

AUSTRALIAN PROGRAMMES

For the benefit of listeners to whom our paper gets in time we give the evening programmes of 2BL, Sydney (353 metres) for the rest of this week. This is the only station whose programmes the mail has brought us in time.

WEDNESDAY, DECEMBER 7.

8 p.m.: G.P.O. clock and chimes; Broadcasters' topical chorus. 8.3: Miss Heather Kinnaird (contralto songs). 8.40: Mr. Googs Hanlon (novelty jazz pianist). 8.47: Mr. Douglas Graham (Scottish comedian). 8.54: The Canterbury District Band (bandmaster, Mr. Stan. Nicholls). Broadcast from Baker's Hall, Campsie. 8.44: Mr. Norman Wright (tenor songs). 8.51: Broadcasters' all-sports expert will talk on "Boxing, Golf, and General Sporting News." 9: Weather report and forecast by courtesy of Mr. O. J. Mares, Government meteorologist. 9.7: Mr. Googs Hanlon (jazz numbers on the piano). 9.14: Miss Heather Kinnaird. 9.21: The Canterbury District Band (classical and popular selections). 9.41: Resume of racing results; greyhound coursing. 9.47: Mr. Douglas Graham. 9.51: Mr. Norman Wright. 9.58: Resume of following day's programme. 10: G.P.O. clock and chimes. 10.1: Dorothy Manning and Harry Graham present humour and harmony. 10.15: Dance music by Danny Hogan's Frisco Six, transmitting from the ballroom of the Bond Casino during intervals between dances. "Sun" news will be read from the studio. 11: G.P.O. clock and chimes; National Anthem.

THURSDAY, DECEMBER 8.

8 p.m.: G.P.O. clock and chimes; Broadcasters' topical chorus; an hour's programme presented by Home Recreations. Limited. 8.3: The Salomela Dance Orchestra. 8.13: Madame Goossens Viceroy (soprano), in selections from her repertoire. 8.23: The Salomela Dance Orchestra. 8.33: Mr. Robert Turner (entertainer), humorous and dramatic recitations, assisted by Mrs. Goossens Viceroy, in further selections from her repertoire. 8.50: The Salomela Dance Orchestra. 9: G.P.O. clock and chimes. 9.1: Weather report and forecast, by courtesy of Mr. O. J. Mares, Government meteorologist. 9.2: From the Wemyss Street Hall, Marrickville, Salvation Army Band (bandmaster, Mr. H. Knight). 9.22: From the studio, Mr. Robert Turner (entertainer), humorous recitation. 9.29: Mr. Moore McMahon (violin solos). 9.36: From Wemyss Street Hall, Marrickville Salvation Army Band. 9.56: Resume of following day's programme. 9.59: Mr. Bert Gilbert (comedian) assisted by Ivy Ray, presents another adventure of Mr. Hopcroft. 10.14: Mr. Moore McMahon. 10.21: Dance music by Cyril Kaye and the Wentworth Cafe Orchestra, broadcast from the ballroom of the Wentworth; during intervals between dances news items by courtesy of the "Sun" newspapers will be read from the studio. 11.30: G.P.O. clock and chimes; National Anthem.

FRIDAY, DECEMBER 9.

8 p.m.: G.P.O. clock and chimes; Broadcasters' topical chorus. 8.3: From the King's Hall Hunter Street, the Cheero Girls, under the direction of Mrs. Bennett White. 9: G.P.O. clock and chimes; from the Stadium, a description by Mr. Basil Kirke of the champion boxing contest. 9.45: From the studio, weather report and forecast, by courtesy of Mr. O. J. Mares, Government meteorologist. 9.46: Broadcasters' all-sports expert will talk on "Cricket." 10: G.P.O. clock and chimes. 10.1: The sporting editor of the "Sun" will talk on the prospects of Saturday racing. 10.29: From the ballroom of the Bond Casino, dance music by Danny Hogan's Frisco Six; during the intervals between the dances news items by courtesy of the "Sun" newspapers will be read from the studio. 11: G.P.O. clock and chimes; National Anthem.

SATURDAY, DECEMBER 10.

8 p.m.: G.P.O. clock and chimes; Broadcasters' topical chorus. 8.3: King's Mandolin Orchestra, under the direction of Mr. C. C. King. 8.10: Mr. Roger Jones

(baritone songs). 8.17: Miss Bebe Scott (soubrette and child impersonator). 8.24: Mr. Kyrie Sylvaney (dramatic artist). 8.31: Dance music by Cyril Kaye and the Wentworth Cafe Orchestra, transmitting from the ballroom of the Wentworth. 8.41: Miss Pauline Harford Foster (soprano songs). 8.49: Mr. G. O. King (mando-cello solos). 8.55: Mr. Roger Jones. 9.2: Dance music by Cyril Kaye and the Wentworth Cafe Orchestra. 9.12: King's Mandolin Orchestra. 9.19: Dance music by Cyril Kaye and the Wentworth Cafe Orchestra. 9.28: Resume of the racing events, greyhound coursing. Epping. 9.35: Mr. G. O. King (mando-cello solos). 9.40: Dance music by Cyril Kaye and the Wentworth Cafe Orchestra. 9.50: Miss Pauline Harford Foster. 9.57: Resume of following day's programme. 10: G.P.O. clock and chimes. 10.1: Miss Bebe Scott and Mr. Kyrie Sylvaney present a humorous sketch. 10.11: Another resume of the racing events, greyhound coursing. Epping. 10.15: Dance music by Cyril Kaye and the Wentworth Cafe Orchestra, transmitting from the ballroom of the Wentworth; during intervals between dances "Sun" news will be read from the studio. 11: G.P.O. clock and chimes; National Anthem.

SUNDAY, DECEMBER 11.

10.45 a.m.: Special news service. 11: Service broadcast from St. Jude's Church of England, Randwick; address by Rev. Canon Oake. 12.15 p.m.: Close down. 2 p.m.: G.P.O. clock and chimes. 2.1: Session for children in hospitals. 2.15: Recital by courtesy of the H.M.V. Gramophone Company. 2.45: Information service. 3: G.P.O. clock and chimes; close down. 3.30: G.P.O. clock and chimes; Bible class, conducted by Mr. W. "Cairo" Bradley. 4: From the Methodist Church, Leichhardt, a pleasant hour with the Central Methodist Mission, Leichhardt. 5: G.P.O. clock and chimes; close down. 5.45: G.P.O. clock and chimes. 5.46: Children's service from the studio. 7: Service broadcast from Chalmers Presbyterian Church. 8.30: From the Manresa Hall, North Sydney a band recital by the North Sydney Tramway Band (bandmaster, Mr. W. Barnes). 9.15: Weather report and forecast, by courtesy of Mr. O. J. Mares, Government meteorologist. 9.16: Broadcasters' Instrumental Trio—Dulcie Blair (violin), Bryce Carter (cello), G. Vern. Barnett (piano). 9.26: "Wind Flowers," a song cycle composed by Arthur Somervell, presented under the direction of Mr. G. Vern Barnett. Helena Stewart (soprano), Amy Ostinga (contralto), Lance Jeffrey (tenor), Peter Sutherland (bass). 9.40: Quartet, "Twist Me a Crown of Windflowers," quartet. "High Over the Breakers," contralto solo. "The Wind Has Such a Rainy Sound," quartet. "Hope is Like a Harebell," duet. "Two Doves on the Self-Same Branches," quartet. "When Soft Voices Die," tenor solo and quartet. "When the Mounting Skylark Sings," quartet. "Going to Bed," bass solo and quartet. "Windy Night," finale. "All Around the House is the Jet Black Night." 10: G.P.O. clock and chimes. 10.5: Broadcasters' Instrumental Trio. 10.15: G.P.O. clock and chimes; National Anthem.

OTAKI COLLEGE RELAY

OUTSTANDING SUCCESS.

The relay by 2YA from the Otaki Maori College last week was brilliantly successful, and much appreciation has been expressed by listeners.

This is a typical letter:—"Just a small space if you would grant it to me about the Otaki Maori College concert relayed last week. I have heard one or two comments on the concert, and they are of the same opinion as myself. The music and Maori singing was a real treat, and we only hope the Maori College will be permitted to favour us with some more of their concerts, which would be looked forward to as a treat."

A GOOD AERIAL AND CORRECT EARTH

USEFUL ADVICE FOR BEGINNERS.

If the receiving set is to be located in a country district at a considerable distance from a local station (says the Melbourne "Listener-In") the degree of selectivity is not a paramount consideration, as interference is not to be expected, but the sensitivity of the set to signals from distant stations is a feature which probably will be greatly desired. Under these conditions an aerial 100 feet or more in length can be employed to advantage. This aerial should consist of a single wire supported at least thirty feet above the ground and located in such a position that it is not near any large objects. The lead-in may be a single wire anywhere from ten to thirty-five feet in length.

If, on the other hand, the receiver is to be installed in a city where interference may be expected from several powerful local broadcasting stations, telephone, electric light and power wires, tramways, generator plant, and one hundred and one other causes, it will usually be found necessary to employ a very short aerial. In some cases a single wire about sixty feet in length will best answer the requirements, and in extreme cases it may be found necessary to use one not more than forty feet long.

For Suburban Area.

Under average conditions in a suburban district an outside aerial consisting of a single wire approximately eighty feet in length will be found most satisfactory, and it is recommended that this size aerial be tried by all persons installing a receiver for the first time. If it is found that interference cannot be overcome by manipulating the tuning controls of the receiver, it may be necessary to reduce the length. However, it should not be shortened any more than necessary to eliminate the interference.

On the other hand, if no trouble is experienced from interference, the sensitivity of the set may be improved by adding to the length. When erecting this aerial every effort should be made to see that it does not pass near to any object which would be apt to absorb electrical energy. The lead-in wire to be used in connection with the antenna may be from 15 to 20 feet in length, thus making the over-all length of the aerial and lead-in from 95 to 100 feet.

Reliable Support.

Another point to consider is the method of support. Care should be taken to see that the wire is tightly stretched, and also that the screw eyes or other terminals are attached to a non-moving object.

With regard to insulation, it is most important that the "free" end of the aerial should be well insulated, for at this end the voltages set up in the aerial by the incoming signals are at the highest value. This does not mean, of course, that the insulation of the lead-in end of the aerial should be neglected.

The Earth Must be Good.

The earth is perhaps even more neglected than the aerial, a poor earth often being the unsuspected cause of insensitivity and unselectivity. The most usual symptoms of a poor earth, assuming all other things to be above suspicion, are poor signal strength and lack of sensitivity, together with flat tuning. A poor earth is tantamount to introducing a resistance in series with the aerial, thereby bringing about an appreciable loss of sensitivity.

Instability is also introduced for the reason that the earth terminal of the receiver is not actually at earth potential as it should be.

Types of Earth.

If from a variety of circumstances outside the control of the reader it is impossible to erect a good aerial, then the inefficiency of the latter can be offset to a large extent by the use of a good earth. The question now arises: Which of the various types of earths are the best? There are the commonly used water-pipe earth, the outside buried earth, the counterpoise earth, and others too numerous to mention. Generally speaking, the outside buried earth is better than the water-pipe earth, if the former is obtained by a short earth lead. Otherwise, the water-pipe is better, but a good joint must be made.

If the water-pipe is used, it should be made certain that the right pipe is chosen, and for this purpose the destinations of the various pipes should be traced out with the object of finding the "ascending main"—that is, the pipe connected directly to the underground main passing up to the taps and the cistern. This pipe is always filled with water, and thus makes a good conductor. The other pipes traverse long distances, and have many joints before entering the earth.

Don't Use the Gas Main.

The gas main should not be used as an earth, for, apart from the danger of an explosion following a lightning discharge down the aerial, the joints of gas pipes are notoriously bad as conductors of electric currents.

Where neither an outside buried earth nor a water-pipe earth are easily obtainable, the counterpoise may be substituted. This type of earth consists of a wire or system of wires running directly underneath the aerial, and insulated from earth, being suspended by insulators at a height of three to six feet above the earth. Local interference from motor generators, etc., can be very much subdued by an "earth" of this type.

SOME NOTES ABOUT TELEPHONES

(By Waring S. Sholl, A.M.I.E.E.)

To all external appearances, the well-known headphone type of receivers are much alike. Roughly, the instruments may be divided into two types, viz., the simple diaphragm pattern, and the armature or "reed" type, in which the magnetic impulses are imparted firstly to a small, delicately pivoted armature which is linked up to the diaphragm. This form is used in the well-known "reed pattern" telephone, and is developed further in the "balanced armature" type of design employed in some makes of large loudspeakers. One great advantage of this design appears in the central pull upon the diaphragm, which avoids distortion to a considerable extent.

Resistance No Advantage.

The ordinary diaphragm type of instrument, however, works very well, and the user whose means will not allow of the purchase of the more expensive type will get every satisfaction from the less costly article. High resistance and low resistance are factors which need to be understood in the terms of electrical efficiency.

Resistance, as resistance, is a distinct disadvantage. True high resistance phones are wound with high conductivity wire of very fine gauge, about No. 47, S.W.G. copper, which enables a large number of turns to be got on the bobbins.

This produces a comparatively great effect, as a small current will have the same effect if sent round the pole-pieces a large number of times as a larger current which only traverses a few turns. Some makers have gone so far as to produce a "high-resistance" phone indeed, but wound with comparatively few turns of high-resistance wire, a thoroughly reprehensible swindle for which there is no extenuation whatever.

In choosing a set of telephones a fair test may be made of sensitivity by placing the instruments over the ears and putting one tag into the mouth. The other tag is rubbed gently upon a small file or a key which is held in the hand. A distinct rasping sound will be heard in the earpieces if the set is reasonably sensitive and in good order.

Telephones should have the leads clearly marked as to polarity, or continual use will tend to demagnetise the magnets; also the signals will not come up to full strength when the instrument is new. Far too many makers neglect this important point, and in such case the careful worker will do well to conduct the following test: Remove the ear-cap and diaphragm and place a compass near to the pole-pieces until the needle comes to rest. Arrange the phone so that its magnetic pull sets the needle at N.E.

Now place the phone leads on a battery and note if the compass needle comes over very slightly towards the telephone magnet. If so, it proves that the current is circulating the right way, and is tending to strengthen the magnet. If, on the other hand, the needle moves over towards north, it shows that the current is passing in the wrong direction, and that the magnets are being reduced in strength.

Having satisfied himself on this point, the user will do well to slip a piece of red sleeving over the positive tag, if of the pintype, or wind some red silk over the cord in the case of the spade type of terminal. After prolonged use, the ear-pieces should be wiped to avoid moisture rusting the diaphragms, and the phones hung up with the cords preferably straight. The method of packing the phones with the cords tightly twisted round the head-bands is thoroughly bad for the cords and displays a want of forethought upon the part of the makers.

Some phones are much improved by fitting thinner diaphragms, of ferrotype, in place of the heavier stallo. While this material is good in some cases, it is not always the best thing to use, although the word sounds very nice in advertisements. Buy the best phones you can afford, and then take care of them.

Statistics show that since the installation of wireless in English hospitals the average stay of patients has been reduced by a week. This should silence once and for all the critics of B.B.C. programmes.

ESPERANTO

THE LAST LESSON.

Below is the concluding lesson of the Esperanto course. It is designed to provide radio students with an opportunity to hear Esperanto in practice. Worthy of special note is the announcement (see lesson) of the instructor regarding the broadcast of an original passage for translation. Students should be on the alert to receive the broadcast passage, and it is hoped that every student who has followed the course will submit an effort to the instructor from whom translations of the two following passages, as well as of the test-piece, may be obtained. Communications should be forwarded to "The Esperanto Instructor," N.Z. Broadcasting Co., Wellington. To ensure a reply, enclose a stamped addressed envelope.

LESSON XX.

(To be broadcast from 2YA on December 15 from 7.39 to 7.54 p.m.)

The following passage and poem will be read by the instructor:—

Kiam la fama angla admiralo Hawke estis ankoraŭ knabo kaj la patro unufoje prenis lin sur s'ipon, kaj admonis la knabon bone konduki kaj aldonis, "Ĉiam mi esperas vidi vin kapitano." "Kapitano?" ekkris la knabo, "kara patro, se mi ne esperas fariĝi admiralo, mi ne konsentus esti maristo."

HO MIA KOR'.

Ho, mia kor', ne batu maltrankvile,
Ĝi mia brusto nun ne saltu for!
Ĝam teni min ne povas mi facile
Ho, mia kor'.
Ho, mia kor'! Post longa laborado
Ĉu mi ne venkos en decida hor'!
Sufiĉe, trankvilig' de la batado,
Ho, mia kor'!

At this stage of the lesson the instructor will broadcast a short original passage in Esperanto. Students are required to write down the passage, to translate it into English, and to forward the translation, together with the name and address, to the instructor who will award prizes for the best and second best translations submitted to him. Translations must reach the instructor by the 31st. instant.

For the purpose of providing conversational Esperanto, the instructor will broadcast the following passage:—

Pardonu al mi, sinjoro, sed ĉu vi parolas Esperanton?

Mi ĝin parolas iom, sed tre malĝuste, ĉar mi ĝin lernis dum tre mallonga tempo.

Sajnas al mi ke vi ĝin parolas tre bone.

Mi timas ke vi faras al mi komplimenton, sed mi ĝojas ke mi ĝin parolas sufiĉe bone por kompreni. Ĉu vi bonvolos havigi al mi bileton por Aucklando?

Kun multe da plezuro. Mi ankaŭ iras tien. Ĝin klaso vi veturos?

En la unua por tia longa veturo.

Mi ankaŭ, tial ni povas kunveturi.

The above passage may be translated as follows:—

Excuse me, sir, but do you speak Esperanto?

I speak it a little, but very incorrectly, because I have been learning it for a very short time.

It appears to me that you speak it very well.

I fear that you are paying me a compliment, but I am glad I speak it sufficiently well to be understood. Will you kindly procure me a ticket for Auckland?

With much pleasure. I also am going there. By what class do you travel?

By the first for such a long journey. I, too, so we can travel together.

PHOTOS BY RADIO

A facsimile system of transmission, known as photoradio, whereby a message, in the form of handwritten, type-written or printed matter, may be flashed across the ocean in its entirety, has been installed between New York and London, San Francisco and Honolulu on a regular commercial basis. Important news photographs are being flashed across the Atlantic as a matter of daily routine.

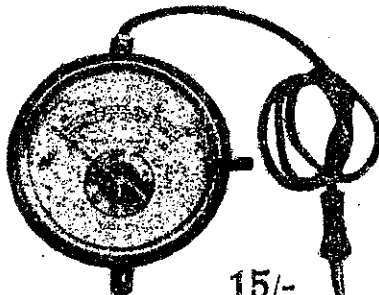
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