrations.

General discussion on all matters respecting broadcasting.

Reports re recent interviews with the Broadcasting Company's directors.

And general matters which members may desire to bring before the meeting.

Ladies are specially requested to attend.

2YA Plans Concert from Wanganui—120 Miles

IF PRELIMINARY TESTS ARE SATISFACTORY

ALL the talent in New Zealand is not confined to the four cities. There must be a lot distributed throughout the country where it cannot be made available for broadcasting. These individual artists cannot go to the broadcasting station, and the station cannot go to them. But, in one at least, 2YA proposes to go to the artists.

This instance is Wanganui, the fifth city of the Dominion, and one of the most musical for its size. A number of Wanganui artists have been heard on the air from 2YA, and Wanganui is the home of New Zealand's champion brass band, the Queen Alexandra's Own, and of the champion Highland Pipe Band (both honours won at the recent band contest in Christchurch), while in musical and dramatic talent the city is very strong.

All this talent cannot be brought to Wellington, so, by means of a relay line, 2YA proposes going to Wanganui.

Relay lines over such a long distance (120 miles) present great difficulties in the successful transmission of a concert, and 2YA's final plans will depend on a test which is to be carried out this week.

The project has only been made feasible by the recent erection of a new line to Wanganui, and the Broadcasting Company, with commendable initiative, proposes to take advantage of it at the earliest moment—if it be proved that a satisfactory transmission can be secured.

The wire is to be tested for radio relay purposes on the night of Tuesday, April 24, and if the wire be satisfactory the concert, which will be given by the cream of Wanganui talent, will take place on Thursday, May 17.

STATION PROGRAMMES

A NOTABLE WEEK

A review of the programmes at the various stations, as published in this issue of the "Radio Record," will disclose a notable week of entertainment.

1YA will broadcast the principal numbers from "Orpheus" (a studio production by Madame Irene Ainsley), a Municipal Band Concert on Wednesday, high class variety on Thursday, Friday (when "Bobbie," a one-act play, will be staged) and on Saturday.

A "Lieder Evening" is scheduled for 2YA on Monday; May Day will be recognised on Tuesday; "Jane," on Thursday, is the star attraction of the week, and variety concerts mark the other two days.

The week at 3YA commences with a Band and Beckenham concert. On Wednesday there will be an Irish Concert, on Thursday a French one. Friday will be a Robert Franz night with a leavening of variety, and on Saturday there will be one of the radio vaudevilles for which 3YA is noted.

Dunedin promises some excellent entertainments, including a comedy night—and Dunedin talent is good.

SPORTING

NEXT WEEK'S FIXTURES

TROTTLING AND RUGBY.

Thursday, May 3: Forbury Park Trots (subject to permission of the club), 4YA.

Saturday, May 5: Forbury Park Trots, 4YA; Rugby football, Eden Park, 1YA; Rugby football, Athletic Park, 2YA; Rugby football, Lancaster Park, 3YA.

SPORT IN PLENTY

(By "Audis.")

FOR the week ending April 28 there will be plenty of sport relays from the various stations. Now that winter is here there will be plenty to occupy the attention of everyone each week. The football competitions are in full swing in all the centres, and descriptions of the games on Saturday afternoons will be a feature of the programmes from each station. While there will be a great deal of interest in the All Black team away in Africa, there is still plenty to interest the players and supporters in the games at home. There is every possibility of a tour of the Waratahs, the successful New South Wales combination, taking place during the season, and while they will really only be called upon to face the third team of New Zealand, these matches will afford plenty of interest, and should result in the unearthing of some very promising young talent in New Zealand football, players who, perhaps, would not have had the opportunity of coming into the limelight if the full strength of the Dominion was available for selection.

The inter-island game will be played as usual this year, and the Ranfurly Shield games will continue. The holders of this coveted trophy—Canterbury—have probably been harder hit by the absence of the All Blacks than any other province, as eight of their best players are away on the tour. Still, there appears to be quite a feeling of optimism pervading the ranks of the Red and Black supporters, and already one or two guesses at the composition of the defenders' team have been heard. While the retention of the shield will be more than their most ardent admirers expect, it is likely that the holders may stem one or two challenges for the trophy, and so

prove that Canterbury has some promising material to rely on in the future. Interest in Wellington, Auckland, and Dunedin seems to be as great as at any other period, and all unions are looking forward to another record season.

On Saturday, April 24, the Wellington Trotting Club hold their final meeting of the season, and it goes without saying that this meeting will be as great a success as the previous ones this year. The Wellington Club are now definitely established, after many years of hard work, and there is no meeting on the trotting calendar which is more efficiently run, or one at which it is more enjoyable to be present. The club are extremely fortunate in their choice of president, Mr. R. A. Armstrong, whose efforts on a race day make him a very busy man; yet he has time to devote to the attention of the many visiting owners, trainers, and supporters.

The handicaps for this meeting are published at the time of writing. The fields are very satisfactory, and the material of a sufficiently high class to make an extremely interesting day's racing. The Wellington public are quickly becoming proficient in the art of spotting winners, as dividends at the last meeting proved, and in the case under review, as many of the horses have appeared at Hutt Park on previous occasions this season, the form of many will be very familiar to the majority of patrons. All that is required to make the meeting a success is good weather, when some very fast racing should be seen. Among the well-known horses handicapped are such speed merchants as Logan Park, Logan Chief, Padlock, Petervah, all of whom are eligible for the New Zealand Trotting Cup, and such promising young horses as Jean McElwain, Loch Moigh, Native Prince, The Shrew, and others. This meeting will be broadcast from station 2YA from before the first race, and the station will switch over in the intervals between the races to Athletic Park for a relay of the Rugby football.

At Dunedin on the same night the professional feather-weight contest between Johnny Leckie (champion of New Zealand) and Gillespie (champion of Australia) will be broadcast from the ringside, and this should prove a great attraction. Leckie promises to be favourite, as he has not been beaten since joining professional ranks, but Gillespie will be in much better form than when he met Griffiths a fortnight ago.

CHURCH BROADCASTS

2YA CHURCH COMMITTEE.

In order that the broadcasting of church services might be arranged most satisfactorily to those concerned, a 2YA Church Service Committee was constituted last week on the invitation of the Radio Broadcasting Company, from representatives of the principal denominations. Those in attendance were the Rev. C. V. Rooke (Anglican), the Rev. R. S. Watson (Presbyterian), the Rev. E. D. Patchett (Presbyterian), the Rev. F. E. Harry and Mr. North (Baptist), the Rev. B. Weeks (Congregational), Pastor W. G. Carpenter (Church of Christ), and on behalf of the company Mr. A. R. Harris, general manager, Mr. C. S. Booth, administrative staff. The Rev. B. Weeks was elected to the chair.

Preliminary discussion emphasised the usefulness of this adjunct of broadcasting religious services, and the chairman, Mr. Weeks, expressed the view that an outcome of this taking of the Gospel to the people would be a definite religious revival over a period of years.

A draft constitution as submitted was discussed in detail and adopted with minor amendments. It was resolved that a Church Service Committee should be constituted to consist of one representative of each of the churches represented and to be appointed.

A statement as to the time to be made available for church broadcasts in respect of allocation by the committee was submitted on behalf of the company, and it was resolved that the detailed allocation of times, etc., should be undertaken at the next meeting of the committee on May 22.

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INVERCARGILL.

THE PERFORMER'S POINT OF VIEW

The following letter was sent to an Auckland paper which has published much matter about broadcasting from the listeners' point of view. But this version of the position did not appeal, and only some of this letter was given publicly. The writer has therefore forwarded to us:—

A great deal has appeared in the Press from the point of view of those who listen in, about the quality of the programmes, and of the artists who broadcast from time to time, but so far as I have not noticed anything from the broadcaster's point of view about listeners-in. I was at the listeners-in meeting here last month, and noticed a number of prominent artists there, and at first I hoped one of these performers would arise and tell the listeners-in on behalf of the others just what they thought of them. However, it was very soon apparent that the meeting had been called to "bait" the Broadcasting Company, and to let one particular speaker have a night out and air his wit, if that is the right word for it; so the artists, and many others who disagreed with most of the speakers (that is, about half those present) lay low and kept their thoughts to themselves. After all, it was the listeners' meeting, they had paid for the hall, so why not let them enjoy themselves?

Now, let me say a word or two from the performer's point of view. The listeners, or many of them, evidently think that the payment of a few pence a week gives them the right to ring up the radio stations, without giving their names, and make offensive remarks or comments on some of the items, because, foolishly, those items do not please their particular taste, although they may be most pleasing to thousands of others listening in. Some of these listeners-in appear to think, too, that they have the right to write offensive, and (of course) anonymous, letters to the artists, and evidently to the company,

too, judging by what one reads in the "Radio Record," objecting to their items. This, mind you, to some of the leading performers in the Dominion, not to mere "try-outs." But in any case, whatever the standing of the performer, he or she is entitled to common courtesy. What on earth has given these people the right to be rude and offensive to the broadcasting artists? Just imagine a state of things where at a public concert members of the audience got up and shouted, "Can't yer stop that woman howling?" or "Why don't you shoot the cows?" and a few other pleasantries of that sort. This is the kind of thing that frequently comes through on the telephone, and yet other listeners-in are good enough at times to write and express the pleasure they have received from these very items. It is about time the listeners realised that no programme or artist can ever please all listeners at the one time. The tastes are much too varied in such a vast audience, which may number 10,000 or even 40,000 or more. Unfortunately most of the people who enjoy the programmes don't bother to write or ring up. It is usually a pestiferous minority who make the noise. After all, how many people actually opposed to the company attended the meeting here in Auckland a few weeks ago? Possibly 150 to 200 out of something like 12,000 subscribers (license holders), and of those 150 or 200 probably not more than 50 were license holders. These folk made a lot of noise, of course, but it was a small percentage, wasn't it? If the dissatisfaction had been in any way general, why, the large Town Hall could not have held them.

Well, listeners, if you don't like an item, or items, shut the darn thing off and try again later. I may not be on then, but don't be rude, or if you must, at least give your name and address.—A REGULAR PERFORMER.

WHY YOU SHOULD LISTEN-IN

(By B Sharp.)

(Specially Written and Voluntarily Supplied to "Radio Record" by a well-known Musician.)

I STARTED learning music when five years old, and it looks as if my youngsters will be like their dad and take to music easily. The old days when I practised 4, 6, and sometimes 8 hours a day proved at times a nuisance because I wanted to play "kick the tin," "fox and hounds," "snowballing," and "tin tack"; still, I will never be able to thank my dear old mother enough for paying the fees for my lessons. I had two lady teachers, then finished off with a master, the result being I can now read almost any music rapidly at sight, can accompany for singers, and have a keen ear for all music, especially instrumental music. Therefore, the remarks which follow are penned by one who can appreciate good music, and without in any way desiring to be egotistical, I offer the following suggestions for what they are worth.

All people love music; music acts upon the nervous system as no drug, tonic, or medicine can possibly act. After a hard day's business, with the nervous system just about ready to break, when men reach home they feel the want of complete quietness and rest from business worries.

Very good; have you seen such a man, after dinner when his friends or child play the piano, or some other instrument, or sings a nice rollicking song? That man changes his whole temperament; from a smileless face, with lines possibly drawn across through worry, probably over his business finances; he suddenly smiles, and within a moment that man's whole countenance has changed completely. His wife shows her pleasure at the change, his children become more frolicsome, and the home atmosphere has turned right round.

Well, now, there are not many to-day who desire to practise; many are too busy to study; others, whilst loving music, have not the desire to test their ability out to see what they can really accomplish.

Others again have no piano, and may feel they cannot afford to buy a piano, on the off chance that one of the family might practise, or some kind neighbour stroll along occasionally and play it for them.

This is where radio broadcasting comes in handy.

I sit in my chesterfield nightly, with my quiet smoke, and paper or book, and I have the musical world—so to speak—at my very feet.

I put on my carpet slippers, rest my weary legs, sit comfortably back and reflect whilst the beautiful music pours forth into the loudspeaker. The strains of some beautiful melody, perhaps one well known to me, come from the broadcast studio or concert hall, probably many miles away.

The marvellous, finest, and most beautiful melodies visit my home all the way from Auckland, Christchurch, Dunedin, Wellington, Sydney, Melbourne, Brisbane, Adelaide, Perth, America, Java, Holland, London, Japan, India, and so on; and what do I pay for it? Fees, 2s. 6d. a month, not the price of 50 cigarettes. Remarkable when one thinks for a moment.

The cost of installing a set, of course, enters into the matter; but as reasonable terms can be obtained this should not preclude anyone from becoming a wireless listener.

A crystal, with or without amplifier, will provide excellent entertainment. Consider for a moment the happiness radio brings to the home: You have music waiting for you just when you please; and the kiddies can listen-in to the children's sessions and derive considerable education, musical advancement, and happiness therefrom.

Some people always take a long time to make up their mind to do anything, whilst others enter right into the spirit of the thing and have the satisfaction of obtaining knowledge, education and musical entertainment.

It seems hardly possible that anyone could live in these days without knowing what radio really means; there are, however, many who do not realise the great pleasure to be derived from radio broadcasting.

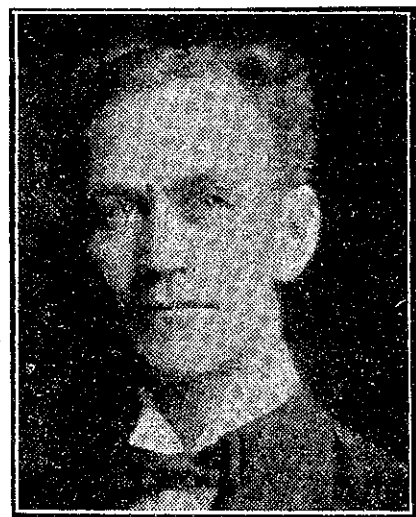
It is simply astonishing the strides and advancement which the radio engineers have achieved. In a few short years we have found out how to transmit music and speech right round the world—truly remarkable.

Are you a listener, I would say in conclusion? If not, let me offer my very best advice as a listener of several years' standing, and a musician of 38 years' standing: Do it now! See your local radio provider, and you will find your home a different one from a social point of view this coming winter.

2YA LOSES UNCLE JASPER

2YA is losing the services of Mr. Clive Drummond as an announcer and as Uncle Jasper. This news will be received with regret by thousands of listeners in grown-up and children alike. Mr. Drummond, who is a member of the Civil Service, has received notice of his transfer, on promotion, to Paeroa, where he is to be postmaster. He will be a considerable loss to radio in New Zealand.

Mr. Drummond was the announcer at old 2YK, the make-shift station which carried on in Wellington prior to the opening of 2YA, and he did the announcing to the exceeding satisfaction of all listeners. To him was entrusted the announcing on the opening night of 2YA, the most important radio event in New Zealand. It was the Broadcasting Company's way of paying



MR. CLIVE DRUMMOND.

a tribute to Mr. Drummond for his past services, and an acknowledgment of his ability. Since then Mr. Drummond has frequently been heard announcing at 2YA, another special occasion being that of the Maori Radio Pageant.

After the opening of 2YA, Mr. Drummond "broke out" in a new place. He became an uncle, and as Uncle Jasper, with Spot, his dog, he was soon a prime favourite with all the children. In Paeroa a listening-in set will be a very poor substitute for a broadcasting station to Mr. Drummond, who has always been a radio enthusiast—at the transmitting end. Uncle Jasper will be leaving Wellington on Thursday, April 26, and his farewell at Thorndon Station will be broadcast during the children's session.

2YA CHILDREN'S SESSIONS

SERVICE COMMITTEE FORMED.

A conference in respect of the children's sessions at 2YA was attended by Miss Sealy (Girl Guides), Miss Thornton (Training College), Miss Dunlop (Y.W.C.A.), Mr. Mabin (Boy Scouts), Bro. Phelan (Marist Brothers), Mr. Greenberg (Y.M.C.A.), Mr. Anderson (Headmasters' Association), Mr. Howes (Sunday School Union), and "Aunt Dot," "Uncle Jasper," and "Uncle Toby." Mrs. A. R. Hall (principal, children's department), Mr. A. R. Harris, general manager of the company, and Mr. J. Davies, station director to 2YA. The Rev. E. Weeks was elected to the chair as senior "uncle" at the station.

It was resolved that an advisory committee be formed, and the constitution as submitted was adopted. The first committee meeting was fixed for next Tuesday.

Regret was expressed by the chairman at the impending departure of "Uncle Jasper" (Mr. Drummond) from Wellington. Mr. Weeks said a very wide circle of children would be disappointed at their coming loss. Mr. Harris endorsed these remarks, and conveyed to Mr. Drummond the appreciation of the company for his assistance.

CORRECTION NEEDED

The Australian listeners are treated to some strange information regarding the New Zealand broadcast stations by the Sydney "Wireless Weekly."

The following appeared in the issue of April 6:—

"1YA, 2YK, 3YA, and 4YA are all controlled by the New Zealand Broadcasting Company. 2YK is in Wellington, 3YA in Christchurch, and 4YA in Dunedin. There is no transmission from 1YA on Mondays, and on Sunday a church service is broadcast, followed by musical entertainment till 9 p.m., after which the station closes down till Tuesday morning.

"The transmitting equipment at Christchurch is similar to that at Auckland. 4YA broadcasts every day of the week, except Thursday, from 7.45 until 10 p.m. 2YK operates every day of the week, except Wednesday.

"However, 4YA and 2YK are only temporary stations, as are the schedules.

"1YA may be found on 420 metres, and has a power of 500 watts, 2YK works on 295 metres, and 4YA on 380 metres, but the power is comparatively low."

The "Wireless Weekly" might enlighten its readers with the news that there is no station at Wellington using the call-sign 2YK. It has been defunct for many moons. Its readers may be interested to know that the Wellington station, 2YA, 420 metres, 5000 watts aerial power, is the second most powerful broadcast station in the British Empire. Also the wave-length of 4YA is 463 metres, not 380 metres. The hours of transmission by 4YA (and, in fact, of the four stations) are from 8 p.m. not 7.45 p.m.

Variety or Quality in Programmes.

The most appropriate comment that we have encountered on the vexed programme question of quality or variety comes from Los Angeles in an interview with Robert Hurd, KFI's programme director. This shows that despite America's greater size and resources her broadcasting stations are encountering exactly the same comments from listeners that are being experienced in New Zealand.

"Fully eighty per cent. of the people registered with American broadcast stations as available radio entertainers are hopelessly mediocre," says Robert Hurd, KFI programme director. "Of the remainder, ten per cent. may be rated fair, five per cent. satisfactory, and five per cent. A1."

"Shall programme directors be governed by the dictates of variety or those of quality in building their programmes?" he continues. "Shall we eliminate the eighty per cent. at once and build our programmes for quality and quality alone, regardless of how often the good artists appear, or shall we run the sad and weary gamut of mediocrity, for the sake of the possible variety demanded by a mythical, restless audience?"

"If we grant that all artists are not equally good, and still insist on using the inferior ones, then we have the ridiculous situation of a station broadcasting, knowingly, and with malice aforethought, inferior programmes by inferior people for no other reason than not to bore John Doe and his radio-party. Poor entertainment by new people will annoy Mr. Doe and his guests more thoroughly than will good entertainment by the same people he heard last night. To-day's metropolitan newspaper is made up of about forty per cent. standard material, while the remaining space is filled with news very like yesterday's, written by the same men who wrote yesterday's news. This week's Satevepost is very like last week's, with the same type of cover and the same type of stories. Would its editors choose in place of a good story by an old author, a mediocre story by a new author just for the sake of variety? The motion picture industry constantly seeks new faces, but does it as a matter of routine choose people it knows are inferior to its stars to be featured in each new picture just for the sake of variety?"

"My personal belief," Mr. Hurd concludes, "is that the variety bugaboo is responsible for much of the hog wash that nightly dilutes our nation's broadcasting.

Needless to say the elements of each night's programmes may and should be diversified.

"Small stations in small communities may find it necessary to use their good artists nightly to maintain a certain standard. Larger stations in musical centres with more people to draw from may broadcast for longer periods before repetition becomes necessary. All stations, however, are now using too many people in the estimation of those who have studied the situation. The broadcaster's watchword should not be 'Is It Different?' but 'Is It Good?'"

DANCING ABROAD

TALKS BY MISS MARGARET O'CONNOR.

Miss Margaret O'Connor, whose name in Wellington is closely associated with the art of dancing, has just returned from a tour of the British Isles, France and America. Taking full advantage of the opportunity afforded by her tour, Miss O'Connor studied under such world-famous teachers as Santos Casain, Barbara Miles, Josephine Bradley and others. Her dancing met with instantaneous success wherever she demonstrated, and Miss Barbara Miles, herself an ex-world's champion, strongly advised Miss O'Connor to remain in London to compete for the professional dancing championship of the world. Miss O'Connor and her partner have been engaged by the Regent Cabaret, Majestic Theatre, and Dixieland Cabaret in Auckland for special exhibitions next month of the modern popular dances. Miss O'Connor will shortly commence a series of lectures on "Doings and Danings in Other Lands," to be broadcast from the studio of 2YA.

A STATION SUED

CAUSES INTERFERENCE.

The Italian Educational Broadcasting Company, operating station WCDA (New York), brought suit for 100,000 dollars: (£20,000) against WOR (New Jersey, New York state), in the Federal court recently. According to Earl W. Dannels, managing director of WCDA, the suit is based on interference caused to his station by WOR, which is owned and operated by L. Bamberger & Co. WOR operates on a frequency of 710 kilocycles, while WCDA works on 1,420 kilocycles. Mr. Dannels said that the interference was caused by WOR's second harmonic, which has a frequency of 1,420 kilocycles, and was due to negligence on the part of the engineers in charge of the Bamberger transmitter who have failed to suppress its energy.

WCDA went on the air last November. Shortly after it commenced operations it received complaints that there was a heterodyne in its channel. Mr. Dannels said engineers connected with his station traced the howl to WOR's second harmonic. He said the Bamberger station was then asked to co-operate in eliminating the interference, but failed to do so. A complaint was then filed with the Federal Radio Commission, he declared, which ordered WOR to correct its harmonics.

C. T. Gannon, assistant director of WOR, admitted that notice had been served upon his company. He said that so far as he knew the suit came as a surprise and that he had no knowledge of the Federal Radio Commission's ever having taken any action in the matter.

MARKET REPORTS

Fruitgrowers and market gardeners will be interested to know that 2YA in future will give, on Monday and Tuesday evenings, between 7 and 8 p.m., the latest market reports supplied by Market Gardeners, Limited (Wellington).

Nominations for Orchestral Item

"RADIO RECORD," P.O. Box 1032, Wellington.

For evening of (fill in day and date)

My request for the open item is

My choice for the repeat item is

Signed

Cheap Autumn Outings by Rail

ANOTHER BIG COMMUNITY SERVICE.

Fathers, mothers, children, cousins, aunts and others, are offered special holiday excursion fares from all stations, from May 3 to 16 (tickets available for return until June 2). Give the young folks a safe and pleasant outing by rail during the school holidays.

Communicate with the nearest Stationmaster, District Manager, or Passenger Agent, for full particulars.

From the Woman's Point of View.

By VERITY.

TO-DAY AND TO-MORROW

They Say:

That many people, while listening to Archbishop Averil's able and inspiring sermon at the Pro-cathedral on Sunday morning, regretted that it could not be broadcast for the spiritual help and enlightenment of the community.

N.Z. in London.

New Zealand was represented recently at a revival of "The Beggar's Opera" in London, where its popularity has never waned. The Misses Burton were there, taking a night off from arduous study of arts and crafts. They were accompanied by Mrs. S. K. Sleight, also Lorna Smith, whose fine contralto is having the best of English training; and they all hailed from the Scottish city. Near to them sat Mr. Marsh, who it will be remembered, was art director of the memorable exhibition of 1925-26; and he told how, at the first Hammer-smith production of the opera, Mrs. Edwards used to go to all the rehearsals, studying the characters and modelling from life those charming figures from the quaint musical masterpiece that ravished the eye in the British section of the exhibition, where Polly Peacham smiled her way into everyone's affection.

War-Time Heroism Recalled.

Miss K. M. G. Mary Davies, the youngest daughter of Sir R. H. Davies, formerly Lieutenant-Governor of the Punjab, India, has died at Cannes, says the "Morning Post."

She ranked with the heroes of yellow fever and malaria because, just as they injected themselves with those "diseases," so she, as a nurse working at the American Hospital, Neuilly, Paris, in 1915, deliberately injected herself with the bacillus responsible for producing gas gangrene.

At the time she was working as a bacteriologist under Dr. Taylor, whose duty it was to investigate the causes of gas gangrene, which was resulting in numerous deaths and amputations. Doctor Taylor was experimenting with guinea pigs, but was unable to obtain results which would allow him to apply his conclusions to human beings.

"Last Experiments."

The crucial experiment of inoculating a human being with a pure culture of the bacillus was necessary, and this appeared to be impossible. Miss Davies, who had studied bacteriology at the Pasteur Institute, had seen about 200 fatal cases of gangrene, and had seen guinea pigs die, but also recover, under Dr. Taylor's experiments.

THE ANNIVERSARY

(By Olwen A. Joergens.)

I WOULD not question when you went away—

There is a right beyond our loves—
God knew;
And when hushed voices spoke of death,
I saw
Vision of life through you.

Now, when the spring and summer sweep along,
Proud with new days, I lift my head
and smile;
When noble deeds are talked of, and great love,
I close my eyes—and smile.

But at day's end, O Heart, when years roll by,
And still new lovers linger in our lane,
Oh, One out of the world, why was it you?
And there is pain, dumb pain.

Without revealing her intention, she took a room near the hospital, and one day Dr. Taylor received a note from her, asking him to come at once to make "last experiments."

He found that she had given herself two deep injections of the culture of the bacillus, in the muscles of each thigh, and had thus furnished him with a pure case of gas gangrene. Dr. Taylor at once injected the antidotal preparation of hydrochloride of quinine with which he had been working.

Risk of Death.

Miss Davies was removed to the American Hospital, and in 24 hours she was pronounced out of danger. By her self-sacrifice in taking the risk of a painful and lingering death she had proved the efficacy of the cure, and had thus saved thousands of lives. The treatment was subsequently used at the American Ambulance, but the modesty of Miss Davies prevented any honour accruing to herself.

The best memorial of her life, a relative writes, would be for a further investigation to be made in this respect.

Embrocation.

Take half a pint turpentine and two eggs, put all into large bottle, cork it, and shake till the mixture becomes a cream, then add gradually one pint of vinegar and bottle for use. This embrocation will keep for years, and is improved by the addition of a small lump of camphor.

Coming Fashions.

Fashions to-day are divided into three classes. There are day-time clothes for town, evening gowns, and sports clothes. One might think it would be difficult to confuse three such definite groups, but those who wear satin shoes on the street, high heels, with tailored suits, and silk stockings on the golf links, are so numerous that no census taken on taste could overlook them.

Ensembles will increase in number for sports, afternoon, and general wear, but this will not make for monotony, and frequently the coat will belong to the dress by virtue of the merest convention of a thread; also that uniformity will be dead, and women will dress according to their personalities, their activities, and the occasion controlled by the permanent limitations of good taste and the current limitations of the mode.

The Sports Mode.

The tailored top-coat for travel, town, or sports wear is straight and tight-fitting, belted or unbelted, and may be fur-trimmed or plain. It may be pleated or trimmed self tucks. Pockets are essential, and often belt arrangements are cut in one with pockets, panels, sides, or back.

Cardigans continue in favour, and are tight-fitting at the hips and buttoned fairly low. They are multi-coloured, checked, have horizontal stripes, and are of plain colours, finished silk bind.

Jumpers are interesting. They are woven, they are plain, or of fancy jersey, in one, two, or three colours. They are belted or unbelted, have square or round close-fitting fisherman necks, and with or without collars.

The Letters of Annabel Lee

My Dear Elisabeth,—

Wellington has greatly appreciated the presence of so many distinguished visitors who are attending the General Synod, this time assembled in the Capital City, three years ago at Dunedin, which sweet city of hospitality is spoken of by many in glowing terms. Great dignitaries foregather daily and hold commune on matters of import to the religious life. A strange and moving thing it was to hear the out-of-door service at Quinton's Corner on a recent evening; the Church of England is but rarely brought to our doors, so to speak, or preached to the man in the street. An experience that will live long in the memories of those privileged to see and to hear.

No more appropriate gift could be imagined than the bronze of great beauty which is to be presented by Lady Fergusson to the Otago Women's Club. From Italy comes that winged figure of rare loveliness, akin as it is in subtlety of appeal to the Victory of Samothrace—but complete, as the Samothrace is not—and instinct with rare, strange quality of gracious motion. An inspiration, this statue, typifying perfection of feminine grace and activity; and, seen from whatever angle, charms the eye and the taste of those who love beauty.

Intriguing, indeed, are the texture and glow of that ring velvet which, it is to be foreseen, will be a vogue in the coming season. Of this caressing silken stuff, greatly to be admired was a gown recently worn by a dainty dame in porcelain, whose clear and pale colouring was enhanced by the pearly grey-tint of that enviable garment, which obviously had been swished and draped by an expert. Framing a pair of blue eyes that rivalled those of Thomas Hardy's heroine was a swathed turban of the same kindly hue; while reptilian shoes and shoulder-knot of satin rose-

Silhouette.

The correct silhouette is made up of matching garments of two, three, or four pieces, forming an ensemble. Firstly, the three-piece tweed or suiting ensemble, consisting of coat, skirt, and woven jumper of various combinations of matching and contrasting materials and colours. Secondly, for wear under the topcoat, a two or three-piece woven suit, consisting of jumper and skirt, or for variety an extra garment in the form of a sleeveless cardigan. Diagonal and horizontal stripes are favoured, or the all self-colour woven garment neatly trimmed suede.

Skirts attain distinctiveness either by being finely and fully pleated or of frankly bold check or stripe pattern. They may be of suiting or heavy tweed, according to use.—Miss Sproston, 4YA, Dunedin.

"THE BETTER WAY"

A COMPETITION FOR HOME-MAKERS.

MONTHLY PRIZES.

All women whose homes are to them a source of abiding interest and delight, have their own treasured secrets of housekeeping: It may be an unusual recipe, a scheme for brightening an uninteresting room, a labour-saving notion, an idea for decorative work, a dress or toilet hint, or a pet economy. There is always a special method of performing various household tasks—the "better way."

"The Radio Record" offers a prize of half a guinea each month until further notice for "Better Ways" from our women readers. The right is reserved to publish any entry not awarded a prize on payment of a fee of 2/6.

Entries must be written in ink, on one side of the paper only, and the name and address of the competitor should be written on the back of each entry.

The May "Better Way" competition closes on May 11, and the result will be announced on the women's page on Friday, May 18. All entries to be addressed:

C/o "Radio Record,"
Box 1032, Wellington.

Country readers are advised to post their entries early to ensure their being in time.

TO-DAY AND TO-MORROW

Princess Arthur as Hospital Nurse.

Few people who know Princess Arthur of Connaught and the wonderful work she does for charities would believe that she could find time to go to a hospital in London every day she is in town, don nurse's uniform, and carry on the ordinary work of a nurse; but she does so, driving herself in a little blue two-seater car, morning after morning, long before many of her friends are astir.

The following incident is interesting: A well-known surgeon was driving to a house to perform an operation, when he came upon an accident.

The surgeon took the injured man to hospital, where he left him in the charge of one of the nurses.

On his way back he called to see how the man was.

"Who did this bar-lage?" he asked, and the nurse who was entrusted with this piece of work was pointed out to him.

"It is beautifully done," he said, and even then he did not recognise the nurse as Princess Arthur of Connaught.

Children's Community Singing.

The charms of community singing have spread, and at 3L.O the kiddies are to have their own community singing half-hour. For some weeks past songs, both words and music, have been taught over the air, and it is thought that the time is now ripe to gather them together and discover how much they have remembered. Apart from the "entertainment" side of the question, the community singing half-hours for the children will have an immense educational value, training the youthful memory and sense of rhythm, and cultivating a good ear for music.

Royal Visit to Trade Fair.

The King and Queen, accompanied by Princess Mary Viscountess Lascelles, spent a busy morning recently at the British Industries Fair at the White City.

They were greeted on arrival by Sir Philip Cunliffe-Lister (president of the Board of Trade) and Mr. Amery (Secretary for the Dominions).

The Royal party then separated, the Queen and Princess Mary making a shopping tour in one direction, while the King inspected other exhibits. They visited stall after stall, talking with the attendants, and displayed intimate knowledge of the great variety of manufactures.

The King and Wireless.

The King showed a surprising knowledge of wireless. At the stall of the Langham Radio Company His Majesty told one of the attendants that he found difficulty in cutting out London from his set at the Palace. His Majesty said that he could not get Paris or Germany on his set there, but added that there was no difficulty in getting foreign stations from Sandringham. He has an expert's knowledge of wireless, and knew all about the wavelengths and dial readings on his own set.

The Queen's Quaint Purchase.

The Queen showed herself a connoisseur of gems. One of her early visits was to the stall of the National Jewellery Association, where she examined a Chaldean necklace 4000 years old, such as might have been worn in the days of Abraham. Her criticism of some Australian emeralds shown her was that they were "not clear, but of quite good colour." She was attracted by an old Persian ring, which contained the tooth of a wild animal as its chief decoration, and had nothing but praise for a box cut from a single amethyst, inlaid with gold.

Many Purchases.

Her Majesty and Princess Mary made many purchases during the morning. The Queen retains her preference for blue. Shopping bags, shingle sets, note cases, rugs—a dozen novelties—all seemed to be in varying shades of blue. A nursery rug, with Little Bo Peep sitting upon it, is probably destined for Princess Elizabeth; and some tiny Royal proteges will have much pleasure from the "Ben Hur" chariot, with its galloping horses and little chariot-coers, which the Queen purchased from a stall run by disabled ex-soldiers.

THE CHARGE

(By Olwen A. Joergens.)

YOU left a rose with me, and I have laid it

As things without a price are laid away;

Alone my lips caress it, visions only
Lie on its leaves, and soft words when I pray.

You left a charge with me that I remember

When all forgot, and life itself rolls by.
You laid love's yolk upon me; God is witness

How I have clung to it—yet Love not I.

A woman with immeasurably loving,
I stretch my arms for you. The swift years flee.

Beloved, return to me with love untried

Or let me wait in faith eternally.

The "Nosey Parker" Stall.

One purchase the Queen carried away with her. At one point she found herself in front of the "Nosey Parker" stall. Here numerous grinning masks faced her, with bulbous balloon noses which swell and diminish as the wearer wishes. One nose swelled to Titanic proportions as the Queen approached; and she stopped. "These are very funny," she said. "I must have one." She purchased two, and carried them away.

Woman Militant.

Three hundred thousand fighting women, according to the Moscow correspondent of the "Chicago Tribune," are enrolled in the Soviet Red Army, the formation of which will be celebrated on February 26. They are chiefly concerned with the aviation and poison gas departments. One hundred thousand more are enrolled in the Red Cross. Despite their nominal status, they receive training in rifle practice, grenade throwing, and field telephone and telegraph work.

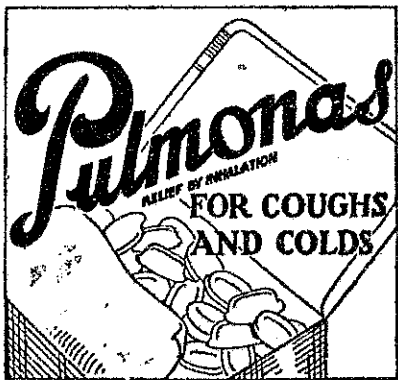
"Without making military training compulsory for women," says an appeal addressed to them, "it is necessary that all working women should work wholeheartedly to reduce military illiteracy."

Service for women, which was started by Captain Botchkareva, and her company of women volunteers known as the "Battalion of Death" against the Germans in 1917, has thus become an accepted fact on a large scale.

When Eggs are Scarce.

Soak some bread in boiling milk till spongy, beat smooth. Heat square inch of butter and small teacupful milk. Butter a fireproof dish, break in two eggs, whisk well, gradually adding two tablespoonfuls of the soaked bread, salt, pepper and mixed herbs to taste. Whisk thoroughly, add boiling milk and butter, and cook slowly till set, stirring frequently to break up lumps. It should rise to top of dish. This dish is beautifully light and is the size of four eggs scrambled in the usual way.

The "modern woman" is one who can hold safety-pins and a cigarette in her mouth at the same time.



Some Features of Next Week's Programmes

"ORPHEUS" & "BOBBIE" AT 1YA

"Orpheus," which has been described as a complete masterpiece and one of the most astonishing productions of the human mind, is the opera chosen by Madame Irene Ainsley for her weekly presentation at 1YA on Tuesday. This opera is by Gluck and was first produced in Vienna in 1782, where it was instantly acclaimed. The vocalists for the 1YA studio production will be Madame Irene Ainsley, Miss Beryl Evans, and Mrs. J. Parry. All the principal numbers of the piece will be sung. This production will occupy the whole of the second half of the programme.

Mr. A. B. Chappell will continue his talks on old New Zealand at 1YA on Tuesday.

Another lecture on physical culture will be given by Mr. Norman Kerr on Wednesday evening.

The weekly concert of the Auckland Municipal Band will be broadcast on Wednesday evening. There will be vocal items from the studio by the Hazell-Sutherland Duo.

A lot of entertainment is to be crammed into the two hours' concert session on Thursday evening. A wide variety of talent has been secured—Mr. Clinton Williams, Mr. George Barnes, and Miss Martha Williamson, Mr. T. T. Garland in humorous sketches, The Snappy Three in popular vocal items, the Sauts Three in instrumental pieces, Mr. Fred Barber in elocutionary items, and Ingalls' Hawaiian Band.

Another programme of a miscellaneous nature has been prepared for Friday evening. Besides an excellent musical programme, both vocal and instrumental, a one-act play, produced under the direction of Mr. J. F. Montague, will be broadcast.

Contributing to the concert programme will be the Madame Towsey Quartet (Madame Mary Towsey, Miss G. Evans, Mr. Reginald Newberry, and Mr. John Bree), whose items will include several popular songs. The Studio Trio and the Internationals will supply instrumental music, and in the latter case, vocal items as well.

The one-act play which Mr. Montague is producing on Friday evening is called "Bobbie." Also on the cast of characters will be Miss Irene Day, Miss Lynda Murphy, and Miss Phyllis Torpy.

The Lyric Quartet has a very bright programme for its share of the studio entertainment on Saturday evening. The items are both single and concerted. The humour from Mr. McElwain will be a feature. From the Bohemian Trio will come vocal and instrumental items, this time popular Maori melodies. There will be the usual session of dance music from Dixieland.

The service to be broadcast on Sunday will be from the Baptist Tabernacle, where the preacher will be the Rev. J. Kemp.

LIEDER EVENING AT 2YA

On Monday, April 30, a unique programme of vocal music will be presented at 2YA by the Aerial Singers, who will draw only upon acknowledged lieder writers for their items (Beethoven, Brahms, Greig, Schubert, Schumann, etc.). As this will be the first occasion in New Zealand on which such a radio programme has been heard, it should be eagerly looked forward to by those listeners in who love the works of the old masters. Apart from the composers mentioned above, songs by Hugo Wolf,

"Jane" on Thursday, May 3 from 2YA

IN pursuance of its forward policy, a feature of very great interest will be presented on Thursday, May 3, from 2YA, when a three-act farcical comedy will be given in its entirety. The play chosen for performance is one that is very well known, being one of the "clean and clever" type, namely, "Jane." The arrangements for the cast are in the hands of Mr. A. Stanley Warwick, who gave a most successful performance of this play last December in Palmerston North, and in Oamaru and Waimate in February. The plot deals with the financial embarrassments of a young spendthrift, Charles Shackleton, and the methods he adopts to overcome them.

These humorous situations lend themselves most aptly to radio work. During the entr'actes, suitable music will be broadcast. After the end of each act a short synopsis of that which has preceded will be given, to enable all those who might tune in late to understand the whole plot. Miss Violet Wilson will take the part of "Jane," Miss Keddel, "Mrs. Chadwick," Miss Mary Langdon, "Lucy Norton," Miss Grace Henderson, "Mrs. Pixton," Mr. Cedric Gardiner, "Mr. Kershaw," Mr. Peter Dorrian, "Charles Shackleton," Master Ian Watts, "Claude," Mr. Francis Hastings, "Mr. Pixton," and Mr. A. Stanley Warwick, "William," the valet.

This new feature should prove a great attraction and will be followed by a series of short plays on Monday evenings from this studio.



Mrs. Kenny's Mandolin Band, playing from 2YA.

—Vinsen, photo.

Robert Franz, Adolf Jensen, and Joachim Raff, will also be heard. Whilst refraining from dealing with the programme in detail, special attention is drawn to the Brahms Op. 52 "Liedeslieder" cycle with pianoforte duet accompaniment, two extracts from which cycle will be heard "on the air" in New Zealand for the first time, as, indeed, will many of the solo numbers to be rendered by the Aerial Singers on Monday. These performers are only too pleased, from time to time, to acknowledge criticisms, suggestions, or requests as to their work (postal address, care Radio Broadcasting Co., Ltd., Wellington).

Mayday is being celebrated by the Orpheus Quartet with the singing of "Wake with a Smile, O Month of May," from the "May Queen," by Sterndale Bennett, while Miss Lily Mackie and Mr. Len Barnes will sing the duet from "Merrie England"—"It is the Merry Month of May."

Other quartets are "A Song of the Sea" and the old English number "Golden Summers." Mr. Len Barnes will sing "At Night" (by Rachmaninoff), "My

Menagerie," by Fay Foster (a child's imagination of the animals to be seen in the clouds), and "Quand La Flamme," from "The Fair Maid of Perth," by Bizet. Mrs. Alice Harris will sing "Awake," Mr. Arthur Coe "Sometimes in My Dreams," and Miss Lily Mackie "Pool of Quietness" and "Morning Song."

Mr. Lad Haywood, and his Italian mandoline, Mr. George Hillwood and his cello, and the Studio Trio will supply the instrumental music on Tuesday.

Mr. Doug. Stark will dispense Scottish humour on Monday evening in "The Boss o' the Hoose," and will be heard in the monologue "I Forget," being the reminiscences of an old soldier. There will also be some humorous cross-talk with Mr. Len Barnes.

The Apollo Singers have arranged a full programme for the evening of Friday, the 4th instant. Two very delightful quartets are included "In This Hour," by Pansini, and, in response to many requests, "A Night of Love," in which these singers have been heard to advantage from 2YA before. Miss M. Goodwill has chosen a popular song, "Dream a Day Jill," while Miss H. Chudley will be heard in "Let Miss Lindy Pass," by L. Ronald and "Pachia Tree," two tuneful numbers. Mr. E. W. Robbins is scheduled for three vocal gems, "Love, Could I Only Tell Thee," "Because," and the ever-popular "Waiaata Poi." A beautiful Irish melody by Lambert, "She is Far From the Land," will be contributed by Mr. S. B. Rodger, and the same singer, with Mr. Robbins, will be heard in "The Two Beggars," a duet for tenor and baritone.

Those entertaining characters, the Two Boiled Owls, will give "More Hoots" and other items at 2YA on Friday.

A number of old favourites will be sung by the Melodie Four during the studio portion of the programme on Saturday evening. Banjo and trio items will supplement. Afterwards will follow a dance programme.

A programme of varied items will intersperse the Lieder evening. There will be saxophone, flute, and trio selections, with elocutionary contributions from Mr. Stanley Warwick. The next series of lectures to be given by the Rev. J. R. Blanchard will be "Watering the Australian Desert," to be given on Monday evening.

3YA ATTRACTIONS

Much is always expected of the Beckenham Male Quartet, and listeners are never disappointed. The Beckenham introduce a freshness, a homeliness, and an originality that never fail to take the popular fancy. Next Monday these singers along with the Christchurch Municipal Band, Mrs. Leslie Scrimshaw, and Mr. J. Darragh, will provide one of the most enjoyable concerts of the week. The band items will be bright and varied, as is usual.

Mrs. Leslie Scrimshaw, a well-known performer for 3YA, will be singing again on Monday. One of her items will be "Solweig's Song," from "Peer Gynt."

Elocutionary items by Mr. J. Darragh on Monday evening will include "Guy de Vere Attempts a Toast," and one entitled "When Tosti Raised his Bowler Hat," evidently having regard to his immortal "Goodbye."

Wednesday's concert at 3YA will be an Irish one, real Irish from beginning to end. Listeners will be taken all round the Emerald Isle in the course

of a descriptive dialogue, for this is another of the series of travelogues by Mr. A. G. Thompson's Dulcet Quartet. The vocalists will be Miss Nellie Lowe, Miss Mary Shaw, Mr. T. G. Rogers, and Mr. A. G. Thompson. Irish airs will be played by the Studio Trio, Mr. R. Ohlson (cornet), and by Mr. Ivan Perrin on the piano (the last-mentioned being, of course, this artist's clever extemporisations). Irish humour by Mr. H. Iustone will complete the Hibernian night's entertainment. A very attractive feature of the entertainment will be that every item (except probably the humorous portion) will be well known and loved by all.

A French entertainment will be provided by the Madame Gower-Burns Grand Opera Quartet on Thursday evening, when the works of well-known French composers will be broadcast. Among the songs to be sung will be selections from Cesar Franck, Massenet, Messager, Chaminade, and Godard. Some of these songs are well known, especially the charming works of Chaminade.

Augmenting the vocal programme on Thursday will be instrumental selections by the Studio Trio, Mr. W. Hay (flute), and Miss Aileen Warren (pianoforte), while elocutionary items will be given by Miss Maiona Juriss, all going to make an excellent French evening.

A programme of the delightful songs of Robert Franz will be presented on Friday evening by Miss Frances Hamerton's Melodious Four.

Next to Schubert, Robert Franz is undoubtedly the most original of German song writers. Unlike Schubert, he was a specialist, confining himself almost entirely to the field of art songs, of which he wrote two hundred and seventy-nine. These short songs represent, however, "multum in parvo." As he himself once remarked, they are "like a mirror reflecting the development of music from A to Z." By this simple strophic structure they remind one of the early folk song. Many of them are as stately and majestic as the Protestant chorals of the time from Luther to Bach. His songs are a happy blending of the romantic spirit and the classical style, of the modern declamatory style, and a genuine bel canto.

Supporting the Melodious Four in what will be a splendid programme, will be the Studio Trio, Miss Elaine Moody's Hawaiian Trio, Mr. George Beunet, and Mrs. Beryl Windsor.

Mrs. Beryl Windsor, who is to give elocutionary items on Friday evening at 3YA, comes from Ross, on the West Coast, where she takes a leading part in all entertainments. She was at one time resident on Christchurch, and was a pupil of Miss Lucy Cowan.

New artists will appear in Saturday's radio vaudeville, and will provide one of the brightest week-end concerts. A glance down the programme shows Rollicking Bobby, Mr. S. E. Munday (clarinet), Mr. A. E. Dowell (popular singer of popular songs), Mr. Verner Lawford (magic flute and phono fiddle solos), Miss Constance Flamank (a first-class contralto singer from Timaru), the Studio Trio, Misses Muriel Johns, and Edna Johnston, Theo and Francis Gunther (concertinas), and Mr. Hiram Dunford, in humorous recitations.

NOTES FROM 4YA

A talk on May Day will be given by Mrs. F. M. Primmer on Tuesday, May 1.

The Kaikorai Band, assisted by 4YA artists, will provide the entertainment at 4YA on Tuesday evening. It will

(Continued on Page 14.)



Clarton Quartet, now heard from 2YA.

—S. P. Andrew, photo.

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Full Programmes for Next

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NOTES AND COMMENTS

(By "Switch.")

A BRUSSELS scientist considers that migratory birds are guided by the same electro-magnetic waves as are employed for broadcasting. This suggests a reason why the start of the B.B.C. winter programmes coincides with the flight of the birds from that country.

AS soon as a joint has been soldered it should be wiped over with a clean duster in order to remove the liquified flux, which is otherwise liable to cause leakage.

FOUR violins, valued at £3000 each, were used recently in a musical art quartet, including Sascha Jacobsen, who broadcast from an American station. The violins are four Strads, purchased by Felix Warburg.

COMMUNICATION was established with fourteen amateur stations in six States from an aeroplane flying in Canada recently, as a result of tests planned by local radio experts. The greatest two-way distance covered was with two amateurs in Oakmont, Pa., 500 miles away. Communication was maintained for an hour and a half whilst the craft was in the air.

MR. LLOYD GEORGE and his daughter have given wireless sets to the North Wales Blind School at Rhyl, England.

The sound waves from a loudspeaker are not projected evenly. The higher notes go straight forward, while the lower notes tend to go off sideways, and even round towards the back of the instrument. This is referred to as "spilling." A good plan to eliminate this trouble is to place the speaker close to and facing away from a wall, so that some of those elusive low notes can be reflected again to the front.

A DEVICE that can be used as a fixed crystal, a transmitter microphone, an amplifier, a telephone, a stethoscope, a hand microphone, a phonograph amplifier, a Morse code practising device, a talking light, a submarine signal, a detector, a grid leak, loudspeaker transmission, and for hundreds of other useful and interesting experiments, is on sale in America priced at 4s. each. "Switch" has one of these little devices, which resembles a miniature carbon microphone.

AMATEURS who build their own cabinets will find that an excellent stain for oak can be made by mixing Japan black and turpentine in equal quantities. The liquid should be applied with a rag to the well sand-papered surface, and with two or three coats a rich brown coat will be obtained.

PERIODICALLY you should run a rag soaked in kerosene up and down your aerial in order to remove the soot and dust, which make for poor reception. Whilst on the job, don't forget the insulators, which also collect dirt. Contrary to general supposition, it is not advisable to solder leads to your aerial, for unless a good connection is made without the use of the solder, the resistance of the latter will cause very poor reception.

THE following Associated Press message was published in the United States dailies:—Algiers, March 17.—North Africa has caught the radio craze, and Arab chiefs are saying farewell to their steeds in exchange for the latest seven-tube sets guaranteed to get all Europe. Barcelona, Spain, is very loud in this part of the world, and Milan, Italy, also is clear. The most appreciated station, however, is London when American jazz is transmitted.

AMERICAN amateurs form district clubs and name them in various manners. A few of them are: "Browsville Racket Raisers," "I Tappa Key," "Busted Valve Club," etc. The "Rag Chewsers' Club" is also well known and a branch has been formed in Australia.

ABOUT 98 per cent. of the telegrams received in the United States from Sweden are being dispatched by radio. It is the policy of the Swedish Telegraph Board to use radio for the transmission of messages in all cases where there is no telephone or other cable directly available. The new Swedish Government radio station has provided increased speed and efficiency in transmitting messages and has made possible a reduction in rates, the United States Department of Commerce says.

A WELL-KNOWN valve firm, advertising in "The Wireless World" (a British periodical), claims that the filaments of their valves are strong enough to hang pictures on and are long enough to dry the week's washing.

DISTORTION due to high frequency currents getting in on the low frequency side of a receiver may be prevented by the insertion of a high resistance in series with the grids of audio frequency valves.

BUS-WIRE is easily soldered owing to the fact that it is already tinned.

Sunday, April 29

1YA AUCKLAND (333 METRES)—SUNDAY, APRIL 29.

- 3 p.m.: Afternoon session—Selected gramophone items.
4.0: Literary selection by the Announcer.
4.8: Further gramophone items.
4.30: Close down.
6.0: Children's service, conducted by Rev. L. B. Busfield.
6.55: Relay of evening service from St. David's Church. Preacher, Rev. D. C. Herron. Organist, Mr. E. C. Craston.
8.30: Relay of band recital by the Municipal Band, under the direction of Mr. Christopher Smith.
9.30: God Save the King.

2YA WELLINGTON (420 METRES)—SUNDAY, APRIL 29.

- 6 p.m.: Children's service, conducted by Uncle Ernest.
6.55: Relay of evening service from Taranaki Street Methodist Church. Preacher: Rev. Clarence Eaton. Organist and choirmaster, Mr. H. Temple White.
8.15: Relay of Port Nicholson Silver Band concert from the Grand Opera House, Wellington.

3YA CHRISTCHURCH (306 METRES)—SUNDAY, APRIL 29.

- 5.30 p.m.: Children's song service, by Uncle Sam.
7.0: Relay of evening service from Salvation Army Citadel, Victoria Square. Speaker, Ensign Allan Montgomery.
8.15: Rebroadcast of 2YA, Wellington (relay of Port Nicholson Band from Grand Opera House).

4YA DUNEDIN (463 METRES)—SUNDAY, APRIL 29.

- 5.30 p.m.: Children's song service.
6.30: Relay of service from the Methodist Central Mission. Preacher, Rev. W. Walker. Organist, Mr. Chas. A. Martin.
8.0: Band concert.
9.15: God Save the King.

Monday, April 30

1YA AUCKLAND (333 METRES)—MONDAY, APRIL 30.

SILENT DAY.

2YA WELLINGTON (420 METRES)—MONDAY, APRIL 30.

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
5.0: Close down.
6.0: Children's hour—Uncles Toby and Jeff, and Thorndon Normal School, Standard V. Two-part song, Norman School, "Shepherd's Evening Song" (Theman). Rounds, Thorndon Normal School, (a) "A Southerly Wind," (b) "Glide Along" (Theman). Sea chanties, (a) "Windlass Song" (Rowley), (b) "Rio Grande" (arr. Sharp). Recitation, cousin, "The Arrow and the Song" (Longfellow). Song, Norman School, "One Man Went to Mow" (Chambers). Recitation, cousin, "Block City" (Stevenson). Song with descant, Norman School, "Derry Vale" (Shaw). Birthday greetings and story.
7.0: News session, market reports, and sports results.
7.40: Lecture—Rev. J. R. Blanchard, B.A., "Watering an Australian Desert."
8.0: Chimes of the General Post Office clock, Wellington.

A LIEDER EVENING.

- 8.1: Overture—"Rosamund" (Schubert).
8.5: Mezzo-contralto solos—Miss Ngaire Coster, (a) "Lullaby" (Brahms); (b) "Hedge Roses" (Schubert).
8.10: Saxophone solos—Mr. A. H. Wright, "Melody in F" (Rubenstein); (b) "Traumerei" (Schumann).
8.15: Tenor solo—Mr. Roy Hill, "Adelaide" (Beethoven).
8.20: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement Trio in D Minor" (Schumann).
8.30: Bass solos—Mr. J. M. Caldwell, (a) "The Organ Grinder" (Schubert); (b) "I Will Not Grieve" (Schumann).
8.36: Flute solo—Mr. L. W. Rothwell, "Ave Maria" (Schubert-Liszt).
8.41: Vocal quartet, with piano duet accompaniment—The Ariel Singers, "Oh! Give An Answer, Maiden Fairest" from "Liebeslieder" (Brahms).
8.45: Violin and piano duet—Miss Ava Symons and Mr. Gordon Short, "First and Second Movements of Sonata for Violin and Piano" (Caesar Franck).
8.55: Soprano solo—Miss Jeanette Briggs, "Solweig's Song" (Grieg).
8.59: Elocution—Mr. Stanley Warwick, "My Motor-car" (Sellars).
9.4: Cornet solo—Mr. H. J. Dutton, "The Minstrel Boy" (Round).
9.9: Weather report and forecast.
9.10: Mezzo-contralto solo—Miss Ngaire Coster, (a) "I Love Thee" (Grieg); (b) "Secrecy" (Wolf).
9.16: Saxophone solo—Mr. A. H. Wright, "Valse Vanitie" (Wiedoeft).

- 9.21: Tenor solos—Mr. Roy Hill, (a) "The Wanderer's Song" (Schumann); (b) "More Sweet and Pure and Holy" (Schumann); (c) "Her Voice" (Schumann).
9.29: Instrumental trio—Symons-Ellwood-Short Trio, "Third and Fourth Movements" (Schubert).
9.39: Soprano solos—Miss Jeanette Briggs, (a) "Lay Thy Check Against Mine Own" (Jensen); (b) "How Still the Grove" (Franz); (c) "Love Finds Out the Way" (Raff).
9.48: Cornet solo—Mr. H. J. Dutton, "A Perfect Day" (Jacobs-Bond).
9.53: Elocution—Mr. Stanley Warwick, "Mr. Tigg meets Mr. Pinch" (Dickens).
9.58: Flute solo—Mr. L. W. Rothwell, "Serenade" (Schubert-Liszt).
10.3: Vocal quartet, with piano duet accompaniment—Ariel Singers, "How Soft, You Murmuring Stream" from "Liebeslieder" (Brahms).
God Save the King.

3YA CHRISTCHURCH (306 METRES)—MONDAY, APRIL 30.

- 3 p.m.: Afternoon concert session—Selected studio items.
4.25: Sports results.
6.0: Children's hour—Uncle Jack and Aunt Edna.
7.15: News session.
8.0: Chimes.
Relay of orchestral selections from Strand Picture Theatre Orchestra, under the direction of Mr. Harry Ellwood.
Studio concert by Christchurch Municipal Band, under the conductorship of Mr. A. J. Schnack, assisted by the Beckenham Male Quartet and Mr. Jack Darragh.
8.15: Male voice quartet—Beckenham Male Quartet, "Nursery Rhyme Medley" (Gracey).
8.19: March—The Band, "B.B." (Horne).
8.27: Tenor solo—Mr. E. R. Pitman, "The Rest of the Day's Your Own" (David and Long).
8.31: Selection—The Band, "Melodious Gems" (Rimmer).
8.43: Male voice quartet—Beckenham Male Quartet, "Lullaby" (Brahms).
8.47: Soprano solo—Mrs. Leslie Scrimshaw, "Golden Dancing Days" (Clarke).
8.51: Hymn—the Band, "Bradford" (Owen).
8.56: Humorous song—Mr. Jack Darragh, "When Tosti Raised His Bowler Hat."
9.0: Weather report and forecast.
9.1: Relay of orchestral selections from Strand Theatre.
9.10: Tenor and baritone duet—Messrs. E. R. Pitman and K. G. Archer, "The Skippers of St. Ives" (Roedel).
9.14: Selection—The Band, "Patience" (Champion).
9.24: Male voice quartet—Beckenham Male Quartet, "Old Farmer Buck" (arr. Williams).
9.28: Characteristic reverie—The Band, "Sliding Jim" (Losey).
9.36: Soprano solos—Mrs. Leslie Scrimshaw, (a) "Solweig's Song" (Grieg); (b) "Chanson de Florian" (Godard).
9.39: March—The Band, "Rauparaha" (Lyons).
9.44: Male voice quartet—Beckenham Male Quartet, "Amazon" (Etinge).
9.51: Humorous recitation—Mr. Jack Darragh, "Guy de Vere Attempts a Toast."
9.54: Humorous chorus—Beckenham Male Quartet, "Topical Chorus."
9.58: March—The Band, "The Voice of the Guns" (Alford).
God Save the King.

4YA DUNEDIN (463 METRES)—MONDAY, APRIL 30.

SILENT DAY.

Tuesday, May 1

1YA AUCKLAND (333 METRES)—TUESDAY, MAY 1.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.8: Further gramophone items.
4.30: Close down.
6.0: Children's hour—Uncle George, assisted by pupils of Miss Blamires. Pianoforte, Irene Graham, "In a Hanging Garden" (Allen). Recitation, Margaret Parsonson, "Dorothy's Tables." Pianoforte duet, Joyce Lee and Phyllis Hogan, "Valse Brillante" (Moskowski). Letters and birthdays. Song, Phyllis Hogan, selected. Recitation, Edna Rainey, "Our New Baby." Pianoforte, Athil Jonas, "Coronach" (Barrett). Bedtime stories.
7.15: News and market reports.
8.0: Chimes.
8.1: Relay of overture from Majestic New Orchestra, under Mr. Whiteford-Waugh.
8.5: Soprano solo—Mrs. J. Parry, "Waltz Song" from "Tom Jones" (German).
9.3: Baritone solo—Mr. Trevor Lewis, "I Pitch My Lonely Caravan" (Coates).
9.13: Contralto solo—Madame Irene Ainsley, "Il Segreto" from "Lucrezi Borgia" (Donizetti).
8.18: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio in C Minor, First Movement" (Mendelssohn).
8.27: Baritone solo—Mr. T. Lewis, "O, That We Two Were Maying" (Nevin).
8.31: Relay of entracte from Majestic New Orchestra, under Mr. Whiteford-Waugh.
8.39: Soprano solo—Miss Beryl Adams, "The Pipes of Pan" (Monckton).
8.43: Violin solo—Miss Ina Bosworth, "Variations" (Tartini-Kreisler).
8.48: Lecture—Mr. A. B. Chappell, M.A., "Talks on Old New Zealand: No. 7, The Cradle of Civilisation."
9.0: Weather report and forecast.
9.1: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Second Valse" (Godard).
2.11: A presentation of the principal numbers from "Orpheus," by Gluck, under the direction of Madame Irene Ainsley.
The part of Orpheus is sung wherever possible by a contralto—at its first presentation in London in 1860 the Ravogli Sisters were in the principal roles. It is considered one of the greatest masterpieces of the human mind. The story is based upon the Greek legend. Orpheus, son of Apollo, was celebrated for his beauty and his musical powers, and on the death of his beloved wife Euridice, he is visited by the God of Love, Amor, who, taking pity on the mourner, tells him he may descend into Hades and seek Euridice in Pluto's kingdom, but he must not look upon her until they have again reached the upper world. Orpheus gladly goes upon his quest—he wins his way through the nether world to the Valley of the Blest by the charm of his singing, and there he finds Euridice. She follows him through the Valley, but grows sad at his seeming indifference, for, true to his promise, he has never looked upon her face. Almost in sight of the upper world her supplications weaken his resolve, and in defiance of the Gods he turns and gazes upon her. She sinks lifeless to the ground, and Orpheus is about to kill himself in despair, when the God of Love, Amor, returns, and, moved by his renewed sufferings, not only restores Euridice to life, but immortalises him.

Cast:

Orpheus (contralto)—Madame Irene Ainsley.
Amor (soprano)—Miss Beryl Evans.



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Week - All Stations - to May 6

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Euridice (soprano)—Mrs. J. Parry.

Chorus—"If Here, Where All Is Dark."
Contralto aria—"Weeping Sorely I Stray."
Soprano aria—"The Gods If They Call Thee."
Contralto aria—"Away With Morning."
Chorus—"Who Is This Mournful One?"
Contralto solo and chorus—"O, Be Merciful to Me."
Chorus—"His Moving Elegies."
Soprano air and chorus—"On These Meadows."
Recitation—"How Pure a Light."
Chorus—"From the Realm of Souls Departed."
Duet—"Come, On My Trueness Relying."
Contralto aria—"Che Faro."
Trio—"Sweet Affection."
Chorus and finale—"The God of Love."

2YA WELLINGTON (420 METRES)—TUESDAY, MAY 1.

3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
5.0: Close down.
6.0: Children's hour.
7.0: News session, market reports, and sports results.
7.40: Lecturette—Representative, Agricultural Department, "For the Man on the Land."
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—The Orchestra, "Poet and Peasant" (Suppe).
8.11: Quartet—The Orpheus Quartet, "Wake With a Smile, O Month of May" (Bennett).
8.15: Italian mandolin—Mr. Lad Haywood, (a) "Wildflower" (Youmans); (b) "Bambalina" (Youmans).
8.22: Contralto solo—Miss Lily Mackie, "Morning Song" (Segal).
8.26: Selections—The Orchestra, (a) "The Answer" (Wolstenholme, arr. Bellingham); (b) "Romanza Andaluza" (Sarasate), (soloist, Miss Ava Symons); (c) "Toreador's Song" (Bizet), (soloist, Mr. S. J. Forrest).
8.37: Tenor solo—Mr. Arthur Coe, "A Sprig of Rosemary" from "A Princess of Kensington" (German).
8.41: Humour—Mr. Doug. Stark, "The Boss o' the Hoose" (Lauder).
8.47: Selection—The Orchestra, "Peer Gynt" (Greig).
8.57: Duet—Miss Lily Mackie and Mr. Len. Barnes, "It Is the Merry Month of May" (German).
9.1: Weather report.
9.3: Quartet—The Orpheus Quartet, "Golden Slumbers" (Old English).
9.7: Italian mandolin—Mr. Lad Haywood, (a) "When Day is Done" (Katscher); (b) "Russian Lullaby" (Berlin).
9.13: Baritone solos—Mr. Len. Barnes, (a) "At Night" (Rachmaninoff); (b) "My Menagerie" (Foster); (c) "Quand la flamme de l'amour" (Bizet).
9.22: Two songs—The Orchestra, (a) "At Evening" (soloist, H. Berry), (Debussy); (b) "La Paloma" (Yradier).
9.30: Humour—Mr. Doug. Stark, "I Forget" (Lee).
9.35: Soprano—Mrs. Alice Harris, "Awake" (Palissier).
9.39: Quartet—The Orpheus Quartet, "Tell Me, Pretty Maiden" from "Flora-dora" (Stuart).
9.43: The Orchestra—Latest fox-trot and waltz novelties.
9.52: Sketch—Messrs. Doug. Stark and Len. Barnes, "Fragments" (original).
9.56: Quartet—The Orpheus Quartet, "Ciribiribin" (Pestolozza).
10.0: The Orchestra, "Slavonic Rhapsody" (Friedman).

3YA CHRISTCHURCH (306 METRES)—TUESDAY, MAY 1.

SILENT DAY.

4YA DUNEDIN (463 METRES)—TUESDAY, MAY 1.

3 p.m.: Town Hall chimes.
3.1: His Master's Voice recital.
3.30: Social notes.
3.40: Lecturette by G. J. Butcher, of Turnbull and Jones, Ltd., "Domestic Uses of Electricity."
4.15: His Master's Voice recital.
4.30: Close down.
6.0: Town Hall chimes.
6.1: Children's hour—Big Brother Bill.
7.15: News session.
7.30: A health talk, by Mr. C. W. Postgate, director of physical culture to Y.M.C.A.
8.0: Town Hall chimes. Concert by the Kaikorai Band, under the conductorship of Mr. E. Franklin, and items by assisting artists.
8.1: March—Kaikorai Band, "Somme" (Hopkinson).
8.5: Tenor solos—Mr. Chas. Edwards, (a) "Siciliana" from "Cavalleira Rusticana" (Mascagni); (b) "Lolita" (Buzzi-Peccia).
8.12: Selection—Kaikorai Band, "Unfinished Symphony" (Schubert).
8.22: Humorous monologue—Miss Madge Yates, "Girls" (Turner).
8.27: Vocal duet—Messrs. Chas. Edwards and R. B. Macdonald, "In This Solemn Hour" (Verdi).
8.31: Cornet solo—Kaikorai Band, "Australis" (Lithgow).
8.38: Contralto solo—Miss Winnie McPeak, "Farewell to Summer" (Johnston).
8.42: Waltz—Kaikorai Band, "Donau Wellen" (Strauss).
8.57: Bass solos—Mr. E. G. Bond, (a) "Philosophy" (O'Connell); (b) "Devonshire Cream and Cider" (Sanderson).
9.4: Fox-trots—Kaikorai Band, selected.
9.10: Baritone solo—Mr. R. B. Macdonald, "Brian of Glenaar" (Graham).
9.15: Address—"A May Day Talk," by Mrs. M. F. Primmer.
9.30: Tenor solo—Mr. Chas. Edwards, "On With the Motley" from "Pagliacci" (Leoncavallo).
9.33: Selection—Kaikorai Band, "Rose Marie" (Friml).
9.48: Recitations—Miss Madge Yates, (a) "The Old Woman of the Roads" (Cohan); (b) "Minora Sidera" (Newbolt).
9.56: Bass solo—Mr. E. G. Bond, "Song of the Wagoner" (Breville-Smith).
9.59: Contralto solos—Miss Winnie McPeak, (a) "The Sands of Dee" (Clay); (b) "I Know Where I'm Going" (Hughes).
10.4: March—Kaikorai Band, "Hawke's Bay" (Hopkinson).
10.8: Baritone solo—Mr. R. B. Macdonald, "Hybrias the Cretan" (Elliott).
10.12: God Save the King.
10.14: Close down.

Wednesday, May 2

1YA AUCKLAND (333 METRES)—WEDNESDAY, MAY 2.

3 p.m.: Afternoon session—Selected gramophone items.
4.0: Literary selection by the Announcer.
4.8: Further selected gramophone items.
4.30: Close down.
6.0: Children's hour—Uncle Tom. Opening chorus, Uncle Tom. Story for tiny tots. Song, Valerie Smith, "Lullaby Land." Letters and Birthdays. Recitation, Frank Wilkin, "How Jimmy Minded the Baby." Humorous sketch, Uncle Tom, "The Auctioneer." Closing chorus.
Mr. Pixton (Mrs. Pixton's husband)—
Mr. Francis Hastings.
Claude (a page boy)—Master Ian Watts.
William (Shackleton's man)—Mr. A. Stanley Warwick.
Scene: Shackleton's room.
Act I—Morning.
Act II—Lunch time.
Act III—Evening.
8.5: "Jane"—Act I.
8.45: Entr'acte—"Merry Widow Waltz" (Lehar).
8.50: "Jane"—Act II.
9.20: Entr'acte—"Luxembourg Waltz" (Lehar).
9.25: "Jane"—Act III.
9.50: Weather report and forecast.
9.51: Studio items.
10.0: Close down.

3YA CHRISTCHURCH (306 METRES)—THURSDAY, MAY 3.

3 p.m.: Afternoon concert session—Selected studio items.
4.25: Sports results.

7.15: News and reports.
7.45: Lecturette—Mr. Norman Kerr, "Physical Culture."
8.0: Chimes.
8.1: Relay of concert programme by Auckland Municipal Band, under Mr. Christopher Smith, assisted by the Hazell-Sutherland Duo, who will perform the following items from the studio:—
9.35: Contralto solos—Miss Phyllis Hazell, (a) "Pleading" (Anderson); (b) "Over the Steppe" (Gretchaninoff).
Baritone solos—Mr. Frank Sutherland, (a) "The Mighty Deep" (Jude); (b) "The Cobbler's Song" from "Chu Chin Chow" (Norton).
Duets—The Hazell-Sutherland Duo, (a) "A Night in Venice" (Lucan-toni); (b) "Sympathy" (Strauss).
10.0: God Save the King.

2YA WELLINGTON (420 METRES)—WEDNESDAY, MAY 2.

SILENT DAY.

3YA CHRISTCHURCH (306 METRES)—WEDNESDAY, MAY 2.

3 p.m.: Afternoon concert session—Selected studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's hour—Uncle Peter and Mother Hubbard. Bedtime stories, songs, and choruses.
7.15: Addington stock market reports.
7.30: News session.
8.0: Chimes and overture.
8.5: Tenor solo—Mr. T. G. Rogers, "The Harp that Once Thro' Tara's Halls" (arr. Rimbault).
8.9: "Cello solo—Mr. Harold Beck, "The Coolin" (Holbrooke).
8.13: Contralto solo—Miss Nellie Lowe, "The Meeting of the Waters" (arr. Rimbault).
8.17: Instrumental trios—Christchurch Broadcasting Trio, (a) "The Last Rose of Summer"; (b) "Irish Jig" (Holbrooke).
8.24: Baritone solos—Mr. A. G. Thompson, (a) "Away in Athlone" (Lohr); (b) "Little Irish Girl" (Lohr).
8.32: Cornet solo—Mr. R. Ohlson, "Come Back to Erin" (Claribel).
8.38: Soprano solos—Miss Mary Shaw, (a) "Killarney" (Balfe); (b) "Kate Kearney" (Lee).
8.46: Piano novelties—Mr. Ivan Perrin, "Irish Melody Extemporisations."
8.50: Irish humour—Mr. H. Instone, "Dooley and His Tall Silk Hat" (Green).
8.58: Weather report.
9.0: Overture.
9.5: Contralto solo—Miss Nellie Lowe, "Silent O'Moyle" (Stanford).
9.9: Vocal quartet—The Dulcet Quartet, "Oft in the Stilly Night" (Stanford).
9.13: "Cello solo—Mr. Harold Beck, "Sunset" (Turtis).
9.17: Tenor solo—Mr. T. G. Rogers, "Mother Machree" (Olcott).
9.21: Cornet solo—Mr. R. Ohlson, "Mother's Heart" (Hock).
9.25: Baritone solo—Mr. A. G. Thompson, "Father O'Flynn" (Stanford).
9.29: Piano novelties—Mr. Ivan Perrin, "Irish Melody Extemporisations."
9.35: Contralto solo—Miss Nellie Lowe, "Danny Boy" (Weatherley).
9.39: Instrumental trios—Christchurch Broadcasting Trio, (a) "Farewell to Cucullain" (Fischer); (b) "Eileen Aroon."
9.47: Tenor solo—Mr. T. G. Rogers, "Green Vales of Antrim" (Langdale).
9.51: Humorous recitation—Mr. H. Instone, "The Irish Fire Brigade" (Hickory Wood).
9.56: Soprano solo—Miss Mary Shaw, "O, Bay of Dublin" (Stanford).
10.0: God Save the King.

4YA DUNEDIN (463 METRES)—WEDNESDAY, MAY 2.

SILENT DAY.

Thursday May 3

1YA AUCKLAND (333 METRES)—THURSDAY, MAY 3.

3 p.m.: Afternoon session—Selected gramophone items.
3.45: Lecturette by representative of Auckland Gas Company, "Gas Cooking."
4.0: Literary selection by the Announcer.
4.8: Further gramophone items.
4.30: Close down.
6.0: Children's hour—Peter Pan, assisted by Bayfield School Choir, Bayfield girls, "Shepherd's Song" (Framzabt). Song, Jean Scott, "Five Little Piccaninnies" (Anthony). Recitation, Shirley Hayson, "A Little Mistake." Letters and birthdays. Choir, Bayfield boys, "The Boat Song" (Steel). Song, Jean Scott, "The Swallows" (Cowan). Choir, Combined Choir, "Where the Bee Sucks" (Arne). Story-time.
7.15: News and reports, book review.
8.0: Chimes.
8.1: Overture—"La Roi L'A Dit" (Delibes).
8.9: Baritone solo—Mr. Clinton Williams, "Her Rose" (Speaks).
8.13: Humorous sketch—Mr. T. T. Garland, "Grand Opera" (Spurr).
8.18: Soprano solo—Miss Dorothy Yould, "Because" (d'Hardelot).
8.22: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio No. 4—Finale" (Mozart).
8.32: Tenor solo—Mr. Geo. Barnes, "A Dream" (Bartlett).
8.36: Lecturette—Mr. Fred. Barker, "A Wayside Philosopher to His Friend—(4) How to Attract Money."
8.46: Vocal trios—The Snappy Three, (a) "Once in a Blue Moon" (Land); (b) "Diane" (Rapee).
8.54: Instrumental—Ingall's Hawaiians, (a) "Invercargill March" (Lithgow); (b) "Tell Me" (traditional).
9.3: Weather report and forecast.
9.4: Contralto solo—Miss Martha Williamson, "In the Silence" (Loughborough).
9.8: Relay of entr'acte from Strand Theatre Orchestra, under the conductorship of Eve Bentley.
9.13: Baritone solo—Mr. Clinton Williams, "The Sweeper" (Elgar).
9.17: Humorous sketch—Mr. T. T. Garland, "My Museum."
9.20: Soprano solo—Miss Dorothy Yould, "Thank God for a Garden" (Del Riego).
9.25: Pianoforte solo—Mr. Cyril Towsey, "Study" (Chopin).
9.29: Tenor solo—Mr. Geo. Barnes, "I Know a Lovely Garden" (d'Hardelot).
9.33: Recitation—Mr. F. Barker, "Snorkins."
9.37: Vocal trios—The Snappy Three, (a) "Me and My Shadow" (Jolson); (b) "Jazz Piano Solo"; (c) "High, High Up in the Hills" (Abrahams).
9.45: Instrumental—Ingall's Hawaiians, (a) "Honolulu Bay"; (b) "Oh, Dem Golden Slippers"; (c) "Smiles, Then Kisses" (Ancliffe).
9.53: Contralto solo—Miss Martha Williamson, "You in a Gondola" (Clarke).
9.57: Instrumental trio—Bosworth-Hemus-Towsey Trio, selection from "Il Trovatore" (Verdi).
10.7: Vocal quartet—Mr. Barry Coney's Quartet, "The Sands of Dee" (Clay).
10.11: God Save the King.

2YA WELLINGTON (420 METRES)—THURSDAY, MAY 3.

3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
5.0: Close down.
6.0: Children's hour—Uncle Sandy and pupils of Rongatai College. Choruses, duets, stories, and birthday rhymes.
7.0: News session, market reports, and sports results.
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—"Caliph of Baghdad" (Boieldieu).

THREE-ACT COMEDY, "JANE."

A special radio presentation of the three-act farcical comedy, "Jane," by H. Nicholls and W. Lestock, under the direction of Mr. A. Stanley Warwick.

Cast:

Jane—Miss Violet Wilson.
Charles Shackleton (a spendthrift)—Mr. Peter Dorrian.
Mr. Kershaw (his trustee)—Mr. Cedric Gardner.
Lucy Norton (Charles's fiancée)—Miss Mary Langden.
Mrs. Chadwick (Lucy's aunt)—Miss K. Keddel.
Mrs. Pixton (Jane's cousin)—Miss Grace Henderson.

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THAT the radio habits of the average set owner have changed completely since the introduction of radio to America, and that buyers of radio sets are demanding the same mechanical perfection that they seek in an automobile, is the contention of a leading San Francisco radio trader. He declares that the type of chassis of any radio forms the one certain means by which the buyer can determine the tonal quality of the set.

AFTER they have been cleaned with household ammonia a-rumulator terminals should be smeared with vaseline in order to keep them from corroding.

ONE terminal of the storage battery is either painted red, or has the plus sign (a cross) stamped in one terminal, and the minus sign (a dash) in the other. The binding posts on the receiver show "A plus" and "A minus" respectively, so that no one should go wrong in making the proper connections.

DO not think that because the lead-in is covered with an insulating material it can be permitted to touch the edge of the roof. When wet, it is likely to prove a good conductor. The reason is that the total resistance natural to the receiver is greater than that of the air gap between the lead-in and the roof, and electricity follows the line of least resistance. Besides rain running down a lead-in goes along the outside of the insulated wire, and provides an electrical path to earth where the lead-in touches the roof, side of the house, or window-sill.

SELDOM do any two receivers perform exactly alike, although the difference cannot be detected by the untrained user. Very often a receiver of three or four valves will do better in one locality than will a super-heterodyne of eight in another.

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Programmes Continued

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- 4.30: Close down.
6.0: Children's hour—Chuckie and Aunt Pat. Stories and songs. Scholars from Marist Brothers' School will also assist.
7.15: News session.
7.30: Talk by Colonel Colquhoun, under the auspices of the Canterbury Progress League, "The Growth of Local Manufacture."
8.0: Chimes and overture.
8.5: Soprano and contralto duet—Madame Gower-Burns and Mrs. Ann Harper, "The Wind and the Rose" (Cesar Franck).
8.9: Flute solo—Mr. W. Hay, "Recitative and Air" (Macfarren).
8.14: Tenor solo—Mr. Harold Prescott, "Elegie" with violin obbligato (Massenet).
8.18: Pianoforte solo—Miss Aileen Warren, "Venetienne, Fourth Barcarolle" (Godard).
8.23: Soprano solo—Madame Gower-Burns, "L'Ete" (Chaminade).
8.27: Instrumental trio—Christchurch Broadcasting Trio, "Presto from a Minor Trio" (Lalo).
8.39: Baritone solo—Mr. Bernard Rennell, "Red Rose" from "Monsieur Beaucaire" (Messager).
8.42: Contralto solos—Mrs. Ann Harper, (a) "If Song to Thee" (Godard); (b) "The Silver Ring" (Chaminade).
8.49: Recitation—Miss Maiona Juriss, "In the Days of La Fayette" (Marlin).
8.55: Tenor and baritone duet—Messrs. Harold Prescott and Bernard Rennell, "On Silver Wave" (Chaminade).
8.59: Weather report and forecast.
9.0: Overture.
9.5: Soprano solos—Madame Gower-Burns, (a) "Awake Not Yet" (Godard); (b) "Chanson de Florian" (Godard).
9.12: Flute solo—Mr. W. Hay, "Ascanio" (Air de Ballet), (Saint Saens).
9.17: Tenor solo—Mr. Harold Prescott, "Ritournelle" (Chaminade).
9.21: Pianoforte solo—Miss Aileen Warren, "First Mazurka" (Saint Saens).
9.26: Contralto solo—Mrs. Ann Harper, "Serenade" (Gounod).
9.31: Instrumental trios—Christchurch Broadcasting Trio, (a) "Reverie" (Saint Saens); (b) "La Coquette."
9.42: Baritone solo—Mr. Bernard Rennell, selected.
9.46: Recitation—Miss Maiona Juriss, "The French Peasant."
9.52: Vocal quartet—Madame Gower-Burns, Mrs. Ann Harper, Messrs. Harold Prescott and Bernard Rennell, "La Marsaillaise."
God Save the King.

4YA DUNEDIN (463 METRES)—THURSDAY, MAY 3.

- 11.30 a.m.: Relay of Forbury Park trotting meeting (subject to permission being granted).
7 p.m.: Town Hall chimes.
7.1: Request gramophone concert.
7.40: News session.
8.0: Town Hall chimes.
8.1: Light orchestral music from the Octagon Theatre.
8.10: Humorous song—Mr. Billy Gay, "I Never See Maggie Alone" (Lynton).
8.14: Banjo solos—Mr. Jack McNeil, (a) "Hello, Cutie" (Friend); (b) "B. & D. Super March" (Morris).
8.21: Humorous sketch—The Two Blue Ducks, "Current Events in 1950—First Part."
8.30: Light vocal solo—Miss Roma Buss, "Rackety Coo" from "Katinka" (Prini).
8.34: Saxophone solo—Mr. J. McCaw, "Valse Vanity" (Wiedoeft).
8.38: Orchestral interlude from Octagon Theatre.
8.48: Light baritone solos—Mr. Percy James, (a) "After Dark" (Johnston); (b) "Precious" (Whiting).
8.55: Humorous sketch—Miss Billie Lorraine and Mr. Percy James.
9.5: Banjo solo—Mr. Jack McNeil, "When You and I Were Young, Maggie" (Butterfield).
9.8: Light soprano solos—Miss Billie Lorraine, (a) "I've Got the Boy"; (b) "You've Gotta Know How" (Donaldson).
9.15: Humorous address—Pastor W. D. More.
9.30: Saxophone solos—Mr. J. McCaw, (a) "O Sole Mio" (Di Capua); (b) "Ricketty Raffle" (Barroll).
9.37: Light vocal solos—Mr. Billy Gay, (a) "Hello, Swanee, Hello" (Britt); (b) "When the Love Bird Leaves its Nest" (Wade).
9.43: Humorous sketch—Two Blue Ducks, "Current Events in 1950—Part Two."
9.48: Light vocal solos—Miss Roma Buss, (a) "Dancing Time" from "The Cabaret Girl" (Kein); (b) "Memory Lane" from "Betty" (Conrad).
9.54: Orchestral selections from Octagon Theatre.
10.0: Close down.

Friday, May 4

1YA AUCKLAND (323 METRES)—FRIDAY, MAY 4.

- 3 p.m.: Afternoon session—Selected gramophone items.
4.0: Literary selection by the Announcer.
4.8: Further gramophone items.
4.30: Close down.
6.0: Children's hour—Nod. Pianoforte, Ivy Perry, "Waltz" (Chopin). Trio, three girls, "Smilin' Through." Sketch, Nod, "Three Trees." Letters and birthdays. Pianoforte, Ivy Perry, "Tarantella" (Kellar). Song, Cinderella, "Little Yaller Dog" (Gallatly). Trio, three girls, "My Blue Heaven." Bedtime stories.
7.15: Talk by Mr. Geo. Campbell on "Motoring."
7.30: News and reports.
8.0: Chimes.
8.1: Relay of overture from Rialto Theatre Orchestra, under Mr. Henry Engel.
8.11: Vocal quartet—Madame Mary Towsey's Quartet, "The Rosary" (Nevin).
8.16: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Trio, First Movement" (Chopin).
8.26: Baritone solo—Mr. John Bree, "Song of the Bell" (Oliver).
8.30: Vocal and instrumental—The Internationals, (a) "Broken-hearted" (De Silva); (b) "Saxophone Solo—Valse Erica" (Weidoff).
8.39: Soprano solo—Madame Mary Towsey, "O. Mio Fernando" (Donizetti).

ONE-ACT PLAY, "BOBBIE."

- 8.44: Play commences.
Cast:
Agnes Brompton—Miss Irene Day.
Roberta (Bobbie)—Miss Lynda Murphy.

MUCH emphasis has been placed by loudspeaker manufacturers upon widening the range of frequencies or musical notes, which a loudspeaker is able to reproduce. This has been one of the great problems of loudspeaker design. Quite closely tied up with this endeavour has been the desire for the loudspeaker to reproduce signals of greater volume than ever before, due to the use of power tubes and high plate voltages in the last audio stages.

AS an analogy to what takes place at a broadcast station, one can visualise pumping gas into a large tank. When the tank is filled, there will be back pressure if the force of the pump is not greater. The tank must explode or leak fast enough to take care of the increased pressure. That is exactly the case with radio, broadcasting, except that the generators pump electricity into the aerial, the voice vibrations being superimposed on the carrier voltage. When the aerial is filled, it discharges into the air. The frequency of these discharges determines the wave-length of the station—that is, the kilocycles per second. Wave-lengths are measured from the peak of one wave to the peak of the succeeding one.

DO not make the mistake of attaching an earth wire to a gas pipe. That is a violation of insurance and fire laws, and voids a fire insurance policy. The cold water pipe furnishes the best earth, and the set should be so placed as to furnish the most direct line to the pipe. Hot water or steam radiators often make good earths, also. Never connect any radio wires to an electric radiator.

THERE are now nearly 140,000 wireless receiving licenses in the State of Victoria. This is more than the total number of licenses issued in all the Australian States together.

THE United States Government Radio Commission recently announced: "Although the commission has received many complaints of interference caused by stations wandering from their assigned channels, it has been disposed to treat the offenders with leniency, because of the mechanical difficulty of maintaining frequency. With the recent development of devices for transmitter control, and the increased necessity of maximum utilisation of the available wave-lengths, a more drastic policy will be adopted."

FOLLOWING is the record of Mr. W. Robinson, a Wellington listener, residing in the hilly suburb of Brooklyn: New Zealand: 1YA, 1ZB, 2YA, 3YA, 3ZC, 4YA, and 2ZB. Australia: 2BL, 2FC, 2GB, 2TR, 2KY, 2UW, 3LO, 3AR, 3UZ, 3BE, 3BY, 3OG, 5CL, 5DN, 5KA, 7ZL, and 7HL. U.S.A.: KPN, KGO, KFTD, KYA, KMT, KPO, Japan: JOAK. Philippines: KZRM. India: 7CA. He uses a six-valve (8-volt valves) imported receiving set.

SEE to it that the lead-in from the aerial does not rest on or run closely parallel to a copper roof or any other metal; that it is not shielded by structural steel, or that the aerial is not close to or parallel to overhead tramway wires, or high-tension (high-voltage) lines. These have absorption characteristics, and will not permit one's receiver to get enough energy to operate. They will be a source of considerable noise, too.

BATTERIES (or high-tension) are usually composed of from two or four units of 45 volts each. When the plus of each is connected to the minus of the next unit, the voltages increase in proportion to the voltage of each unit added.

A BROADCAST listener in Shanghai writes to the New York "Radio News":—"At present, there are four broadcast stations in this city, which regale the radio audience with regular 'programmes.' All of them are super-powerful, namely, one one-quarter kilowatt, two one-twentieth kilowatts, and one two-hundredth kilowatt. The two intermediates have such a perfect system of high-tension supply, and such delicate provisions for adjustment of wave-length, that they give a beautiful mixture of nerve-racking noises, and merrily overlap a score of metres on either side of their channel. While it may be an easy matter for an American BCL to tune out a wee local station of, say, ten to twenty kilowatts' power, and bring in DX, having a difference in wave-length of ten to fifteen metres, it is practically impossible for a Shanghai fan to get over these giants and pull in a DX station twenty or more metres above or below the scale."

TAKING care of a radio receiver is much the same as anything else. One does not go around with the works of his watch exposed. We get enough dust inside with the case tightly closed. Dust in a set decreases its efficiency by gathering on the plates of condensers, varying its capacity. Moisture lowers the efficiency of the set. Always keep your set closed.

THE storage battery is the source of supply for lighting valve filaments, and supplies of six volts—more than enough to light standard 5-volt valves. That is why a variable resistance or rheostats are put on the receiver. Of course, this is not true in receivers which use the new A.C. valves. In this case, transformers have been designed to deliver the proper voltage, and do not need controlling apparatus.

George Phillips—Mr. J. F. Montague.
Grace—Miss Phyllis Torpy.

- 9.3: Weather report and forecast.
9.4: Relay of contr'acte from Rialto Theatre Orchestra, under the direction of Mr. H. Engel.
9.9: Tenor solo—Mr. Reginald Newberry, "Rosebud" (Drummond).
9.13: Cello solo—Miss Lalla Hemus, "Romance" (Gottnerman).
9.17: Contralto solo—Miss Gwyneth Evans, "I Wonder If Love Is a Dream" (Forster).
9.21: Instrumental trio—Bosworth-Hemus-Towsey Trio, "Military March" (Schubert).
9.31: Baritone solo—Mr. John Bree, "The Ringers" (Lohr).
9.35: Recitation—Miss Lynda Murphy, "Slow, Ain't It?"
9.39: Soprano solo—Madame Mary Towsey, "When the Dew Is Falling" (McMurragh).
9.43: Vocal and instrumental—The Internationals, (a) "Charmaine" (Rapee); (b) "Maori Medley"; (c) "Me and My Shadow" (Jolson).
9.52: Contralto solo—Miss G. Evans, "Only the River Running By" (Hopkins).
9.56: Vocal quartet—Madame Mary Towsey's Quartet, "O, Hush, Thee, My Baby" (Sullivan).
10.0: God Save the King.

2YA WELLINGTON (420 METRES)—FRIDAY, MAY 4.

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
3.1: Selected gramophone items.
3.30: Lecturette—Miss Marion Christian, "Gas Cooking."
3.45: Selected gramophone items.
5.0: Close down.
6.0: Children's hour.
7.0: News session, market reports, and sports results.
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—The Orchestra, "Raymond" (Thomas).
8.11: Quartet—Apollo Singers, "In This Hour" (Pinsuti).
8.15: Tenor solo—Mr. E. W. Robbins, "Love, Could I Only Tell Thee" (Capel).
8.19: Humour—Two Boiled Owls, "More Hoots" (original).
8.25: The Orchestra, (a) "Minuet" (Beethoven); (b) "Valse Blue Danube" (Strauss).
8.32: Contralto solos—Miss Hilda Chadley, (a) "Let Miss Lindy Pass"; (b) "Fuchs's Tree" (Ronald).
8.39: Duet—Mr. E. W. Robbins and Mr. S. E. Rodger, "The Two Beggars" (Lane Wilson).
8.43: Soprano solo—Miss Moana Goodwill, "Dream o' Day Jill" (German).
8.47: The Orchestra—"Ballet Egyptian" (Lutini).
9.0: Weather report.
9.2: Lecturette—Editor-Announcer, "Imperial Affairs."
9.17: The Orchestra, selections from "Rose Marie" (Prini-Stolhart).
9.25: Baritone solo—Mr. S. E. Rodger, "She is Far from the Land" (Lambert).
9.29: Humour—The Two Boiled Owls, "Cheerie, Beerie, Be" (Young); "Pianophon" (Alter).
9.36: The Orchestra—Dance numbers.
9.45: Tenor solos—Mr. E. W. Robbins, (a) "Because" (d'Hardelot); (b) "Waiana Poi" (Alfred Hill).
9.49: Quartet—Apollo Singers, "A Night of Love" (Spicer).
9.53: The Orchestra, (a) "In a Bird Store" (Lake); (b) "Independencia March" (Hall).

3YA CHRISTCHURCH (336 METRES)—FRIDAY, MAY 4.

- 3 p.m.: Afternoon concert session—Selected studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's hour—Aunt Pat and Scatterjoy. Stories, songs, and group of little Brownies to help.
7.15: News session.
7.30: Talk by Mr. Robert Nairn on "Insect-Eating Plants."
8.0: Chimes and overture.
8.5: Vocal quartet—The Melodious Four, "Request" (Franz).
8.9: Violin solo—Miss Irene Morris, "Prize Song" from "The Meistersingers" (Wagner).
8.13: Tenor solos—Mr. Russell Sumner, "The Rogue Marie" (Franz).
8.19: Instrumental trio—Christchurch Broadcasting Trio, "Allegro from F Major Trio" (Reissiger).
8.29: Contralto solo—Miss Belle Renaut, "In Autumn" (Franz).
8.33: Hawaiian, ukulele, and steel guitar trios—Miss Elaine Moody's Hawaiian Trio, (a) "Elegie"; (b) "Cheerie, Beerie, Bee" (Lewis and Wane); (c) "Souvenirs" (Nichols).
8.42: Soprano solo—Miss Frances Hamerton, "Slumber Song" (Franz).
8.45: Accordeon solo—Mr. George Bennett, "Love's Old Sweet Song."
8.50: Bass solos—Mr. T. D. Williams, (a) "Calm at Sea" (Franz); (b) "In the Dreamy Wood I Wander" (Franz).
8.56: Humorous recitation—Mrs. Beryl Windsor, "The Bride's First Call on the Butcher" (Fisk).
9.0: Vocal quartets—The Melodious Four, (a) "For Music" (Franz); (b) "The Rose Complained."
9.5: Weather report and forecast.
9.6: Overture.
9.11: Soprano solos—Miss Frances Hamerton, (a) "Spring's Profusion" (Franz); (b) "Stars With Golden Sandals" (Franz).
9.17: Tenor solos—Mr. Russell Sumner, (a) "Lassie With the Lips So Rosy" (Franz); (b) "As the Moon Her Trembling Image" (Franz).
9.23: Instrumental trios—Christchurch Broadcasting Trio, (a) "Andantino" (Lemare); (b) "Scarfe Dance" (Delibes).
9.33: Contralto solos—Miss Belle Renaut, (a) "Tho' the Roses Now Flourish" (Franz); (b) "Romance" (Franz).
9.39: Hawaiian ukulele and steel guitar trios—Miss Elaine Moody's Hawaiian Trio, (a) "Hanalei Bay" (Alohiaka); (b) "Flower of Hawaii" (Sherwood and Riga); (c) "My Blue Heaven" (Donaldson).
9.48: Bass solo—Mr. T. D. Williams, "Stormy Night" (Franz).
9.51: Violin solo—Miss Irene Morris, "Rondino" (Beethoven-Kreisler).
9.54: Humorous recitation—Mrs. Beryl Windsor, "A Woman in a Shoe Shop" (Fisk).
10.0: Accordeon solos—Mr. George Bennett, (a) "O Where, Tell Me Where" (b) "Annie Laurie."
10.4: Vocal quartet—The Melodious Four, "Dedication" (Franz).
God Save the King.

4YA DUNEDIN (463 METRES)—FRIDAY, MAY 4.

- 3 p.m.: Town Hall chimes.
3.1: His Master's Voice Recital.
3.15: Fashion talk by a representative of the D.I.C.
3.30: Afternoon tea music from the Savoy.
3.45: Studio music.
4.0: Music from the Savoy.
4.15: His Master's Voice Recital.
4.30: Close down.
6.0: Children's hour—Aunt Sheila and Big Brother Bill, assisted by pupils of Miss Noeline Parker. The Happy Folk's Anthem. Recitation, "The King's Breakfast," Joyce Inslip. Song, Master Dowd Foord, "Visitors." Recitation, Miss Honi Davidson, "Bird of Blue." Storytime. Monologue, Lonie Wreathall, "Packing." Recitation, Hazel Ness, "Gossip." Letters and birthdays. Recitation, Jean Kirkham, "If

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Programmes Continued

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- You Meet a Fairy." Song, Evelyn Shepard, "In a Toy Balloon." Recitation, Harold Davidson, "So Was I." Recitation, Miss Billie Sapsford, "The Dream Man." Story-time, "In An Old Castle." Recitation, Etta Kirkwood, "Vespers."
- 7.15: News session.
7.30: "The New Motor Regulations," reviewed by Mr. W. D. Ansell, president, Otago Motor Club.
8.0: Town Hall chimes.
8.1: Baritone solos—Mr. Bert Rawlinson, (a) "The Admiral's Broom" (Devan); (b) "The Diver" (Loder).
8.8: Flute solo—Mr. Chas. E. Gibbons, "Prince Methusalem" (Strauss).
8.14: Contralto solo—Miss Flora Williamson, "Linden Lea" (Williams).
8.17: Orchestral selection.
8.21: Bass solo—Mr. Neil Black, "Gipsy Love Song" (Herbert).
8.24: Pianoforte solo—Miss Alice Wilson, F.T.C.L., "Sonata in B Major—Allegro" (Mozart).
8.29: Soprano solos—Mrs. D. Carty, (a) "That Old Irish Mother of Mine" (Von Tilzer); (b) "There's a Wee Bit Land."
8.36: Orchestral selection.
8.40: Baritone solo—Mr. Bert Rawlinson, "Rocked in the Cradle of the Deep" (Knight).
8.44: Flute solos—Mr. Chas. E. Gibbons, (a) "Love's Request" (Reichardt); (b) "Mignon" (Thomas).
8.54: Contralto solos—Miss Flora Williamson, (a) "Can't Remember" (Goatley); (b) "Sapphic Ode" (Brahms).
9.0: Weather report and forecast.
9.2: Bass solos—Mr. Neil Black, (a) "Russian Love Song" (Lardelli); (b) "The Mountains of Mourne" (Herbert).
9.9: Pianoforte solo—Miss Alice Wilson, "Sonata in B Major—Adagio and Allegro" (Mozart).
9.16: Vocal duet—Mrs. D. Carty and Mr. Bert Rawlinson, "Hunting Tower."
9.20: Orchestral selection.
9.23: Soprano solo—Mrs. D. Carty, "The Harp That Once" (Moore).
9.26: Relay of dance music by Alf Carey's Dance Orchestra from the Savoy.
10.0: God Save the King.

Saturday, May 5

1YA AUCKLAND (333 METRES)—SATURDAY, MAY 5.

- 2.45 p.m.: Relay of Rugby football from Eden Park.
6.0: Children's hour—Cinderella. Monologue, Margot Trafford, "Little Brown Rabbit." Banjo solo, Ross MacBride, "A Little Spanish Town." Letters and birthdays. Monologue, Margot Trafford, "Before." Uncle Mack, jungle stories. Song, Cinderella, "Good-night, Radio Family." Bed-time stories.
7.15: News and reports, sports results.
8.0: Chimes.
8.1: Relay of overture from Prince Edward Theatre Orchestra, under Mr. E. Beacham.
8.10: Vocal quartet—The Lyric Quartet, (a) "Sailors' Chorus" (Parkes); (b) "Soldiers' Farewell" (Kinkell).
8.18: Humour—Mr. Allan McElwain, "Some Humour."
8.23: Vocal and instrumental—The Bohemian Trio, "Popular Maori Melodies," (a) "Pokarekare"; (b) "Matangi"; (c) "Hoki Hoki Tonu."
8.31: Tenor solo—Mr. Herbert Richards, "Longing For You" (Stevens).
8.35: Bass solo—Mr. Ernest Thomas, "Off to Philadelphia" (Sanders).
8.40: Relay of entr'acte from Prince Edward Theatre Orchestra, under the conductorship of Mr. E. Beacham.
8.48: Quartet—The Lyric Quartet, "The Mulligan Musketeers" (Adams).
8.52: Tenor solo—Mr. Arthur Ripley, "Serenade" (Tosselli).
8.56: Vocal and instrumental—The Bohemian Trio, popular Maori melodies, (a) "Hine Hine"; (b) "Hoea Ra"; (c) "Poatarau Maori."
9.4: Weather report and forecast.
9.5: Humour—Mr. Allan McElwain, "More Humour."
9.10: Vocal quartet—Lyric Quartet, "A Summer Lullaby" (Barnes).
9.14: Relay of dance music by the Internationals, under Mr. Clyde Howley from Dixieland Cabaret.
11.0: God Save the King.

2YA WELLINGTON (420 METRES)—SATURDAY, MAY 5.

- 3 p.m.: Running description of Rugby football match from Athletic Park.
5.0: Close down.
6.0: Children's hour.
7.0: News session, market reports, and sports results.
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—The Orchestra, "Light Cavalry" (Suppe).
8.10: Quartet—Melodie Four, "In Absence" (Abt).
8.14: Banjo solo—Mr. Chas. Brazier, "Happy-go-Lucky" (Grimshaw).
8.19: Bass solo—Mr. W. W. Marshall, "The Cold North Sea" (Courtney).
8.23: Selection—The Orchestra, "Chu Chin Chow" (Norton).
8.33: Duet—Messrs. R. S. Allwright and Sam. Duncan, "Fickle-hearted Mimi" from "La Boheme" (Puccini).
8.37: Mandolin band—Mrs. Sawden's Mandolin Band, (a) "Bridesmaid's Gavotte" (Angel-Carini); (b) "Romance" (Tollhurst).
8.45: Humour—Mr. Geo. Titchener, "Euclid" (original).
8.52: The Orchestra, (a) "violin solo, 'The Swan' (Saint-Saens); (b) "Minnet" (Paderewski).
9.0: Weather report.
9.2: Tenor solo—Mr. Sam. Duncan, "Tom Bowling" (Dibin).
9.6: Banjo solo—Mr. Chas. Brazier, "Take Your Pick" (Mandell).
9.11: Baritone solo—Mr. R. S. Allwright, "Pagan" (Lohr).
9.15: The Orchestra, "Musical Switch" (Alford).
9.25: Tenor solo—Mr. Frank Bryant, "Bird of Love Divine" (Haydn Wood).
9.29: Humour—Mr. Geo. Titchener, "The Ridiculousities of a Novelist" (MS.).
9.36: The Orchestra—"Popular Melodie" (Sullivan).
9.46: Quartet—Melodie Four, "Simple Simon" (Macey).
2.50: Programme of dance music.

3YA CHRISTCHURCH (306 METRES)—SATURDAY, MAY 5.

- 3 p.m.: Relay of Rugby football from Lancaster Park.
6.0: Children's hour—Uncle Sam and Aunt May. Stories and songs for the little and big.
7.15: News session.
8.0: Chimes and overture.
8.5: Joy song—Rollicking Bobby, "Baby Face" (Davis and Ask.).
8.9: Clarinet solo—Mr. S. E. Munday, "Serenade Elegante" (Heller).
8.13: Popular song—Mr. A. E. Dowell, "Love is Just a Little Bit of Heaven" (Baer).
8.17: Magic flute solos—Mr. Verner Lawford, (a) "Swiss Cradle Song" (Scott); (b) "Omaka Waltz Melody" (Nicholls).
8.24: Contralto solos—Miss Constance Flanagan, (a) "Look Up O Heart" (Del Riego); (b) "Ships That Pass in the Night" (Stephenson).
8.32: Instrumental trios—Christchurch Broadcasting Trio, (a) "Blue Danube Waltz" (Strauss); (b) "Gavotte" (Sinding).
8.42: Happy duets at the piano with ukulele—Misses Muriel Johns (piano) and Edna Johnson (ukulele), (a) "Breeze" (Hanley); (b) "Who-oo You-oo" (Yager).
8.50: English concertina duets—Theo and Miss Frances Gunther, "Colonel Bogey" (Alford); (b) "Ukulele Dream Girl" (Low).
8.55: Humorous recitation—Mr. Hiram Dunford, "The Enchanted Skirt" (a philosophical fairy story).
9.0: Weather report and forecast.
9.1: Overture.
9.6: Joy songs—Rollicking Bobby, (a) "Sweet Child" (Whiley); (b) "Ukulele Lady" (Whiting).
9.13: Clarinet solos—Mr. S. E. Munday, (a) "Harlequinade Polka" (Morelli); (b) "Weber's Last Waltz" (Le Thiere).
9.20: Popular songs—Mr. A. E. Dowell, (a) "The World is Waiting For the Sunrise" (Seitz); (b) "Charmaine" (Rapley and Pollock).
9.27: Phono fiddle solos—Mr. Verner Lawford, "The Question" (Elkin); (b) fox-trot melody, "Avalon" (Burcher).
9.34: Contralto solo—Miss Constance Flanagan, "Hindoo Song" (Bemberg).
9.38: Instrumental trios—Christchurch Broadcasting Trio, (a) "Berceuse de Jocelyn" (Godard); (b) "Three Pours Waltz" (Taylor).
9.48: Happy duets at the piano with ukulele—Misses Muriel Johns (piano) and Edna Johnson (ukulele), (a) "Shady Trees" (Donaldson); (b) Dew, Dew, Dewy Day" (Podias).
9.55: English concertina duets—Theo and Miss Frances Gunther, (a) "Always"; (b) "Napoleon's Last Charge."

LONG aerials, as a rule, are best if one has a selective receiver, or one with which it is easy to separate the various stations. With the advent of high power broadcasting, however, one has to live a considerable distance from such stations to bring in one without hearing another in the background. For that reason, many radio manufacturers recommend an aerial of between fifty and seventy-five feet. The aerial could be of No. 14 twisted strand enamelled wire. No. 18 rubber-covered wire makes an excellent lead-in.

ONCE upon a time the New York "Radio News" regularly devoted a large proportion of its space to amateur transmission, Morse code work, etc., but broadcast listening has so overwhelmed amateur transmission in general interest that the "Radio News" now allows very little space to the "ham." In reply to the criticism of a correspondent, the New York paper says:—"The 'Radio News' caters to the greatest number of radio enthusiasts. This majority is composed of those people who are interested only in the phases of radio reception, and who have little knowledge of the radio code, and less of transmitting practices. You are quite correct in stating that 'Radio News' is devoted to the interests of the broadcast listener; that is our aim, but not quite completely so, as we do publish enough technical articles to appeal to those more advanced radio fans who can appreciate them. The people who can read good code are comparatively few in number, and their special interests are covered by a magazine which has no other function."

IN the ordinary tuned radio-frequency receiver, the efficiency is highest when the dials are tuned to the shortest wave-length; and, as the wave-length is increased, the efficiency decreases steadily. The result is that, on the waves between 400 and 500 metres, where much of the listening actually takes place, the sensitivity of the set is often only one-third of maximum. On the other hand, makers of the best tuned radio frequency sets have embodied methods of overcoming this disability.

IN round numbers, the average American home spends 50 dollars (\$10) a year for soft drinks and ice cream; for tobacco, about 100 dollars (\$20) a year; for telephone, 80 dollars (\$6) a year; for radio, 25 dollars (\$5 12s.) a year; while the automobile costs 420 dollars (\$84) a year, more than fifteen times as much as the electricity bill.

RADIO dry batteries should always be tested for their voltage, as that is an important thing to know. Furthermore, they should be tested with a high-grade, high resistance voltmeter. The ordinary pocket voltmeter has a much lower resistance than the radio valve, and its indications will be lower than that actually impressed by the battery to the tube. A low resistance instrument, therefore, may condemn the battery too severely.

ARRANGEMENTS were completed in New York recently, whereby radio fans were able to listen to the broadcast of a musical comedy, and the next day purchase the exact programme, including the radio announcements, in the form of a phonograph record. The first programme of this kind was given over WHAF on March 11, between 5.30 and 6 p.m.

"THERMOS" (Thorndon) writes:—Let us hope that when the Wellington Radio Society is appointing a representative for the society on the 'public relations' committee with respect to broadcasting matters, that they will weigh carefully the personal attributes of the candidates. The representative should be an experienced listener, and not a five-minutes in the game squib. He should be a man of good judgment, and not given to venting hot air. He should not have a reputation for putting his foot in it when he opens his mouth in public. He should not be an individual who is seeking the appointment merely for self-glorification, and the free advertising he is likely to get out of the position for his own business purposes. The society has a serious responsibility before it, and it should be prepared to make a judicious selection. The appointee should have the confidence of the general body of listeners, and, above all, should have an unimpeachable record. If the man who is appointed does not fit this bill the "public relations" committee is doomed to failure so far as the Wellington listeners' faith in him is concerned.

IT is first be understood that a "C" battery is not a cure-all. It will not increase the range of your set, nor will it make a simple one-valve set operate from a loop, nor give loud-speaker volume from the Australian stations with one valve, when used on an aerial. The primary purpose of a "C" battery is to put a negative bias on the grid element of the valve, thereby preventing a flow of current from the filament to the grid; it reduces the "B" battery drain considerably, producing a saving in four yearly "B" battery bills. It also affords clearer reception by reducing somewhat the noises in a set. A "C" battery is used to advantage only in cases where the "B" battery voltage is in excess of 50 volts. "C" battery is most commonly used on the amplifier valves, and the circuit can be arranged so that but one "C" battery takes care of both amplifiers.

- 10.2: Humorous recitation—Mr. Hiram Dunford, "The Little Hatchet" (George Washington story revised).
Dance music until 11 p.m.
God Save the King.

4YA DUNEDIN (463 METRES)—SATURDAY, MAY 5.

- 11.30: Relay of Forbury Park Trotting Club's meeting (subject to permission being obtained).
7.15: News session.
7.30: Address under the auspices of Workers' Educational Association by Dr. G. E. Thompson, on "French Literature."
8.0: Town Hall chimes.
8.1: Orchestral music relayed from the Empire Theatre.
8.11: Soprano solos—Miss Agnes Guy, (a) "The Wood Pigeon" (Lehmann); (b) "Pokarekare" (Hill).
8.17: Instrumental trio (violin, cello and piano)—"Andante" (Beethoven).
8.22: Baritone solo—Mr. Arthur Langley, "When the Sergeant Major's on Parade" (Longstaffe).
8.26: Pianoforte solos—Miss Muriel Caddie, (a) "Le Papillon" (Levallee); (b) "Valse Lyrique" (Sibelius).
8.36: Orchestral interlude from Empire Theatre.
8.46: Mezzo-soprano solos—Miss Molly Vickers, (a) "I Hear a Thrush at Eve" (Cadman); (b) "Just a-Wearying For You" (Jacobs-Brond).
8.54: Cello solo—Mr. P. J. Palmer, "Aria" (Bach).
9.0: Weather report and forecast.
9.2: Instrumental trio, (a) "Scherzo" (Reissiger); (b) "Melodies Mignones" (Sinding).
9.13: Soprano solo—Miss Agnes Guy, "Roschud" (Drummond).
9.17: Violin solos—Miss Eva Judd, (a) "Mazurka" (Henry); (b) "Chant Hindu" (Rimsky-Korsakov).
9.23: Pianoforte solo—Miss Muriel Caddie, "Polish Dance" (Scharwenka).
9.28: Baritone solos—Mr. Arthur Langley, (a) "The Devout Lover" (White); (b) "Sea Fever" (Ireland).
9.35: Cello solo—Mr. P. J. Palmer, "Dance Orientale" (Squire).
9.40: Mezzo-soprano solo—Miss Molly Vickers, "Think of Me" (Scott).
9.44: Violin solos—Miss Eva Judd, (a) "Cavatina" (Raff); (b) "Chant Sans Paroles" (Tchaikowsky).
9.52: Orchestral music from the Empire Theatre.
10.0: God Save the King.

Sunday, May 6

1YA AUCKLAND (333 METRES)—SUNDAY, MAY 6.

- 3 p.m.: Afternoon session—Selected gramophone items.
4.0: Literary selection by the announcer.
4.8: Further gramophone items.
4.30: Close down.
6.0: Children's song service, conducted by Rev. L. B. Busfield, assisted by cousins from Beresford St. Sunday School.
6.55: Relay of evening service from Baptist Tabernacle. Preacher, Rev. J. Kemp; organist and choirmaster, Mr. Arthur E. Wilson.
8.30: Relay of organ recital by Mr. J. Maughan Barnett from Town Hall.
9.30: God Save the King.

2YA WELLINGTON (420 METRES)—SUNDAY, MAY 6.

- 6 p.m.: Children's song service, conducted by Uncle Ernest, assisted by St. Peter's Choristers.
6.55: Relay of evening service from St. Andrew's Presbyterian Church. Preacher, Rev. R. J. Howie, B.A.; organist and choirmaster, Mr. Frank Thomas.
8.15 (approx.): Relay of band concert of the Wellington Municipal Tramways Band from His Majesty's Theatre.

3YA CHRISTCHURCH (306 METRES)—SUNDAY, MAY 6.

- 5.30 p.m.: Children's song service by Uncle Sam, assisted by scholars from Moorhouse Avenue Church of Christ.
6.30: Relay of evening service from Church of Christ, Moorhouse Avenue. Preacher, Rev. Howard Earle; choirmaster, Mr. J. Ames; organist, Miss E. Hepburn.
8.0: Rebroadcast of 2YA, Wellington (concert by Municipal Tramways Band from His Majesty's Theatre).
God Save the King.

4YA DUNEDIN (463 METRES)—SUNDAY, MAY 6.

- 5.30 p.m.: Children's song service, conducted by Big Brother Bill and assisted by a choir of young people from Trinity Church Sunday School.
6.30: Relay of service from Knox Church. Preacher, Rev. Tulloch Yulke, B.D., M.A.; organist, Mr. W. Paget Gale.

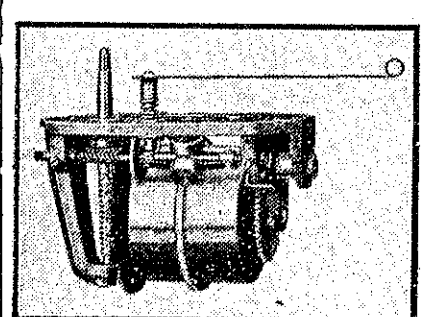
A NUMBER of broadcast listeners, on a recent evening, picked up 9XF, Downes Grove, Illinois, U.S.A., power 5000 watts; wavelength, between 280 and 290 metres. The station was testing, and asked for reports.

The American attempt to use the new word "radiocast" in place of "broadcast" has apparently failed completely, and the former term is seldom seen in print. An American radio writer says: "Without explanation, ask 100 people in the street what 'radiocast' means, and if they answer at all it will be a guess that it has something to do with the receiving instrument, as a radio set to-day is generally accepted as a receiving set, not a transmitter. Ask that same 100 what 'broadcast' means and they will tell you, and tell you correctly."

SERIES means batteries connected positive to negative. This method of connecting gives a voltage equal to the sum of the voltages of the individual batteries or cells. Thus, a 22½ volt "B" battery is composed of 15 cells connected in series. Two "A" batteries connected in series give 3 volts.

If you use a motor-car storage battery for lighting the filaments be sure it does not exceed six volts. There are several makes of such batteries on the market whose voltage exceeds six volts, and if they are used in conjunction with six volt valves, there is a good possibility of the filament being burned out, unless the rheostat has been turned fully "out" before lighting the filaments.

Sometimes a set will cease functioning or will function poorly on the last stage of audio-frequency amplification. This is almost always due to a poor connection in the jack that precedes the last stage or in one of the preceding jacks in other stages. If you have this trouble, look in between the small silver contacts in the jacks, and notice whether or not they close properly when the plug is withdrawn from them. Sometimes the springs weaken and do not allow them to close as they should. The remedy is to take out the jack and bend the offending spring back into position, and then to replace the jack.



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The Advantages of the B Battery Eliminator

Its Action and Use Fully Described

By "MEGOHM"

ACTION OF THE CIRCUIT.

BETWEEN the circuit diagrams is one showing the action of the Alternating current is made up of small impulses changing at the rate of 50 to 80 per second. In the case of 50 per second, or "50 cycles," there will be 25 impulses in each direction every second. A few of these impulses are shown in the diagram alternating on either side of a central or neutral line, the short arrows showing the direction of the current for one-half of a complete phase or vibration. This kind of current enters the transformer, and on account of its alternating form, it is able to induce in an adjacent winding a similar amount of current measured in watts, dependent upon the

When the current has been transformed, either stepped up or down, it is still alternating, and then passes through the rectifying valve, which only passes current from plate to filament. With the tapped high-tension secondary winding connected as it is, the alternating pulse in one direction travels in the valve from plate to filament from one half of the winding. The next pulse is in the opposite direction, through both windings, but the construction of the valve only allows it to take an impulse from plate to filament, which is now the pulse in the other half of the winding, so that we now have the alternating impulses that were formerly going in opposite directions, now travelling through the output circuit all in the same direction.

The current next encounters in turn smoothing condensers, and one or two choke coils with iron cores. The smoothing condensers have the property of storing up a charge of current momentarily and giving this charge back to the current when its voltage is below that of the stored-up charge. By this means the low-voltage gaps between the "humps" of voltage shown in the diagram are filled in. The action of the choke coil is to stop the passage of fluctuating current, so that only fairly smooth direct current can pass. The last condenser (C3) stores up a charge which is chiefly utilised to provide for any extra demands that may be made on the audio side, and if the placing of a larger power valve in the receiver causes any indication of hum, it is this condenser that should be increased in capacity, the benefit being especially noticeable on the low notes. Output voltages of different values are obtained by reducing the main voltage by means of variable resistances, and in order to prevent any tendency to hum, a fixed condenser is placed across each different output.

TROUBLE FINDING.

AS remarked above, there is little to give trouble in a well-constructed eliminator, but if trouble does develop, it may readily be located and remedied. More often the trouble is in the receiver, and it should be decided by proper tests that the trouble is not in the receiver before commencing upon the eliminator.

The logical place to begin the hunt for trouble in a radio power unit is at the resistor bank, and then work backwards through the filter, rectifier tube, and finally the transformer. It is assumed, of course, that the alternating current is known to be flowing through the transformer, and that the rectifier tube is not visibly damaged in any way.

An open-circuited or burnt-out resistor will result in no voltage from the tap it controls. If the 10,000-ohm fixed resistor becomes open, in the case of the B-power unit, the detector

voltage will immediately increase so that in the tuned radio-frequency receiver the signal strength will be greatly diminished, while in the regenerative receiver there will be constant oscillation.

The simplest method to locate a defective resistor is by means of a high-resistance voltmeter, connected to each tap in turn. In fact, this device is essential in adjusting B power voltages to any receiver, in place of the cut-and-dry method. In the absence of this device a 15-watt 280-volt incandescent lamp may be employed. It should glow a dull red on the full output and on the intermediate tap of the B-power unit. If it lights equally bright on the detector tap, it is an indication of an open or defective 10,000 ohm fixed resistor.

If the tap voltages are found to be satisfactory, and the receiver still does not operate well, the trouble may be due to an open or an unitted by-pass condenser. A short-circuited by-pass condenser will act the same as a short-circuited resistor.

No Voltage at all Terminals.—This condition can be caused by an open circuit in the wiring transformer, choke coils, or by a broken-down filter condenser.

With power disconnected from the B-power unit and the Raytheon tube removed, a click should be heard in the testing telephone when connected in series with battery between plate terminal of rectifier socket and the positive B of the power unit. A click should also be heard between either filament terminal of the rectifier socket and the negative B of the B-power unit. These clicks should be of equal strength. If one filament terminal gives a much louder click than the other, it generally indicates a defective buffer condenser. If no click is heard on either filament terminal, then the transformer secondary is open-circuited, or the centre tap of the transformer does not connect to the negative B side as it should.

The circuit continuity of the transformer itself may be tested by the click between the two filament terminals of the rectifier socket, with the tube removed. If the transformer secondary tests O.K. on the foregoing procedure, there must of necessity be an open circuit in the negative B lead.

A short-circuit in the secondary of the transformer can be most easily checked by connecting a 25-watt, mains voltage lamp in the series with the primary. The current is now turned on in the usual way, but with the rectifier or Raytheon tube removed from the socket. The incandescent lamp should glow dull, if at all. If it glows bright either the transformer secondary or one of the 1 mfd. condensers is broken down. With the lamp still in the primary, the rectifier tube is inserted in its socket. If the secondary connections are O.K. and the Raytheon is operative, the lamp will increase in brilliancy.

transformer. The positive output is the usual plate connection on the socket and represents the cathode or metal cap within the valve. This connection runs to the chokes and smoothing condensers, and is the B positive output for each valve, voltage being suitably altered by variable resistances.

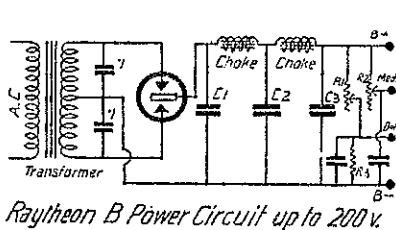
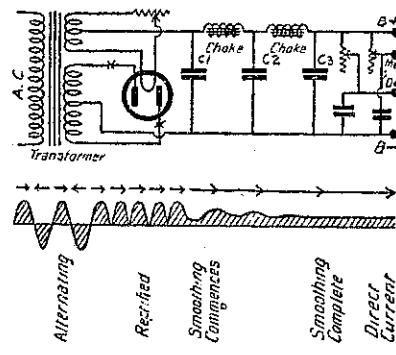
B POWER SUPPLY CIRCUITS.

REFERRING to the diagrams, two circuits are presented one showing the connections for a filament valve giving full wave rectification, and the other showing connections when the Raytheon B1 tube is employed. The smoothing system is identical in both, except that in the Raytheon circuit a resistance R3 is shown across the output, but this resistance is not indispensable, and may be omitted. In the case of the filament valve there is a low-tension winding on the transformer to supply filament current, and this is adjusted by a suitable rheostat. In the filament valve circuit the B positive is from a tap in the centre of the filament winding, the reason for this being that in the process of rectification, current can only flow from plate to filament in the valve, so that it has to be drawn off at an equally balanced point in the filament circuit, and this point, if correctly determined, is the electrical centre. In actual practice, it works quite efficiently and without introducing hum, if the tap is at the central turn of the winding, though it may not be the exact electrical centre.

In the Raytheon circuit no filament winding is necessary on the transformer so far as the rectifier is concerned, but in the case of converting a filament valve eliminator to use a Raytheon, the discarded filament winding may be profitably utilised to heat the filament of the last power-valve, and although this current is only raw a.c. at low voltage, no hum is introduced into the receiver.

In the Raytheon circuit two by-pass condensers are placed one across each high-tension winding of the transformer. These assist the action of the valve, and may also have the effect of decreasing any radio-frequency currents induced from the mains. Mains operated sets are frequently said to be less selective than those operating from batteries, but the writer has found that by inserting radio-frequency chokes in a suitable position in the circuit, that eliminator operation can be just as selective as when batteries are used. The presence of these R.F. currents is accounted for by the fact that the mains conveying the current act as efficient aerials and pick up the transmission of a station near the wavelength of that being received, passing these currents into the receiver through the power circuit, ignoring any selective tuning arrangements that may be in the aerial circuit proper. Radio chokes consisting of 1000 turns of fine wire will stop these currents, and all that is needed is to insert a choke in each plate circuit as shown at XX in the standard circuit.

Standard B Eliminator Circuit



ratio between the turns on the secondary winding or windings and the turns on the primary windings. If the number of turns is equal on both primary and secondary, then the same voltage and amperage less a conversion loss, will be obtained from the secondary, and the same gauge of wire would be used on each, unless as in the case of an eliminator, the required output is extremely small. But the number of primary turns must be accurately determined if the transformer is to work efficiently. If secondary turns are more than on the primary, there is a proportional step-up in voltage, but fewer amperes may be safely drawn, so the secondary wire can then be of thinner gauge. If very few turns are on the secondary, we get low voltage, and may draw more amperes to make up the total watts, so that heavy gauge wire must be used, as is the case for filament windings to give say six volts at one or two amperes.

WHY VALVES BECOME PARALYSED

PRESENT-DAY dull emitter valves, for the most part, have so-called thoriated-tungsten filaments, the action of which, even at this late date, is not fully appreciated by the average listener. The electronic emission of the thoriated-tungsten filament, according to the chief engineer of the Radiall Company (of America), depends upon the presence of a layer of thorium atoms on the outer surface of the filament.

Thoriated-tungsten.

It will be noted that, unlike the oxide-coated filament found in some valves, the thoriated-tungsten filament is not merely thorium-coated, but it is permeated throughout its entire mass with the rare element thorium. During the normal operation of such a filament the thorium on the outer surface is gradually evaporated, reduc-

less paralysed. Operating these valves at sub-normal voltages is also liable to paralyse them slowly, as the filament temperature is then so low that the process of boiling out the thorium becomes abnormally retarded.

Need for Filament Control. Hence it is important that the thoriated-tungsten filament valves be operated strictly at their rated voltage by means of hand rheostats with an ac-

curate voltmeter, or, better still and simpler, perhaps by means of self-adjusting rheostats, such as Amperites.

Screen-grid Valve Holder. A SPONGY rubber valve holder has been introduced for use where the S625 type passes through a screen. The rubber holder is attached to the screen, and holds the centre of the valve in a non-microphonic grip.

THE RADIO LEADERSHIP OF 1928.

THE ELECTRIC MODEL A.C. CROSLY BANDOBOX WITH SPEAKER—£38/10/-.

Contributing much to the success of this 1928 Wonder Radio is the MERSHON CONDENSER, in the power element of the set. Not being paper, the danger of its blowing out is entirely removed, so that the desired HEAVY VOLTAGE can be used to produce the acoustic and volume results so greatly desired.

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Moving-Coil Loudspeakers.

THE moving-coil loudspeaker is admitted to be the best type at present in existence, and is well suited to large rooms where ample volume combined with quality is required. This type of speaker usually requires about one ampere of continuous current to energise the electromagnet, and this fact makes it somewhat expensive to run, especially where mains current is not available. Its principle depends upon the interaction between the electromagnet and a small coil attached to the back of the cone diaphragm, this coil carrying the current of varying amplitude from the plate circuit of the last audio valve. Small sizes are made with permanent magnets, obviating the heavy current consumption.

New Push-Pull Transformers.

THE first shipment of Ferranti push-pull transformers is aboard the s.s. Westmoreland, shortly to arrive in New Zealand.

B Accumulator Voltages.

The idea of utilising the whole output of a B accumulator and cutting down voltages with resistances in the various plate circuits has one disadvantage, in that a certain amount of current is dissipated in the resistances, thus causing a higher consumption than in the case of employing tapplings. The idea is not suited to a dry battery in any case. This method appeared in an American radio journal.

A New Vernier Condenser.

DUBILIERE are marketing a new type of variable vernier condenser that will shortly be on sale in New Zealand. This, known as the "Univane," is so designed that each turn of the control knob turns one vane from zero to full-in position, the next turn puts in another vane in the same way until all the vanes are full-in. This allows of very fine tuning in an easier way than when the whole of the vanes move together. To assist in logging, a radial indicator how many vanes are in use. The maximum capacity is .0005 mfd.

B ELIMINATORS

WILLARD Units are not just ordinary B Eliminators, they are POWER UNITS

and can be supplied in the following types.

B POWER UNITS—TWO SIZES.

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Thos. Ballinger & Co. Ltd.

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Frame Aerials and their Uses

SIMPLE CONSTRUCTION FOR EXPERIMENTERS

MANY inquiries have been received regarding the use and efficiency of loop or frame aerials, and it is in response to these that this article is written.

It should be stated as a preliminary that the sensitivity of an average frame aerial compared to that of an outdoor aerial of ordinary proportions is from one-sixth to one-tenth, so that where heavy volume is sought, a frame is out of the question with an ordinary set, except at very short distances from the transmitter. In the ordinary way, a frame aerial is more frequently used with a super-heterodyne type of receiver, which is both sensitive and selective, the latter quality being further augmented by the use of the frame or loop.

Yet even with an ordinary set of three or more valves, good results may be obtained over long distances, using headphones, by anyone of an experimental turn of mind. A few years ago the writer and others have on one or two favourable occasions been able to pick up KGO (California) on one and two valves, using a small loop, but such reception appears to be impossible at the present time owing to the congestion of the ether or some other reason.

In spite of its limitations, however, the frame has some compensations, and the lack of sensitivity is made up for to some extent by the great reduction of interference and the clearness of reception owing to the silent background. Tuning is very fine, and will seem particularly so to those who have not had experience on short-wave.

FRAME aerials are made according to several different patterns, but the most selective is that in which the wires all lie in the same plane. The winding is connected across the aerial and terminals of the set, the aerial tuning condenser then being in parallel with it. The reason for its selectivity is because waves from a transmitting station reach one side of the frame before the other, if the plane of the wires lies in the path of the waves. When the waves strike the first wire of a turn they induce voltage in a certain direction; when they strike the further side they induce voltage in the opposite direction. These two voltages would exactly balance each other, except for the fact that the waves strike one side before the other, and on this account the voltages on the two sides are unequal, and the small difference only traverses the windings. The fact of there being several wires supplies a difference of voltage for each turn and these differences add together, giving the total effect. The waves strike the top and bottom wires equally, so no difference of potential is available from them. In like manner, when the plane of the frame is turned across the direction of the waves the latter strike more and more equally until the position is at right angles, when there is equal effect upon all wires, and consequently no voltage difference to traverse the windings.

THIS property is made use of in finding the direction from which waves are coming, and it is quite easy to distinguish the difference on strong signals between maximum and minimum settings, the frame being parallel with or at right-angles to the incoming waves. Failing any known data as a guide, this test will give a line of direction along which the waves may be travelling in either one direction or the other. To determine the direction of origin upon this line, two bearings are usually taken by moving the frame and receiver after the first one, to some distance either side of the line that has been found. Such new bearing will converge upon the original line, thus indicating very clearly the direction from which the waves emanate. This is the method adopted by the British Post Office for tracking-up offending oscillators, all the apparatus being installed in a specially-built motor-van. Two vans are often employed, each one taking a different bearing simultaneously.

THIS method also constitutes the radio compass, by which means bearings may be found by a ship or its bearings communicated to it from shore. The directional effect of frame aerials is much more marked on short than upon long wavelengths, so for compass work short waves are used. Some years ago there was established a radio beacon of limited range working upon a wavelength of seven metres.

ESSENTIAL POINTS.

ONE point in using a frame aerial is that any circuit whatever may be employed, including any that would be illegal on an outside aerial. In the construction of a frame aerial attention

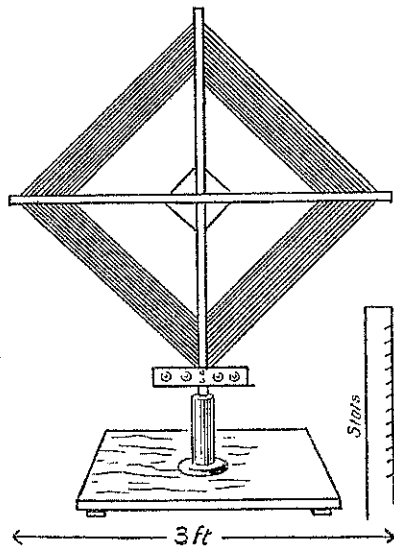
must be paid to making it as "low-loss" as possible, especially if for use at high frequencies (short-wave) where its efficiency will be the greatest if design and insulation are good. Essential points for successful operation are good audio amplification, a good B battery, silent background, and full control of reaction. All oscillation backlash must be eliminated so that the detector glides imperceptibly into and out of oscillation.

CONSTRUCTION.

FROM the foregoing remarks it will be seen that the amount of energy dealt with by the frame is very small, and it is clear that the greater the distance between the two upright portions of the winding, the greater will be the difference in voltage induced. It is therefore an advantage to keep the size of the frame large rather than small, yet within reasonable limits, to suit the rooms of a house. A convenient and fairly effective size is one having two-foot sides, which has a diagonal of nearly three feet.

ON a frame of these dimensions 500 metres would tune in on 12 turns, which would require about 35 feet of wire; 300 metres on 9 turns, or about 74 feet; 180 metres on 6 turns or 50 feet. Lower wavelength would require fewer turns. Many taps are not actually required, because the parallel tuning condenser in the aerial circuit of the receiver gives a wide range. Twelve turns will be ample for any broadcast reception, and it is a good

idea to take a tap at the centre or sixth turn, and one at the ninth. One system of tapping is to merely scrape away the insulation at desired points,



and make connection by means of a clip attached to the lead. Dead ends are not desirable in frame aerials, so if short-wave is to be worked it would be a good plan to bring out the ends of both halves separately at the sixth turn, and connect together to put the whole in series, or use only one winding of six turns, further reducing it by clip connections as mentioned. No doubt a number of enthusiasts will be pleased to add to their experiences by experimenting with the frame, and in order to bring the opportunity within the reach of the greatest number, the simplest possible way of constructing the frame will be described.

In some frame aerials their reaction is obtained by including some of the turns in the plate circuit.

TWO laths one inch by half an inch will be required, 3 feet and 3 feet 6 inches in length respectively. The shorter one is fixed by its centre at right angles to the longer at a distance of 18 inches from one end of the latter by "halving." Further security is obtained by fastening on a 4-inch square of 3-ply or ½ wood, as shown in the diagram. Twenties or 22's enamelled copper wire is the best to use. Before putting the cross-pieces together they must be slotted to take the wire. The slots are made with a saw, the slots, sloping diagonally, can be sawn in two strips at one operation, and if held in a vice with a waste strip outside each side, there will be no fear of breaking out the small pieces of wood between the slots, which are ½ in. apart. Just the same effect will be obtained by drilling holes ½ in. apart, and threading the wire through, which is rather a tedious operation. Brass (not iron) tacks could be used on one edge of the strips as a makeshift idea. It is important that the wood used be of a good solid kind and thoroughly dry, and after cutting the slots, should be well shellaced, getting the shellac well into the cuts. To obtain stability of the cross-piece, two short pieces of wood may be screwed to the upright as shown at A.A. Ends of wires may be secured by passing through a hole drilled in the strips, or may be connected to terminals on a small square of ebonite as shown.

The lower extremity of the upright is rounded to fit the centre of an old wire spool, from which one flange may be removed. This is screwed to a base-board and allows of the frame being rotated with ease. If a calibration scale is required for direction-finding, the top flange of the spool should be left intact, and upon it a cardboard scale marked in degrees can be fixed. A pointer of wire or a large needle is then attached to the upright.

No useful work can be done with loop aerials in connection with crystal sets, and an inside aerial will give better volume than a loop, but loses the advantages of the frame aerial's selectivity.

Our Mail Bag

Taranaki Reception.

Ed. J. L. Payne (New Plymouth): I regret to notice that you are still maintaining that we must seek locally for the cause of 2YA's distortion, the plain insinuation being that our receivers are to blame. Your past slurs on North Taranaki's receivers are still rankling, as you are doubtless aware. There is one fact which I would like to point out to you. It is this: the same "distortion producers" at the touch of a knob or dial, bring in clear, sparkling reception of foreign stations operated on various wave-lengths. Can your technical experts explain this away? Do you claim, Mr. Editor, that the Broadcasting Company's own engineer supports you in your opinion that our receivers are to blame for our distorted reception of 2YA? He has investigated for himself, which is evidently more than you have done. I should like to see the "Record" run on the same lines as the "Radio Times," the B.B.C.'s official organ, and not dabble in highly controversial matters on which its outlook appears to be influenced by a desire to show the company in the light of a public benefactor, and listeners as ingrates.

[Our correspondent's letter is apparently aimed at "Megohm's" article in last week's issue on "The Causes of Distortion." "Megohm" is a very experienced and competent experimenter and writer, and has a perfectly free hand to express his views and experiences, the whole purpose of his writings being to benefit listeners. We do not dictate his writings or even the subject of them in the slightest, and in most cases do not peruse them till after they are printed. The personal tone of our correspondent's letter is therefore quite uncalled for. On perusing "Megohm's" article we cannot see any justification for sensitivity, on the part of Taranaki. It is a purely general article, and is certainly not aimed at Taranaki reception or distortion. It is aimed to help listeners analyse the causes of poor reception. What does seem puzzling is why some parts of Taranaki should get poor reception from 2YA while other parts of the country get it well. Our correspondent is quite welcome to express his views, but a slightly different tone might be more pleasant. "Megohm" will be quite pleased to have any errors in his article pointed out.—Ed. "Radio Record."]

Query Answered.

A correspondent advises "A Listener," in response to his query, that the station he heard "hollowing" is 2BH, an amateur transmitter in Wright Street, Wellington.

Eulogy of 3YA.

Ferry Road (Christchurch).—In view of the commencement of a new radio year and also in view of the controversy regarding the affairs of the R.B.C., I wish to just express very briefly my opinions on some of the matters concerned. I have written the company many times, and certainly whatever my letters have lacked they have never been lacking in candour and frankness, and they have at the same time, I trust, been free from any suggestion of personal bitterness or animosity, which seems to pervade all correspondence from the Queen (paradise), I mean "Queen" City. As one who has often groaned in spirit over the presence of, or the lack of, certain classes of entertainment, I will admit freely the programmes are wonderfully good now, and show an enormous advance on those of even six months ago, and that they are improving every night. I have been watching the programmes from the other centres, and, though good, they cannot compare with the ones sent out from 3YA. Many items presented here are often put over the same night or week from one of the "Aussies" with the credit balance strongly on this side of the Tasman. I say that although I am strong for Australia in lots of ways! Mr. Clyde Carr is equal to, if not superior to, most announcers, either here or "across the way."

LOOPS OF LARGE DIMENSIONS.

A READER of a London wireless journal gives an account of experiments which he has made with large loop aerials formed around the walls of a room, and some of the results he has obtained are really surprising. As a matter of fact, in view of the difficulty of erecting a good outdoor aerial, as well as the objection which many people seem to have to an outdoor aerial in any case, it has always seemed to me that a good deal more attention might, with profit, be devoted to the loop aerial. The reader in question sets up two loops on two adjacent walls of the room, that is, two walls meeting at a corner. These loops are made by means of a few turns (usually not more than half a dozen) along the floor, up the wall, along the ceilings of picture rail and down the wall again. They are further arranged so that they may be put electrically in series.

When receiving a station, first one loop is tried, then the other, and then the two in series. It may be that one or the other gives the best results, according to the bearing of the desired station, or it may be that the two together give a resultant directional effect better than that obtained with either separately. Furthermore, the loops are arranged so that they may be reversed electrically. In these and various ways it is evident that, although the loops are actually fixed, it is possible so to manipulate them electrically that practically the same result is obtained as if they were mechanically movable.

Although there is a good deal in all this that is well known, it seems to point the way to interesting and useful developments.

I am glad that musical comedy and comic opera (especially the former) are now being regularly presented. "Going Up" was a "rattling good show," and so was the "Country Girl" and "Monsieur Beaucaire." At the same time the fact that many items apart from the piece set down for the evening are introduced is an excellent idea. That is where the "permanent staff plan" crashed, for the same little "set" over and over again in one evening "bored us stiff" even though the singers were really fine.

The increasing use of the gramophone is a splendid sign despite whatever may be said by those who have a worn-out portable and half a dozen scratched records. "These are the ones who write to the 'Record' saying 'we have our own gramophones, so cut it out of the radio programmes.'" It causes me no tears that the movie shows have got greedy and withheld their music (good though it was). The overtures each night are miles better, and we don't have to endure the laughing, which was very irritating at times. Being able to select an overture in keeping with or from the piece for the night is worth while losing the other. Saturday night at 3YA is as good as any from "Aussie." The big roster of artists is astonishing, and they are all "top-notchers," too.

The re-broadcasts of 2YA of late have been good, and are always welcome (especially Friday's "All Black" farewell). Could the Aucklanders find fault with that? The gramophone sessions in the afternoon and between the races are splendid; the selection of records being as wide and diverse as possibly could be.

In regard to Rugby football in Christchurch, "Don't come at their bluff" is the advice of dozens of listeners. Once relays are paid for—"good-night" programmes! Doubtless something else could be put across, but don't let it be League or Soccer—"small-time stuff" as they say in vaudeville. Once more admitting that 30s. is cheap.

The Programmes.

Philip Williamson (Whangamata): I have been quite interested, not to mention somewhat amazed, to read of the various complaints put forward regarding the programmes put on the air by the N.Z.B.C. Considering the comparatively small population of New Zealand and consequent limitation of talent, it seems to me that the company is to be highly commended for, not only the exceedingly fine quality of the programmes broadcast, but also on their variation, and the manner in which all tastes are catered for. I notice that there have been complaints regarding the constant re-appearance of the same artists, but when one considers that such artists are among the very best in New Zealand, I, for one, fail to see any cause for complaint. I think that I am right in saying that those who complain about the Broadcasting Company are very much in the minority. The bulk of listeners are, I think, more than satisfied with the entertainment provided. It is, of course, impossible to please everyone, but the Broadcasting Company seems to do all that is humanly possible in this direction.

Another bone of contention among a certain section of the public seems to be with reference to the non-publication of detailed financial statements. I may ask, do the regular patrons of picture theatres and so on expect it to be their right, since they pay for admission, to be informed exactly how the sum total of their various payments are expended by the management of the places they patronise? A certain section, however, argues that since the license fees are collected per the medium of the Post Office—a Government institution—that the people have a right to know all about the exact manner in which their fees are expended. To my mind, the Post Office, in this direction, acts purely in the nature of a collecting agent, for which service it is paid in much the same manner as any other collecting agent, such as a solicitor is paid by his client.

I understand that it is stated by some people that since the Government helped to finance the Broadcasting Company, that the company should publish detailed financial accounts. Here again, I may ask, does the Government, which has advanced vast sums of money to farmers, expect each farmer, particularly if he pays his interest, etc., regularly, to forward copies of his profit and loss account and balance-sheet for the perusal of the general public?

While writing, there are two small suggestions I would like to make. The first is with reference to the "Radio Record," in which I think publication of photographs of the various station announcers would be greatly appreciated. We all know their voices, and if we knew their faces, too, a still closer personal touch with them would be felt. I suppose there is no voice better known in New Zealand than that of the editor announcer of 2YA, and many would probably be interested to see photographs of him and the other announcers.

The second suggestion is with reference to an educational hour for children, particularly for those in country districts. I would suggest that each station devote one afternoon session a month in this direction. I should like to see some country schoolmasters take up the matter in these columns.

[We understand this matter is in hand with the Department of Education, and an announcement may be expected soon.—Ed.]

News and Inquiries.

J. W. Hannan (Matiere): In last week's issue of the "Radio Record" Mr. Johnstone reported reception of the unknown station working below K.FON. The station is probably the first harmonic of 4YA, on about 233 metres, which can be tuned in clearly. There is also an American station, KFWM, Oakland, Cal., on 236 metres, which I logged to-night (Sunday) for the first time. Hawaiian music was being broadcast on request. At 7.30 this evening, on about 234 metres, I heard a station close down thus: "After 2BL, station 2GJH, now closing down. Goodbye everybody." Mr. Bank also reports reception of an unknown station between 220-240 metres early in the morning. At 2.30 this morning I logged a station on 232 metres. Hawaiian music was being broadcast, and one of the performers was whistling the tune. The station closed down at 2.35, without giving the call sign. I logged another station at 1 o'clock this morning, which I believe to be an Indian station, working one and a half degrees below 2BL. Orchestral music was being broadcast. The announcing was in a foreign language, sing-song fashion, almost a wail, in fact. The station closed at 1.10. At 1.45 a station was heard one degree below 5CL, broadcasting queer organ music, closing down at 1.50, giving no call sign. The station is situated in the Philippine Islands, I think. Can any listener enlighten me regarding the above stations?

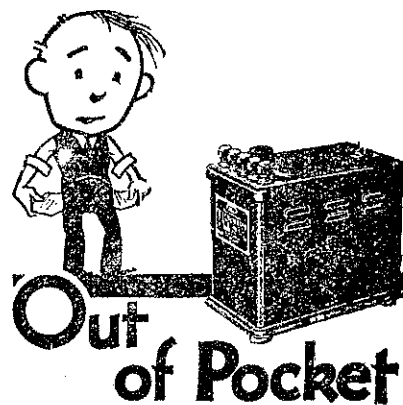
What's Wrong, Anyway?

"Programme" (Hunterville): Lately I have read many letters about radio programmes not being up to the mark. Well, I am informed that the listeners pay 30s. per annum to install and operate a radio set, not to manage the programmes. Perhaps if the dissatisfied listeners petition the N.Z.B.C. they may be allowed to run the stations too. If there were no stations in New Zealand the listeners would be paying their money for Australian reception, which is not always good. Now what's wrong with the programmes? The N.Z.B.C. can't please everyone. The programmes here are just as good as anywhere else, if not better.

The Programmes.

N. S. Francis (Lower Hutt): I would like you to grant me a little more space in your valuable paper. It was with much interest, and quite a little amusement, that I read the letter written by "Satisfied," or was it "Easily Satisfied," in this week's "Radio Record." He helps my side of the question along quite a lot. One can at once see, by the way in which he replies to the few words which I wrote merely expressing my opinion of the programmes, an opinion, by the way, which I am quite entitled to express, that he is either connected with the radio business or else he is one of those persons who can't be convinced that an improvement in the programme is necessary, for I am sure that even the Broadcasting Company themselves

(Continued on Page 14.)



Out of Pocket

over replacing old worn out batteries. An endless job, no sooner renewed than they run out again, and then generally in the middle of the week's best programme. Why carry on with it? Why run the risk of ruining a night's pleasure. Get an Emmco "B" Battery Eliminator which requires no attention, runs direct from the light socket at a fraction of the cost of an old fashioned dry battery. £10-10-0

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On Short Wave

A BIG NEW STATION

50,000 WATTS FROM
AMERICA

Mr. F. W. Sellen (Northland) writes:—I have not been able to devote as much time as usual during the past week to the short-waves.

Saturday, April 14.

The afternoon concert from Schenectady usually heard from 2AD was put on by 2XAF. The programme was again supplied by the Palmolive Company. Reception was very good, especially toward the closing time.

In the morning, I tried for 5SW, but apparently they were not on the air at the same time as usual. RFM was heard for a short time late in the evening. At 11.35 p.m. 2XG gave us some of his usual "Write down Long-fellow," etc.

2YG, Sydney, was testing, and was received at good volume and modulation; he was relaying 2BL for a time. 5LH, 5DX, 7CW, and 3KR, Australian and Tasmanian amateurs, were heard on telephony.

PCJJ was very weak when they commenced their early Sunday morning transmission, but no doubt increased in volume later on.

Sunday, April 15.

Dance music relayed from Albany, New York, was heard from 2XAF till 4.31 p.m.

Monday, April 16.

2NM was just audible before 6 a.m. transmitting some organ music. After this, the carrier only could be heard.

ALO were very good from 6 a.m., but fading was bad. RFM had plenty to say in the evening, but not any music while I was listening.

Tuesday, April 17.

5SW started at 6.30 a.m. with a talk after Big Ben had struck.

Wednesday, April 18.

PCJJ was very good, both in volume and modulation. Just before 6 a.m., a few names were called, listeners who had sent reports from various parts of the world, my name being in the list.

Big Ben was heard at 6.30 a.m., followed by "5SW calling, on 24 metres"; then "Davenport calling." A talk was then given on "Pigeon Raising or Pigeon Racing." Musical items followed.

7CW was heard during the evening. This Tasmanian amateur comes in very strong.

Thursday, April 19.

5SW started their transmission with a talk as usual after Big Ben struck. 5DX, or, as he announces 5DonX, was the only one heard on the short time while I was listening during the evening.

Friday, April 20.

5SW and 2XAD were testing, giving reports of reception, discussing programmes, etc.

PCJJ was again very good till they closed down at 6.35 a.m. with their National Anthem.

5SW started again at 6.30 a.m. RFM was received very weak during the evening.

In the March issue of "Modern Wireless," just received, are particulars of a new, powerful short-wave station of 50,000 watts. The call is 3XN.

This station, which is owned by the Bell Telephone Laboratories, New York, only operates once a week; this will be from 4.30 p.m. till 8.30 p.m. New Zealand time, on Saturdays. The wavelength is not announced.

When this short-waver gets going, it should be easy enough to pick up here. P.S.—I saw Mr. Harris during the

week, and he thinks a line to my home will be a good idea, so he is going to have it put in for a short period at first to try out, but, in my opinion, these short-wave rebroadcasts, which at present are experimental, will be a part of our regular programmes in the near future.

I can see in this new station—3XN, mentioned in my notes—a means of filling in a gap somewhere between 4.30 and 8.30 p.m., which is usually the best time for reception from New York.

Another Enthusiast.

S. Saunders (Wellington).—Further results on short-wave band.—April 11, 1928: PCJJ, 32.2, came in at good strength; 5SW also at good phone strength. Talk on "Girl Guides" and usual concert. 4PJ, Brisbane, put over some good records; also 2RV, Sydney, both very plain. At 9.30 p.m. got a station putting over a play, people laughing, band pieces, "Valencia," and Sailor's Hornpipe. Could not get call sign.

On April 13, 1928, PCJJ and 5SW both came in well.

April 14, 1928: WGY, 2XAF, usual programme, Wurlitzer Organ items and singing. Announcer spoke about North Atlantic flight; got amateurs of RB and 7NW, Hobart.

April 15, 1928: 3AR and 3AL, Ashburton, Station 2ME (2FC), 2BL, WGY, 2XAF, National Broadcasting Company, Wurlitzer Organ and Dan Mannel's Orchestra at De Wetzler's Hotel, New York, very clear. People in hotel heard talking and laughing, good programme; signed off 4.35, New Zealand S.E.T., 12.44. Got station at 7.10 p.m. on about 60 metres; man mentioned people of New Zealand. Also at 10.0 p.m., got station on 65 metres, orchestra with lot of flutes, and a man sang. Could not get call signs, too weak.

On Monday morning, April 16, 1928, 2LO, Melbourne, came in good strength. The latter part of the programme was spoilt by persistent howling. April 17, 1928, 6.30 till 8.30 a.m., got station on 17 metres (about). Talk on "Negro Race," orchestra jazz music, two ladies sang Charles Dickens's sketch, "Lady Reciting." Xylophone solo, Wurlitzer organ going strong when I shut down; could not get call sign.

On April 18, 1928, got WGY again, put over fine programme. P. A. Ralph's Orchestra played items, also Wurlitzer Organ, organist Gordon Baldwin. After 12.0 p.m., New York time, switched over to Buffalo Theatre, Symphony Orchestra, operatic items, and also dance orchestra (Nat. Holmes's); altogether a very enjoyable programme. Closed down 1.1 a.m. S.E.T., 5.30 New Zealand time.

On April 19, 1928, 5SW was on the air. April 20, 1928, PCJJ, Holland, came through at good strength. 5SW was also on the air that morning. The Chelmsford Station has not been coming over too good this last morning or two, a bit on the weak side. Perhaps some of your readers could identify those stations I got and could not get call signs for.

P.S.—I might mention that I got 3LO, Melbourne, on a Crosley Pup one-valve last night at 11.0 p.m. I put that down to my good earth system. It came through fair phone strength, about R4.

Successful Reception.

J. A. Huxtable (Mount Eden, Auckland).—Often when reading your paper in the short-wave columns I find much to interest me, as from time to time some eager registers another short-wave station, and through the reports being published in the "Radio Record" with detail particulars, I have been successful in logging RFM, ANE, and PCJJ. Now it is up to me to add my experiences. About six weeks ago, Sunday, at 4 p.m., New Zealand time, I cleaned up a series of messages being sent out from the Westinghouse Manufacturing Company's station, Ontario, Canada, to the isolated people in Labrador. The following Sunday I searched, but failed to locate it again, but was successful in getting WGY, and on the last three Sundays this New York General Electric Company's station; I have received just as clear as I get IYA on crystal reception. A fortnight ago I kept a pencil and paper and doctored down each item as Mr. Barnes announced; since, I have posted the programme to WGY for confirming.

Last Sunday I heard the entire dance music programme relayed from the Rainbow Dance Room, Hotel Van Kel, Albany, New York. "Where we dance by candle light" (so said the announcer). Anyone knowing the

whereabouts of — Hill, a motor mechanic, whose mother has just died, notify WGY, New York.

To-day it took me quite an hour to clean up the reception. The announcer gave the station call as 2XAF, relaying dance music from the Crystal Dance Room, De — Hotel, Albany, New York.

Items: "One More Night," "Mary Ann." The dancers sang the chorus. My request: "Leave My Baby Alone."

"There is always a way to remember, But I can't find a way to forget The man that helped the band." By request: "Whispering," "My Buddy."

Signed off at 4.33 p.m., New Zealand time.

This company, I think, controls four more stations. Their wave-length is 31.4 metres.

Announcing is of no importance to this station, for while jazz music is being played often the announcer hurriedly makes the announcement, and I could not get the name of the hotel. The drummer always seemed to be prominent just at the critical moment.

WMAK, WGY, 2XAF, are three of their calls. If any reader knows anything of the method adopted by the General Electric Company of New York's stations I should be pleased to hear, as I am inquisitive.

Our Mail Bag

(Continued from Page 13.)

would not go so far as to say that they have reached perfection as regards the programmes. As for "Satisfied's" little joke about the oxophone, a thing which exists only in his, evidently, rather limited imagination, I think it was rather crude and even a little vulgar coming from one who has such refined tastes.

Hoping that "Satisfied" will now be sporting enough to sign his own name to any reply he should think necessary to make to this.

Artists Wanted.

Robert Radford (Johnsonville): In a recent issue of the "New Zealand Radio Record," April 6, 1928, page 5, in the top left-hand corner, I noticed an article headed, "Artists Wanted," and the leading phrase ending as follows, "Where are the new performers?" Would you grant me a small space in your "Record" by saying that the Broadcasting Companies of New Zealand ask for new performers in the hope that they will not come forward.

There are good singers in the Wellington district who have had years of first-class training and who have entered their names in the "book" and have been told they will be called upon, but that is months ago, and they are still waiting, and they will have to keep on waiting, for the simple reason that the broadcasting stations have got their own concert parties, and the said parties mean to stick to the radio—just glance through the weekly programme. So before amateurs can become perfect in the art of broadcasting they ought to be given a chance, and then perhaps they will receive the encouragement mentioned in your article.

Doug's Queries Answered.

Listener: In last week's issue of the "Radio Record" I noticed a few queries from "Doug." Perhaps the following may be of some assistance to him. In cases where he has quoted figures, such as 20—60, I take it the 20 is on the left-hand dial, and 60 on regeneration condenser.

Whistle on 96 is evidently 7ZL, Hobart.

Whistle on 20 is probably 3DB, Melbourne, on 255 metres.

Whistle on 30 is probably 2UW, Sydney.

Whistle on 64 is evidently 2GB, Sydney on 310 metres.

He heard whistles on 20 and 30 at 1.30 a.m. That would be midnight in Australia. I have heard stations like 3DB and 2UW working until well after midnight.

EXTRACTS FROM LETTERS

B.C.H. (Wellington): "Before closing I should like to say how very much my Hubby and I enjoy 2YA sessions. We get a great deal of fun and information from them, and fully appreciate all the radio people do for our amusement and entertainment. We have been intensely amused at the criticism you all get from time to time, but we are happy to note that it doesn't disturb our serenity. You evidently understand human nature. I believe it was Lady Astor who once said, 'If some people were given the best seat in Heaven they would complain there was a draught.' Personally, I should imagine it would be very, very difficult to estimate the amount of good radio does and can do, both now and in the future. It should prove a great blessing."

A.D.A. (Brisbane): "And now I have to give you the palm for having the best concert, or whatever you like to call your effort. I thought that our little bit of mud would be able to give the best turn-out seeing that we have more to choose from, but I must say you beat us."

4YA NOTES

(Continued from Page 7.)

be a splendid concert. The artists will be Miss Winnie McPeck (contralto), Miss Madge Yates (soprano), Mr. Charles Edwards, Mr. R. B. MacDonald and Mr. E. G. Bond.

An interesting address on "French Literature" will be given at 7.30 on Saturday by Dr. G. E. Thompson.

For Thursday even a comedy programme has been arranged, when good

DX WORLD'S CHAMPION

HAS HEARD 746 STATIONS

Mr. G. B. Van Buren, of 125 Ronada Avenue, Piedmont, U.S.A., has logged 746 broadcast stations, and he is now recognised as the world's champion broadcast listener.

Mr. Van Buren writes:—"John buys a radio set and he wants distance. It makes little difference about tone quality or volume. What he demands is the satisfaction of listening to the announcer on a distant station's programme. Tom demands a set with the avowed understanding that he is no DX hound (long-distance listener). He wants quality on locals; eventually he becomes an ardent worshipper of that great god DX, whose most devoted slave he will have the honour of being. This has resulted in a demand for the high-class receivers which we have on the market to-day—a radio that gives distance, tone quality, volume and selectivity."

Radio brings so much entertainment, education, amusement and enjoyment into the home, the camp, the speeding auto and train and everywhere man goes, it does not seem possible that anyone should be without a radio. Not only has radio brought us all of these things, but it is keeping the public posted on civic and international affairs throughout the world every hour.

Receives Many Inquiries.

I have been the recipient of hundreds of telephone calls and a mass of mail from all parts of the country—some from our foreign cousins as far west as Hawaii, all of whom requested me to tell more about my DX reception and further details about the equipment I utilize.

The fact that I have become the accepted world's DX champion is due, in large part, to the fact I am a crank on antenna systems. I am satisfied only with the best aerial and the best ground obtainable. Too many fans overlook this great importance. The proper grounding of the radio set is so important that you cannot afford to overlook it; in fact, it is more indispensable than the aerial.

Perfect Earth Necessary.

"If you wish to get results from your radio receiver you must have a perfect radio receiver you must have a PERFECT ground. Outside of the radio receiver itself, the ground is the most important, yet it is sadly neglected by countless fans. Local as well as distant reception depends upon an efficient pick-up system. The power that reaches the aerial from the broadcasting stations is so small that a little resistance prevents the station from coming in on the loudspeaker."

"The water-pipe ground, the gas-pipe and the steam-pipe, are merely hitching posts for electrical devices such as the electric light and telephone. The gas-pipe should never be used. Pipe grounds are known to run many feet before coming to earth contact, and they therefore do not make a true earth contact. Pipe grounds will average a resistance of from 1000 to 3000 ohms and even higher. Even when a ground clamp is attached at a distance above the ground, the intervening length of the pipe acts as a resistor. The steam radiator and its connecting pipes are not grounds for radio receivers by virtue of the fact that rubber gaskets are used to prevent the escape of steam. A good ground must have a positive earth contact, and be of low resistance. The grounds which I have just mentioned are of extremely high resistance."

Poor Earths.

"Interred Ford radiators, wash-boilers, dead B batteries, and other metals, are resistances, detrimental to good reception. They should not be used—they cause a loss of radio frequency currents, and these RF currents are very small at their best. What we do get we wish to conserve in every way possible and avoid losses, therefore getting away from resistance prevents loss. In other words, you MUST have a ground of the least possible resistance, making a true earth contact, and the lead-in being as short as possible."

"For a ground connection I am using what is known as the permanent radio ground. This is a chemical ground, and it gets me away from the out-of-date pipe grounds which are, as I have said, no more than hitching-posts for telephones, electric lights, and other electrical contrivances. This most marvellous invention was developed by C. H. Preston after many years of experience, and he has devoted his life work to lines of communication in a period of over twenty-five years of

humour, not necessarily Scottish, will be broadcast. Miss Roma Buss, Miss Billie Lorraine, Mr. Billy Gav, Mr. Percy James, Mr. Jack McNeil, Mr. J. McCaw, the Two Blue Ducks and Pastor W. D. More will contribute.

An excellent concert programme is scheduled for Friday evening at 4YA. A number of old favourites are to be sung—"The Admiral's Broom," "The Diver," "Linden Lea," "Rocked in the Cradle of the Deep," "Mountains of Mourne," "The Harp that Once," and others. Dunedin's fine artists contributing will be Mr. Bert Rawlinson, Miss Flora Williamson, Mr. Neil Black, Mrs. D. Carty, while flute and piano selections will be played by Mr. Charles E. Gibbons and by Miss Alice Wilson respectively. Savoy dance music will follow the studio concert.

The week-end concert will be up to the usual standard of 4YA's best. Miss Molly Vickers, Miss Agnes Guy, who will sing mezzo-soprano and soprano solos, Mr. Arthur Lanley (baritone), Miss Eva Judd (violin), Miss Muriel Caddy (piano) and Mr. P. J. Palmer (cello) are contributing.

wireless, railroad, and commercial telegraphy. This ground has been installed very recently on station KNX, and other installations are to be made very soon on KFWB, and a broadcasting station, which is soon to be under construction in Oakland. I think I have dwelt enough on the subject of grounds, and I hope this information will prove of value to all of you, as it has been my good fortune at one time to experience and personally wage a fight against counterpoise, even going so far as to mention the history of this "artificial ground," where and how it has been used in commercial radio work. Therefore I am greatly interested in a ground which gives true earth contact, which was sadly needed.

Describes His Earth.

"I shall give a brief outline of this earth. The earth is a copper cylinder containing eight different chemicals, which, when buried in the earth, permeate the adjacent ground, making positive contact and rendering high conductivity. That the chemicals contained within the instrument cause a spongy mass of copper growth within and without the container and collecting its own moisture, clearing up the radio frequency waves and thus permitting a clean, clear signal to be interpreted, is due to the chemical formula which neutralises the action of the sulphate upon the copper container, and rather than eat away the copper, as is the natural tendency of blue vitriol, it preserves the copper in its original state, which is, indeed, an accomplishment. This ground increases its efficiency with age."

The Aerial System.

"Now comes my aerial system. A dirty, rusty and corroded antenna, improperly insulated and erected, is a feature which should not be overlooked. The resistance in the aerial is a factor which must also be very low. To get down to low resistance, experts have developed a new wire, which may be used in single strand or in a cage-type aerial. This copper wire embodies a silver plate surface, as silver itself is the best known conductor to radio frequency signals. A gold-plated surface over the silver prevents corrosion, as it was found that silver-plated wire, when exposed to certain weather conditions, corroded, thus reducing the loss of signal strength. The name of the new wire, Gossilo, was coined by using the first syllable of the name of each of the metals employed—gold, silver, copper."

A BY-PASS condenser in the plate circuit of the detector valve will improve the operation of your receiver to a great extent.

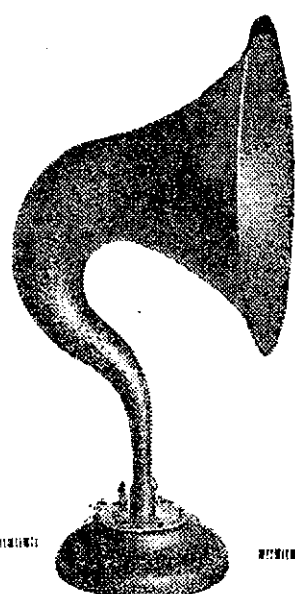
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The British A.J.S. Loudspeaker is now procurable at the remarkably low price of 42/6.

The A.J.S. Loudspeaker is standard equipment with the famous Courier 3-valve Set, and is well known for its flawless tone and full volume.

11in. FLARE.
19in. HIGH.

The A.J.S. is as handsome as it is efficient—a black matt finish preserves the good appearance of this all-British speaker. We advise you to secure your A.J.S. at this special low price.—If your regular dealer cannot supply you, write direct to us, and we will see that you are promptly supplied. The A.J.S. is 19in. high, with 11in. diameter flare.

Wholesale only from

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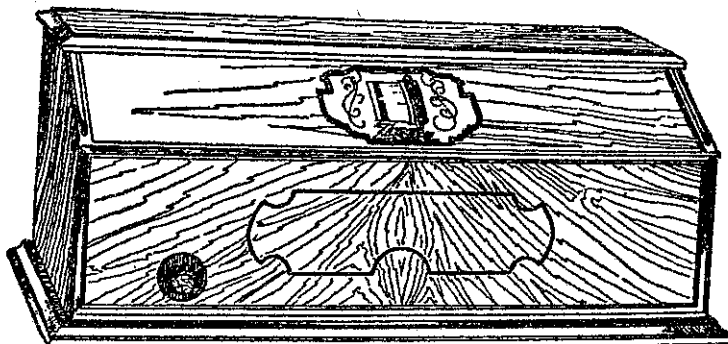
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A bit cheaper;
In short "a job!"
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ZENITH MODEL 11



The Model 11 is a bona fide 6-tube receiver with every tube a working tube. Many 6-tube receivers have only 5 effective working tubes, one being used for antenna coupling. The Model 11 has Zenith's own tubeless method of antenna coupling. Judged by the standards of many 6-tube sets, the Model 11 is the equivalent of 7 tubes. Single control electric lighted dial. Calibrated in both kilocycles and metres. 4 Zenith condensers permanently balanced on one shaft. Most 6-tube sets have 3 condensers. Battery operated, and economical in the use of batteries. Wired for power tube. Cabinet in beautiful brown mahogany veneer.

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—"THE HOUSE OF SERVICE"—WELLINGTON.

NEWS FOR THE CHILDREN

FAMOUS AIRMAN'S TALK TO CHILDREN

AN INTERESTING FLIGHT

The famous airman Captain Hinkler, when talking to the children of 2YA, Melbourne, gave them an interesting description of the wonderful things he saw on his long flight. Boys and girls of New Zealand who were not fortunate enough to be able to listen-in to Captain Hinkler will like to read of his adventures. He said:

Flying Kangaroo.

"I suppose you would like to know how I felt when I was away up in the air on my long journey to Australia. Well, I just felt that I was a flying kangaroo, coming home to my dear native land in big hops. It's a grand thing to feel that you are coming home. You know how you feel when you have been away for a holiday; what a good time you have when you are away, how you enjoy everything, new scenes, new playmates, new games, and all the rest of it, but after all there's nothing more enjoyable than the journey home. And let me tell you that the joy of home-coming is better than ever when you have been far away from your own country. Some day you'll experience this, and you will know how I felt when I reached Australian shores after my flight.

The Eternal City.

"What a lot of interesting places I saw on the way back. I wish I had time to tell you about them all, but this is impossible. I daresay most of you know that the first place I stopped at was Rome, more than 1000 miles from London. In those olden days the famous Coliseum was often a scene of great brilliancy during bull fights and many other contests. It was at the Coliseum also that the poor Christians were tortured. To-day the Coliseum is one of the very interesting sights of ancient Rome. Other ruins of famous buildings nearby are also preserved. What a grand old place it is, the Eternal City of the Seven Hills. I could imagine what it was like in the days of old, with the proud Roman citizens in their flowing togas, the ladies in their robes of cloth of gold, and the palm-bearing slaves, like living statues of ebony. I remembered that Rome was the birthplace of that great airman de Pinedo, and I thought of the great scene that must have taken place about two and a half years ago, when de Pinedo landed his 'plane on the waters of the Tiber after his long flight to Australia and Japan and home again.

Oranges and Lemons.

"The next place I called at was the island of Malta. That's the place to see, lovely gardens and beautiful fruit orchards and groves of lemons and oranges, all flourishing in the sunny clime of these parts. Malta has a very romantic history, and I advise you all to look it up and learn all about this wonderful island.

Arabian Nights.

"Now, after Malta was a long sea journey over the Mediterranean. It took me six hours to get to Benghazi, on the African coast, Tobruk, Ramleh, and Basra, and there you get some idea of the kind of country where the great camel trains used to plod along with their tinkling bells, carrying their freights of 'gold and gems and silken scarves.' It is the land of dates and spices and sweet oils. It makes you think of Ali Baba, the Golden Road to Samarkand, the ancient river of the Alana, and all the glitter and the mystery of the Arabian Nights.

"After a run down the Persian Gulf we come to India, first of all the town of Karachi, and then a big hop over to Cawnpore. Those of you who are learning history will remember that it was at Cawnpore that the treacherous Nana Sahib betrayed the British soldiers during the Indian Mutiny. Cawnpore is now a busy commercial city.

The Land of Chang.

"Next there was Calcutta. No doubt you have heard a good deal about that very important British outpost, and a very fine city it is. Now I must hurry along and take you across the Bay of Bengal to Rangoon, and on to Victoria Point. Did any of you see the picture called 'Chang'? Well, that would give you some idea of what the jungles of Siam and Burma are like. The very thought of it gives one the shivers.

Gateway of the East.

"All aboard now for Singapore, but on the way we pass Georgetown, on the island of Penang, another great British port, and one of the busiest places I saw all the way. And this reminds me there's a great treat in store for you. When passing over there I saw the British flying boats now on their way to Australia. These flying boats, four of them, are manned by members of the Royal Air Force, and they are due to arrive in Australia about June. Look out for them—it will be a great sight.

"Well, my time is nearly up, and I must hurry you through the Dutch East Indies down to Bima, where I hopped off for Australia. One thing about Bima shall never forget, and that was the squitoes. They nearly ate me alive,

(Continued in Column 5.)

Uncle Jasper and Spot bid Farewell to Radioland

Dear Children,

We always have good news, but to Paeroa. We are going to miss Spot. However, we will send a this, time we have some sad news Uncle Jasper and Spot very much, troop of fairies to cheer him on his for you. We always have bright and just at the time, too, when Felix journey to Paeroa. Here are some sunshine and smiles for you, but this time there is a shadow on our happy Radio Circle. Yet, do not be too sad, for Uncle Jasper would not like to see you in tears. He does not think there should be any tears in the eyes of children; and hasn't he put many a smile on your faces? Yes, it's about Uncle Jasper. Uncle Jasper and Spot are going away. How very unfortunate that is! They are not flying away to the Never Never Land that Peter Pan tells about, for someday we shall have them with us again. But Uncle Jasper is going quite a long way away from 2YA. He has received notice of his promotion in the Govern-

ment service and is being transferred was going to make friends with

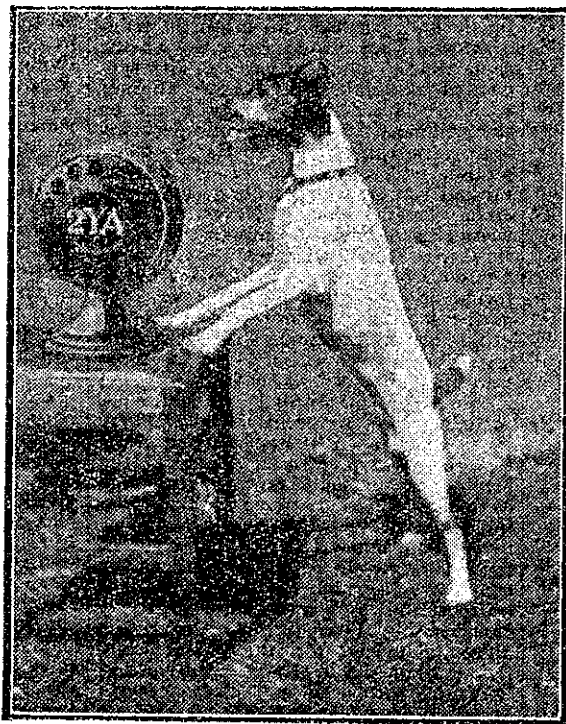


Photo shows Spot "broadcasting" from 2YA.

Some Letters of Felix the Cat to Spot of 2YA

Dear Uncle Jasper,—I wonder if you would accept me for your little friend? I hear you speak to the little boys and girls of Radio Land every Tuesday evening. I know you love little boys and girls and doggies. You may not like me, I am a big black pussy. Uncle Jasper, I am jealous—you never speak about pussies—only about dogs. I don't like dogs; one dog bit my tail nearly off once. I don't suppose Spot would bite a pussy's tail, but I know I should be afraid of him; and, oh, Uncle Jasper, I think Spot is very rude, and he "shows off." Last Saturday night I sat in our diningroom and listened to Spot talking and "showing off" for the little boys and girls at the hospital, and I heard you ask him to sit up for a biscuit, and when he caught it he crunched it with his teeth, and made me shudder. The other day when you took Spot with Aunt Dot to visit a farm, he did not behave himself; on the journey to the farm, riding in the car, Spot made a great fuss when the car rounded corners and made believe he was falling off the step—he did it so that you would notice him. I would have sat very still on your knee, Uncle Jasper. When you reached the farm I heard the great splash made by Spot when he jumped into the pond

and frightened the poor ducks, and when you left the farm you had to dry him with your handkerchief—he was so wet and dirty. I remember, too, the time you decorated him with a flower—flowers sent to Aunt Dot, and you—fancy a self-respecting dog allowing anyone to place a flower behind his ear—like a Tahiti belle—oh, Uncle Jasper! The other day, when you were speaking, I heard a terrible noise, and it was Spot talking very loudly in the studio.

Uncle Jasper, I am smooth and soft, and I am all black. I haven't one nasty spot like some people I know. Could you love me a little, Uncle Jasper? Anyway, one thing I know that Spot does not know, I understand French.—Your loving friend,

FELIX.

P.S.—I will listen-in every Tuesday until you answer my question. Don't you love nice, big, black, soft pussies better than rude doggies? I wouldn't chase rabbits and I would not interrupt Aunt Dot, either.

Dear Uncle Jasper,—My tail shakes with rightful wrath. I can hardly write. I hear that a strange cat (a very ordinary cat, I believe), giving his name as Felix, is a guest at 2YA. Aunt

Dot's message over the air leads me to believe that she took this intruder for me. I am tortured with jealousy! I am pure black. I know it is Spot's fault. I daresay that imposter is a friend of his; some cats have no pride. Spot introduced this stranger to Aunt Dot just to annoy me. I am still trembling with rage, but must not forget my manners. So I thank you, dear Uncle Jasper for speaking so nicely to me. That horrid Spot heard you whisper that you liked big, velvety, black pussies, and he was so cross. Uncle Jasper, Spot was very rude to me, when he spoke that Tuesday night, he simply roared at me. I could never repeat what he said. Oh, how I longed to scratch him, but all I could do was to snarl and hiss at the radio cabinet. Please thank sweet Aunt Dot for saying good night in cat language; she speaks cat divinely. I love her pretty voice. But she must not take every cat she sees, or hears stories about, for me.

Now, please, dear Uncle Jasper, I beg you to ask that strange cat to produce his passport. I mix in a very good set, and cannot have ordinary creatures taken for me. I kiss my paw to Aunt Dot.—Your exasperated

FELIX.

(Continued from Column 1.)

and I believe they would have had a go at the 'plane, too, if I hadn't stepped lively.

Home—The Last Hop.

"That brings us to the last hop, over the Timor Sea. Australia is in sight, see there at Darwin is the little monument to Ross Smith, my brother Australian, who made the first of all the flights to this country. Now we're home in dear old Australia. It didn't take us long, did it?

"Well, boys and girls, some day you'll all be taking the air like I did. Read up all you can about flying. Learn all about flying and the aeroplane as soon as you can, and remember this, you are Australians and you are Britishers, and we all must see that Britons lead the world in flying, as they do in so many other ways. I never lost sight of the good old Union Jack all the way out. It is our protection wherever we go. Look up to it, work for it, and let the world know that Britons are second to none."

THE COMING OF TELEVISION HOW IT WORKS

The miracle of sight by wireless has been achieved.

The famous Bell Telephone Company, which operates a huge network of thousands of miles of telephone lines in the United States, has one of the most remarkable research laboratories in the world. About a hundred of its men have been busy solving the problem of seeing by wireless.

The same laboratory has installed over a thousand instruments for telegraphing photographs, and so perfect are the results that it is almost impossible for an expert photographer to distinguish between the original picture and a copy of it sent 5000 miles by wire.

The Pencil of Light.

The Bell Telephone Company decided a few years ago to attack the gigantic problem of television, and they have now perfected a system by which it is possible for the whole audience of a theatre to watch on a screen about two feet square the movements or features of a person hundreds of miles away. So complete has been their work that in the view of experts there is no doubt that in a short time television will become as common a thing as the telegraphed picture.

This is the method by which the likeness of a face can be seen five hundred miles away. A narrow pencil of light is directed by means of a rapidly-moving piece of apparatus on to each tiny part in succession of the face of the person whose image is to be seen at the distant spot. As this pencil of light falls on each little bit of the face it passes over dark hair, light skin, dark eyes, white teeth, and so on, and from these various parts of the face the light is reflected on to three giant photo-electric cells, the biggest ever made.

Lamp Like a Chessboard.

These cells generate an electric current which changes in strength with each change of the light reflected from the face. The varying electric current is sent on a wireless carrier wave to the distant station. Here it is picked up and passed into a remarkable kind of electric lamp, consisting of a huge grid about two feet square, which can be illuminated in any one of its 2500 tiny parts.

It is like a large chessboard; and as the pencil of light at the sending instrument is focussed on each bit of the face so the electric current received by wireless from the photo-electric cell causes the corresponding tiny portion of this neon lamp grid to glow with corresponding brightness.

18 Times a Second.

The point of this pencil of light traces over the whole of the face in a fraction of a second, repeating its performance 18 times in a second. The result is that those watching the grid of the neon lamp see what amounts to a kinematograph picture of the sitter, whose face can be clearly seen many miles away.

Although at present only simple subjects, such as the head or shoulders, can be seen by wireless, so complete has been the work of the Bell Telephone Company that it can be a matter of time only before television becomes common and far more elaborate subjects are dealt with.

A GIANT PIE

Not even the vast kitchen ranges of the Mansion House could furnish such a pie as that set before the Lord Mayor of London and the Lady Mayoress at the Albert Hall.

Six men were required to draw it forward, and the sides were sealed by means of step-ladders. When the "feast" was spread there came an imposing procession of nursery rhyme characters.

The pie was opened to the accompaniment of the singing of "Four-and-twenty Blackbirds" by a choir of 1200. The blackbirds were, of course, four-and-twenty little boys.

This was one of many delightful surprises provided by the boys and girls from various branches of Dr. Barnardo's Homes at the annual festival.

Children's Sessions for Next Week

1YA.—TUESDAY, MAY 1.—Uncle George with us again, with his charming stories. The pupils of Miss Blamires will also assist with songs and piano items. Listen for the Tiny Tots playing their duet.

WEDNESDAY.—Our ever-welcome Uncle Tom will have more jokes and fun for young and old.

THURSDAY.—Here's Peter Pan. And more good news—Bayfield Choir will entertain the little folk in Radioland.

FRIDAY.—Nod provides the stories and birthday greetings. Cousins will play the piano and violin.

SATURDAY.—Guess what Cinderella has in her glass slipper to night? Some clever little performers, and, oo! Uncle Mack with his jungle stories.

AT 2YA.

MONDAY, APRIL 30, brings the Thorndon Normal School on the air again. They are merry friends. Auntie Gwen and Uncle Jeff will keep the ball rolling—choruses, dialogue, and stories.

TUESDAY.—Pupils from the Island Bay School are making their first appearance, or audition, shall we say. Now, listen in, little ones, for new surprise.

THURSDAY.—On May 3, Uncle Sandy will have a jolly troupe of little people from Rongotai College. They are new friends, too, and ever so welcome to our circle.

FRIDAY.—Uncle Ernest and our party from the Technical College. Hurrah for choruses, novelties and stories by all the gay little entertainers.

SATURDAY.—Uncle Toby and Aunt Dot, with their treasure box of joy. Mrs. Halligan's pupils are coming to join in the fun. Songs and sketches and "joy germs."

3YA.

MONDAY, APRIL 30.—Hello! Hello! Uncle Jack here, and Aunt Edna, too. Are all you children ready for the story hour and the dear old good-night songs?

WEDNESDAY.—"Here we are again," says Uncle Peter. "Well, Mother

Hubbard, where are your pretty songs for the little ones?" We are having some quartets, also, "Wee! may the keel row," and others.

THURSDAY.—Chuckie with his chirpy chuckles. And the Marist boys are visiting us again, singing songs and choruses for the children

FRIDAY.—Aunt Pat and "Scatterjoy," with the help of a group of little Brownies, will keep the children happy and interested for this bedtime hour. Mr. Pegg, from the Y.M.C.A., is coming along to tell you all about some fine games and how to keep fit and well.

SATURDAY.—Uncle Sam and Aunt May, with their infectious merry-making and jolly music, will keep you happy and bright to-night.

SUNDAY.—To-night we have the Children's Song Service, conducted by Uncle Sam, and the hymns will be sung by the scholars from the Moorhouse Avenue Church of Christ Sunday School.

Auckland Leaders in Music Endorse Company's Committee Scheme

Comprehensive Committee Appointed by Enthusiastic Meeting

A comprehensive meeting of representatives of musical and dramatic committees was held at IYA Auckland on Friday last to discuss the formation of an advisory committee. Present: Madame Irene Ainsley (Ainsley Operatic Society), Messrs. T. Garland (Auckland Savage Club), G. T. Lee (Aeolian Orchestra), N. R. McRobie (Royal Auckland Choir), V. Trask (Athenian Club), Karl Atkinson (Auckland Gramophone Society), J. D. Crawford (Auckland Orphans' Club), C. B. Plummer (Auckland Choral Society), L. E. Lambert (Bohemian Orchestra), J. F. Montague (Auckland Comedy Players), Dr. Kenneth Phillips (Society of Musicians), A. R. Harris (general manager, Radio Broadcasting Co. N.Z.), W. J. Bellingham (Director of Music, Radio Broadcasting Co. N.Z.), S. J. Hayden (Station Director at IYA). On the motion of Mr. Plummer, seconded by Mr. Montague, Mr. Karl Atkinson was unanimously elected to the chair.

The Company's Policy.

Mr. A. R. Harris, general manager of the Broadcasting Company, in outlining the proposals to form a musical and dramatic committee said the company was guided in this matter by the fact that certain activities of the Broadcasting Company were closely allied with the aims and objects of other public organisations. In the circumstances the directors felt that some kind of public relationship between these organisations and the Broadcasting Company would be of particular interest to the societies and of national benefit to the public at large. A workable arrangement, however, was not a simple matter. The company did not wish those present to think that it wanted free advice as to how to run its business. As a matter of fact it employed a competent staff of experts for this work, and had also retained the services of overseas authorities for consultation on any important matters. These experts also kept the company posted on any new ideas developing elsewhere. He knew that those present had for many years given a great amount of their time to maintaining and developing interest in musical and dramatic art. He assumed therefore, representatives were interested to learn what effect broadcasting would have on their past efforts or future endeavours. As this applied to other organisations of a definite type, the difficulty was to provide a medium for discussion satisfactory to all parties. The General Advisory Board idea introduced in other countries was more political than practical.

He was of opinion that this was due to diversity of interests. These interests could not all be represented on such a board, and in any case were so opposed to one another that little if any benefit resulted as far as the actual service was concerned. On the other hand certain work of the Broadcasting Company touched upon activities already being undertaken in the more customary way by well defined public organisations. These could be classified into definite types, all organised for specific objects of an ideal nature. The company had therefore decided that committees consisting of allied societies were the only satisfactory method of obtaining worth while results. Such an arrangement would be fundamental and on the lines of the company's policy in respect to the other phases of its programme. In arranging programme sessions psychological, as well as other factors had been considered and there was a logical reason for a certain type of programme at a certain hour, whether that session was afternoon, children's, news and information, or entertainment. For instance, news and information session has been fixed at 7.8 p.m., because adults in general after a day's work are more susceptible at that particular time of the day to broadcasts of a newsy or instructional character. The same condition of affairs applied to the 8 p.m. to 10 p.m. session, which had been fixed for entertainment entirely. Types of programme are also organised fundamentally. It was apparent that with the varying types of individuals that make up a broadcast audience it was impossible to cater for all or even the majority of tastes at one time. The company had, therefore, decided on the plan of endeavouring to cater for a definite section of listeners at a definite time, and another section on the following evening and so forth, in the hope of satisfying the majority at one time or another. As far as possible programmes are arranged so as to present a different type of programme each night in the week. These had been classified as classical, opera and heavy, band and light ballads, popular, vaudeville, and sacred nights. Under this arrangement the company had distinct and definite programmes. This system opened the way for the co-operation of committees of allied interests. Church service committees consisting of representatives of the more prominent denominations, children's session committees, consisting of representatives of Children's Welfare Leagues were functioning to the benefit of all parties and listeners generally. The representatives present were then invited to discuss the formation of a IYA Auckland Musical and

Dramatic Committee, on the lines of the constitution submitted.

Musical Director's Remarks.

Mr. W. J. Bellingham said that the committee representing as it did the leading organisations of their kind in the city, would naturally be interested in stimulating the higher forms of music and art from an aesthetic point of view. They would recognise at the same time that the majority of listeners wanted entertainment of the lighter variety. This demand would be met by the company, and was being provided for by the company's experts in collaboration with other authorities. At the present time it was receiving every possible consideration. Nevertheless it was being discovered through the world that with the development of broadcasting a demand was arising for better forms of entertainment. This was due to the fact that in large doses, lighter forms of entertainment became satiating. It was recognised that in some countries broadcasting had to a great extent been prostituted by jazz. A prominent judge recently said: "There is no worse form of monopoly in America than the present monopoly of the air by jazz music." Several years ago American plebsites gave approximately 80 per cent. votes to jazz, whilst a recent vote showed only 5 per cent. in favour. It would be the concern of the committee to watch the development of broadcasting and co-operate with the Broadcasting Company, to foster the aims and objects for which their societies existed. The Radio Broadcasting Company proposed to place certain hours at the disposal of the various societies. The committee would be in a position officially to represent the responsible musical and dramatic organisations and their considered opinions would carry more weight than the private opinions of individual members. They would thus be able to assist to preserve a balance between pure vaudeville on the one hand and their ideals of art on the other.

Good Music First.

The chairman, Mr. Karl Atkinson remarked that so far as he was concerned the interests of good music were always placed first and he regarded with favour any scheme which would further such interests. Although broadcasting was a new field or comparatively so, he felt that the science had an immense power to bring before the public and assist in the appreciation of the higher and other forms of music, and a committee as proposed, would undoubtedly reflect to the advantage of the societies concerned.

Dr. Kenneth Phillips, who recently returned from Europe, was fully in accord with the proposal. He was of opinion that the local programmes compared more than favourably with those from Australia and were also on a par with those broadcast in England, bearing in mind the relative resources of talent available. He had listened to programmes with interest and thought that the majority of tastes were well catered for. However he had one or two suggestions to make which he felt would make for further improvement. Up to the present he had noted no orchestra renditions of the better class of work. Many of the symphonies of Beethoven and Mozart lent themselves peculiarly to orchestral performance, particularly such compositions as Mozart's Symphony in G Minor, Figaro, and the overture to Don Giovanni. The average person could be delighted with such works which were by no means too heavy and could be easily appreciated. English music of the present day composers should form a distinct part of the work. Nevertheless the Spanish, Russian and French school should not be forgotten since it was only by the study of all nationals that a wide outlook in music could be obtained. Dr. Phillips regretted that German Lieder was so seldom heard as this comprised some of the most beautiful vocal music. Another matter was the question of musical lectures. These could well be included in the programmes on the lines of those at present appearing on the programmes in England. These lectures could be given by recognised authorities and might with advantage be illustrated with excerpts from the composer's works. However, he felt that it would not be advisable to prolong such lectures beyond forty-five minutes as the interest of the average listener had to be maintained. The societies should not regard the rendering of assistance on these lines from a restricted viewpoint, but should be prepared to assist the furtherance of musical appreciation through the medium of radio broadcasting as well as by means of their own organisations. The remarks and lectures from examiners visiting the city should prove a valuable adjunct and comment from these gentlemen on the ability of candidates offering for examination would be invaluable to those concerned.

Value of Orchestras.

Mr. C. B. Plummer agreed with Dr. Phillips's remarks concerning orchestras and considered that orchestral accompaniments to vocal operatic rendi-

tions by quartets and double quartets should be aimed at.

Mr. Bellingham pointed out that the company had already completed arrangements with the leading performers of Wellington to form an orchestra for IYA. However, whilst appreciating Mr. Plummer's suggestion regarding accompaniments for operas, the difficulty was to secure orchestral parts for this class of work. It would be necessary for manuscript orchestrations to be made and some of these were already in hand.

Mr. L. E. Lambert said that an orchestra on the lines of that arranged at Wellington was a distinct advance, and although the IYA orchestra would at the outset comprise ten performers this would be quite sufficient to faithfully interpret the class of music referred to. This was amply borne out by the small orchestras at present recording for the gramophone companies. He thought the societies were indebted to the company for the opportunity offered in the contemplated forming of such a committee.

Messrs. J. D. Crawford and T. T. Garland considered the arrangement and presentation of studio programmes by their respective clubs would be a welcome adjunct.

Mr. J. F. Montague mentioned the interest that would accrue to the dramatic societies and thought that the rendering of short plays and sketches would add variety.

Madame Irene Ainsley also touched on the operatic aspect of the matter.

Committee Formed.

The chairman, Mr. Karl Atkinson, said that from the suggestions already heard the proposed committee would obviously be of immense benefit to listeners the societies and the company.

The following motion was then put to the meeting and carried unanimously:—

"That this conference approve of the Radio Broadcasting Company's proposals for the formation of a IYA musical and dramatic committee for the purpose of stimulating interest in musical and dramatic arts and that those present form themselves into a committee."

The proposed constitution was then discussed in detail and carried by the committee, and it was decided that the first committee meeting be held on Friday, May 4. The general manager, Mr. A. R. Harris, thanked the delegates for their presence, and a vote of thanks to the chairman concluded a very enthusiastic meeting.

Notes from Auckland

AFTER the summer of excitement created by the public meeting convened by the local Listeners' League, wireless enthusiasts in Auckland have settled down in a generally satisfied frame of mind to enjoy the nightly programmes from IYA and from other stations further afield, but with little better to offer. Though the Auckland listener does a growl occasionally, either verbally or in the columns of the local dailies, his is not the frame of mind that is disgruntled, and he has been quick to renew his license. Radio will not wane here. It has too firm a hold upon public taste, and the number of converts to its ranks is increasing daily.

THE first of the public relations committees, the one which advises regarding the broadcasting of church services, has got to work in earnest. It has made a thoroughly satisfying allotment of the times available to religious bodies, and adherents of various denominations will now know exactly when the tenets of their own faith will be on the air. By this work alone the committee has well justified its creation.

PROBABLY the best series of lectures ever arranged for IYA is that upon the story of our own country, so ably delivered by Mr. A. B. Chappell. The subject matter of the lectures must have occasioned much research, and their interesting presentation has held the attention of thousands, who previously knew far too little of the fascinating story of their own land. The lectures should be preserved in print.

THE least appreciated of all the good things broadcast from Auckland seemed to be the regular item by the studio trio, which, for a beginning, often owed the uninitiated by its correctly given title. The craze for jazz is very strong in the light-hearted northern city, and there were many whose musical knowledge did not extend beyond these realms of syncopation. They expected the trio to come down to this level, and when it did not do so they complained. Now, however, the painstaking efforts of the three instrumentalists are having their effect. Listeners are being educated to the beauties of classical music, with the result that vituperation is giving place to appreciation, and a appreciation of a steady growth. The trio is winning its way to a popularity that, according to the man in the street, formerly it could never attain.

THE weekly operatic excerpts are always enjoyable, and they too are improving each time. Listeners probably fail to realise the amount of work and enthusiasm required to produce such broadcasts weekly. They owe a debt of gratitude to Madame Ainsley for her untiring efforts in this field of their entertainment.

OF course the "star turn" from IYA is the relaying of the Municipal Band, and there are few sets not in use when the band is on the air. It has an appeal to all, and those who have explored thoroughly the broadcasts from all other stations which can be regularly picked up in New Zealand, are unanimous that they hear nothing else in the way of brass and reeds to equal it. Auckland is justly proud of its own civic band.

MOST impressive was the relay of the dedication service last Sunday night, when the "Toc H" ritual was excellently handled. No listener could fail to be impressed by the dignity and the solemnity of the occasion, so ably conveyed from church to the seclusion of the home.

DURING the coming week Aucklanders will be able to enjoy two Shakespearean nights, and to make comparisons. On Monday night, when the local station is silent, there will be a rush to tune in IYA, while on the following evening, the lucky possessors of valve sets will be able to sit back and say "There, I told you so. Our programmes are quite as good as the Wellington ones."

RUSSIAN STATIONS

SCHEDULE OF OPERATION

ADVICE TO MR. WATERS.

When a new powerful Russian short-wave broadcasting station came on the air last June, says the "Manawatu Standard," there was considerable speculation and discussion as to its identity, but when Mr. W. A. Waters, with the aid of Mr. M. Zoloff, of Bunnythorpe, ascertained that it was RFN, Khabarovsk, the statement was disputed by several Press radio writers in New Zealand. Subsequently, Mr. Waters received a post-card from the station in response to a cable sent, which proved the accuracy of the information previously published in the "Standard," and a letter has now been received which gives some interesting information on the broadcasting activities of Russia, or the Union of Soviet Socialist Republics (USSR) as Russia is now called. The letter reads as follows:—

Dear Sir,—We thank you very much for your cable and letter of October 31 with a newspaper cutting. In answer to your cable we have sent you a card. Our station is regularly transmitting from 10-IX (September). Before this time we have transmitted tests on several wave-lengths from Yuny (June). For the tests we have used the call letters RFN, and from September our call letters are RFM. We see that you at New Zealand have no indications about the broadcasting in the Union of Soviet Socialist Republics. On this day in the U.S.S.R. we have about 60 broadcasting stations in operation and about 10 to be erected. The most powerful stations are: Four in Moscow 40, 25, 12 and 4 KLW; in Leningrad, Petersburg, 10 KLW; Kharkov 15 and 4 KLW; Bakou 25 KLW; the rest of stations are 4 and 1.2 KLW. All these stations have the wave-length 450-1700 M. (metres). (KLW is Kilowatts.) Of short-wave regular broadcasting stations in operation we have only ours at Khabarovsk and some number of stations on phone for testing. Our town Khabarovsk is the capital of Far East Province of the U.S.S.R. and the destination of our broadcasting is to cover the whole of our large province from Baikal Lake till Behring Strait, between Asia and America. It is a surface 4000 KLW in radius. (1 Kilometer is 1/2 mile approximately). At this time we have had reports about receiving our station on the loudspeaker from Canada, California, New Zealand, Australia, Bruxelles and the whole territory of U.S.S.R. The largest distance is New Zealand, 11,000 KLW (6840 miles). From February 10 we have begun to transmit on 70.1 M. and would be very glad to have some reports about reception, also extracts or whole numbers of your newspapers or journals, wherein anything is written about this matter. I beg your pardon for my bad English, writing and expressions. With best wishes, Bergman, Chief of Post and Telegraph Administration of F.R. Province, U.S.S.R.

In addition to the letter, a post-card was enclosed, giving the new times of regular transmission, which will be of interest to radio amateurs as the station can be heard on the loudspeaker every night in New Zealand. The times given in the post-card are Greenwich mean time, but have been corrected to New Zealand time by Mr. Waters as follows:—

REGULAR TRANSMISSION.

Monday	9.30 p.m. N.Z. time
Tuesday	9.30 p.m. "
Wednesday	Silent day. "
Thursday	8.30 p.m. "
Friday	9.30 p.m. "
Saturday	9.30 p.m. "
Sunday	2.30 p.m. and 8.30 p.m. "

The regular wave-length after tests were completed in September was 60.2

metres, but from February 10 it was changed to 70.1 metres, at which wave-length it now operates. Khabarovsk is practically on the same longitude as Adelaide, so that the time in Khabarovsk is about 2 hours behind New Zealand on the same day. The exact time zone used by Khabarovsk is not known in Palmerston North, as in all the announcements Khabarovsk refers to Moscow times as a reference point for the Russian listeners.

CONFERENCE BY RADIO

A GREAT SUCCESS

We were recently told by cable of the successful holding of a joint conference simultaneously in New York and London on the part of the American and British Institutes of Electrical Engineers.

The following from an American journal gives a fuller account of the proceedings:—

With the Atlantic Ocean between them, the American and British Institutes of Electrical Engineers have just held a joint session in which radio telephone bridged the gap as completely as if the meetings had been in the same room.

For the first time in history, a presiding officer on a London platform introduced a speaker in New York, and both audiences, physically separated by more than 3000 miles, heard the entire proceedings simultaneously.

So successful was the demonstration that the New York engineers probably heard more of what went on in London than did the British group. Through the microphone there were audible the whispered conversations which passed between officers of the British institute while the speaking was in progress. So accurate and rapid was the transmission that the New York group became aware of the applause in London for one of the American speeches even before those in the lecturer's presence here began to clap their hands at the conclusion of his talk.

The arrangement to "suppress the Atlantic" was made by the British Post Office and the American Telephone and Telegraph Company. The demonstration formed one of the features of the mid-winter convention of the American Institute of Electrical Engineers in the engineering auditorium here and the session of the British group on the Victoria embankment in London.

A resolution, citing the significance of the "new international assembly" of the engineering groups, was introduced

in New York by Brigadier-General John J. Carty, vice-president of the American Telephone and Telegraph Company. It was seconded almost immediately in London by Sir Oliver Lodge. It was passed by acclamation in both sections of the meeting.

"This meeting," the resolution read, "wishes to express its feelings of deep satisfaction that, by the electrical transmission of the spoken word, these two national societies have been brought together in this new form of international assembly, which should prove a powerful agency in the increase of good-will and understanding among the nations."

Bancroft Gherardi, president of the American Institute; Dr. Frank B. Jewett, president of the Bell Telephone Laboratories; Colonel Purves, head of the British Post Office; and Sir Oliver Lodge were among the engineers who spoke to the two gatherings.

Archibald Page, president of the British Institute of Engineers, presided.

NOVEL BROADCAST

SOUNDS OF NERVES.

A United States Associated Press message from Des Moines, dated March 15, stated: "Two University of Iowa professors, after three years of experimentation have announced a plan to broadcast the sound of nerve currents of the human body. The men are Dr. Lee E. Travis, assistant professor in psychology, and Theodore Hunter, technician in speech pathology. They will broadcast from the station WHUI, the University station, on the night of April 15."

The minute sound made by the current that carries nerve reactions from muscles and organs of the body to the brain or vice versa, has been measured by the scientists. The amplifier used in broadcasting will magnify the sound 8,000,000 times.

The apparatus used in experiments consist of two electrodes which are fastened to the subject, an amplifier, an oscillograph which records the action of the nerve currents and a motion picture camera which makes a permanent record of the experiment."

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