# Full Programmes for Next

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#### NEWS AND NOTES

(By "Switch.")

It is always better to use wire stays and wire halyards for radio aerials. Rope contracts in wet weather, and stretches in dry weather. Galvanised wire lasts better than unprepared

It has been calculated that even the best receiving aerial does not receive more than about one-trillionth of the power radiated by a broadcast sta-tion, even in the vicinity.

An aerial connected directly to earth is capable of receiving radio waves of a wave-length about four times its length of wire. Thus a single wire 100 feet in length can receive waves of a wave-length of 400 feet, without the addition of the usual tuning inductances in a wireless set, which increase or decrease the wave-length at will. A metre is equivalent to 3.28 feet, or, roughly, 3 feet 31 inches. An aerial connected directly to earth

The broadcast waves picked up by your aerial travel only along the surface exterior of the aerial wire, and do not penetrate to the core of the wire. This phenomenon is known as "skin effect." An aerial which is badly corroded subjects the radio waves to a certain amount of resistance. to a certain amount of resistance.

In some home-made "B" eliminators, especially when the transformers and chokes are wound by the constructor, there is apt to be a lot of heat generated. Therefore, never enclose a home-made eliminator in an enclose a home-made eliminator in an air-tight cabinet. If you must use a cabinet, provide an ample number of holes in its sides to allow good ventilation. If a "B" eliminator transformer is allowed to heat up, it may burn out the windings and blow the fuses. Ventilation will keep the heat at a minimum and often prevent such an occurrence. an occurrence.

Though radio waves can pass through bricks, mortar, concrete, and wood, metals have the same effect upon them as mirrors have upon light, deflecting them temporarily from their natural

The best way to connect the earth wire to a waterpipe is to clean the surface of the pipe thoroughly by scraping, filing, or sandpapering. The end of the earth wire should then be cleaned the same way, and wrapped two or three times around the waterpipe. It is then essential that the wire be firmly soldered to the waterpipe.

Valves should not be burned too brightly or their lives will be shortened. Turn on the rheostats only so far as the point at which best reproduction is obtained. To urn the rheostats further than this is to shorten the lives of the valves without any benefit. By operating the filament of a valve at 95 per cent. of its rated voltage, its life will be doubled.

An outdoor aerial will become heav-An outdoor aerial will become neavily oxidised within the space of a year. This oxidation reduces the over-all efficiency of the aerial system; and should therefore be cleaned off every six months or so. Here is a simple and effective way of doing it. Purchase a shilling's worth of muriatic acid, and mix it with three parts of water in a large earthenware dish. Coil the aerial wire into a roll and place it in the dish. Leave it there for about an hour and stir the solution three or four times every fifteen minutes or so. Next prepare a strong solution of soda and water in another large dish and place the roll of wire in this to neutralise the acid. Let the wire remain in this solution for about ten minutes; then take it out and scrub off any remaining scales of exidation with an old tooth brush. You will find the wire to be in the same clean condition as when purchased.

An indoor loop aerial to tune to the wavelengths of the New Zealand and Australian broadcast stations can be made with a diameter of 4 feet to carry seven turns of wire spaced half an inch apart and to be operated with a .0005 mfd. variable condenser in parallel.

High resistance headphones are sensitive because they are wound with a very large number of turns of wire, and not as a natural result of their high ohmic resistance. This latter is simply the result of their requiring to be wound with fine wire to pack the numerous turns into a small space, and is no advantage in itself.

The more ambitious of experimenters will find it interesting and instructive to test out crystals of different minerals for sensitivity. While thousands of crystals and combinations of crystals have been tried out, a new combination may accidentally be discovered that will bring results well worth the trouble. Now, you boys, get busy!

The "carth" wire should be kept as short as possible, otherwise, not only is the resistance of the aerial—earth circuit as a whole increased, but use-less inductance is added to the circuit, necessitating the use of a smaller number of turns in the tuning induct-ance, without the compensating ad-vantage of any additional energy col-lected by the earth wire.

### Sunday, December 11th

1YA AUCKLAND (333 METRES)—SUNDAY, DECEMBER 11.

3 p.m.: Afternoon session-Selected Studio items.

4.30: Close down. 6.55: Relay of church service from St. David's Presbyterian Church. Preacher, Rev. D. C. Herron; organist, Mr. E. C. Craston.
8.30: Relay of organ recital from Town Hall. Organist, Mr. Maughan Barnett.

9 30: A thought. 9.31: Close down.

2YA WELLINGTON (420 METRES)—SUNDAY, DECEMBER 11.

6 p.m.: Children's session, conducted by Rev. E. Weeks.
7.0: Relay of evening service from St. Gerard's Redemptorist Church, Hawker Street, Wellington. Order of service:—
Organ—Mr. Henry Mount, "Hymn to St. Cecilia" (Gounod).
The Rosary with choral responses.
Antiphon—"Alma Redemptoris" (Richardson).

Motets-"Worthy is the Lamb" (Handel), "O Holy Mother," "Magni-

Motets—"Worthy is the Lamb" (Handel), "O Holy Mother," "Magnificat" (Rossi).

Organ—Mr. Henry Mount, "Offertoire" (Hartwell).

The Benediction service will consist of the following Motets: "O Salutaris Hostia" (Perosi), "Tota Pulchra Es Maria" (Smith), "Tantum Ergo" (Murray), "Divine Praises" (Rev. F. O'Meeghan), "Adoremus and Laudate Dominum" (Allegri).

Organ-Mr. Henry Mount, "Marche Triumphale" (Lemmens). Organist, Mr. Henry Mount; choral director, Mr. Frank J. Oakes. 8.15: Quartet—The Wm. Renshaw Quartet, "God is a Spirit" (Sterndale-

Quartet—The Wm. Renshaw Quartet, "God is a Spirit" (Sterndale. Bennett).

Bass solo—Mr. Thomas C. Wood, "Holy City" (Adams).

Soprano solo—Mrs. Amy Dunn, "Come Unto Him" (Handel).

Instrumental quartets—The Ellwood String Quartet, (a) "First Movement" from "B Flat, Maori Quartet" (Hill); (b) "Haka" from "B Flat, Maori Quartet" (Hill).

Tenor solo—Mr. William Renshaw, "If With All Your Hearts" (Mendelscales).

Contraits solo—Miss Nora Greene, "O Rest in the Lord" (Mendelssohn).

Instrumental Quartets—The Ellwood String Quartet, (a) "First Movement" from "G Major Quartet" (Mozart); (b) "Minuetto" (Boc-

cherini).

Vocal duet—Miss Nora Greene and Mr. Wm. Renshaw, "O, Lovely Peace" from "Judas Maccabeus" (Handel).

Bass solo—Mr. Thomas C. Wood, "Out of the Deep I Call" (Martin).

Soprano solo—Mrs. Amy Dunn, "Jerusalem" (Mendelssohn).

Instrumental quartet—The Ellwood String Quartet, "Andante Cantabile" from "D Major Quartet" (Tschaikowski).
Tenor solo—Mr. Wm. Renshaw, "An Evening Song" (Blumenthai).
Contraito solo—Miss Nora Greene, "My Prayer" (Squire).
Quartet—The Wm. Renshaw Quartet, "Cast Thy Burden" (Mendelssohn).

## 3YA CHRISTCHURCH (306 METRES)—SUNDAY, DECEMBER 11.

5.45: Children's song service, under Uncle Sam, assisted by scholars from the Papanui Presbyterian Sunday School.
 7.0: Relay of evening service from Salvation Army Headquarters, Victoria

Square. Choruses and hymns, etc., will be sung by 130 voices. The Boys' Band will accompany the congregational singing and the orchestra will accompany the singing of the younger people. Brigadier Bladen in charge of service. Mr. J. Taylor, Y.P.S.M., con-

ductor of music After service, at 3YA the Christchurch Broadcasting Trio will give the

following items:

Instrumental trio—Christchurch Broadcasting Trio, "Allegro Vivace" from "D Major Trio" (Beethoven).

Violin solo—Miss Irene Morris, "Romance" from "Second Concerto"

Instrumental trios—Christchurch Broadcasting Trio, (a) "Allegro"; (b) "Andante"; (c) "Tempo di Marcia" (Bohm).
Pianoforte solo—Miss Aileen Warren, "Serenade" (Schubert-Liszt).

#### 4YA DUNEDIN (463 METRES)—SUNDAY, DECEMBER 11.

5.45 p.m.: Children's song service, conducted by Big Brother Bill.

Hymns will be sung by the Methodist Sunday School children. Order
of service: Hymn, prayer, Lord's Prayer, hymn, Scripture reading,
hymn, Bible story (Big Brother Bill), hymn, Benediction. 6.20: Close down.

7.0: Relay of evening service from Knox Church. Preacher, Rev. Tulloch Yuille, M.A., B.D. Organist, Mr. W. Page tGale.
8.0: Relay from St. Kilda (weather permitting) of concert by the St. Kilda Band. Conductor, Mr. James Dixon.

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## Monday, December 12th

1YA AUCKLAND (333 METRES)—MONDAY, DECEMBER 12. SILENT DAY.

2YA WELLINGTON (420 METRES)—MONDAY, DECEMBER 12.

3 p.m.: Afternoon session-Selected Studio items.

Selected gramophone items, 3.30: Lecturette—Representative of James Smith, Ltd., "Fashions."

3.45: Relay of Manuel Hyman's Exhibition Band from the Adelphi Cabaret. Selected gramophone items.

Selected gramophone nems.

5.0: Close down.

6.0: Children's hour—Aunt Jo and pupils of St. Mark's School. Unison singing, St. Mark's School, "Dance of the Rainbow Fairies" (Riley), "The Sleepy Song" (Riley). Aunt Jo sends birthday greetings. Unison singing, St. Mark's School, "I Passed by Your Window" (Brahe), "Danny Boy" (Weatherby). Aunt Jo, story time. Unison singing, St. Mark's School, "Admiral's Broom" (Bevan). Recitation, cousin, selected. Maori songs, St. Mark's School, "Tapua" (Rivers), "Waista Poi" (Hill). Choir, St. Mark's School, "School

tion, cousin, selected. Maori songs, St. Mark's School, "Tapua" (Rivers), "Waiata Poi" (Hill). Choir, St. Mark's School, "School Song" (Watkins).

7.0: News session, market reports, and sports results.

7.40: Lecturette—Mr. G. G. Stewart, editor, "Railway Magazine," "Holiday—making on the Railways."

8.0: Chimes of the General Post Office clock, Wellington.

8.1: Overture—"Nell Gwyn" (German).

8.5: Vocal quartet—Melodie Four, "Stars of the Summer Night" (anon.).

8.9: Steel guitar—Mr. E. J. Palmer, (a) "Blue Skies" (Berlin); (b) "Three o'clock in the Morning" (Young).

8.14: Humour—Mr. A. Stanley Warwick, (a) "W'en the Road's Hup" (Longstaffe); (b) "Night of the Party" (Roberts).

8.17: Tenor solo—Mr. C. E. Williams, "I'll Sing Thee Songs of Araby" (Clay).

8.20: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement" (first part) (Tschaikowsky).

part) (Tschaikowsky).

8.30: Baritone solo-Mr. R. S. Allwright, "The Gay Highway" (Drummond).

8.34: Flute solos-Mr. Claude Tucker, (a) "Romanza" (De Lorenzo); (b)

"The Whirlwind" (Krantz).

8.40: Vocal quartet-Melodie Four, "Peter the Cat" (Eastman).

8.43: Violin solo-Miss Ava Symons, "Andante" from "Concerto" (Mendels-

sohn).

8.50: Mezzo-soprano solo-Miss Eirene Bull, "Waiata Maori" (Hill).

8.50: Mezzo-soprano solo-Miss Efrene Bull, Walata Maoti (1714).

8.55: Weather forecast.

8.56: Vocal quartet—Melodie Four, "They Kissed" (Merry).

9.0: Mandoline—Mr. E. J. Palmer, (a) "Hello, Aloha" (Baer); (b) "Hono-lulu Moon" (Lawrence).

9.17: Tenor solo—Mr. F. Bryant, "I Heard You Singing" (Coates).

9.21: Instrumental trio—Symons-Ellwood-Short Trio, "First Movement" (second part) (Tschaikowsky).

9.30: Lecturette—Sir Frederick Chapman, "America and Britain: A Policy of

Common Aims." Common Aims."

9.45: Mezzo-soprano solos—Miss Eirene Bull, (a) "The Pearl"; (b) "Amber and Amethyst" from the "Jewel Cycle" (Carse).

9.49: Humour—Mr. A. Stanley Warwick, "Knocking Down Ginger" (Thomas).

9.52: Bass solo—Mr. W. W. Marshall, "Down Withycombe Way" (Ewing).

9.55: Flute solo—Mr. Claude Tucker, "Caprice—Il Vento" (Briccialdi).

9.58: Vocal quartet—Melodie Four, "The Moon Man" (Macy).

10.0: God Save the King.

#### 3YA CHRISTCHURCH (306 METRES)-MONDAY, DECEMBER 12.

3 p.m.: Afternoon session-Selected Studio items.

60: Children's hour-Uncle Jack and Aunt Edna. Bed-time stories, songs,

7.0: Close down.

7.0: Close down.
 7.15: News and reports.
 7.30: Talk—Mr. A. L. Chappell, Philatelic Society, "History and Stamps."
 8.0: Chimes. Studio concert by Christchurch Municipal Band, under conductorship of Mr. A. J. Schnack, assisted by 3YA artists.
 8.1: Relay of orchestral selections from Strand Picture Theatre Orchestra, under the direction of Mr. Harry Ellwood.
 8.10: March—The Band, "Twentieth Century" (Hume).
 8.15: Male voice quartets—Cathedral Male Voice Quartet, (a) "Come, Let Us Join the Roundelay" (Beale); (b) "Summer Eve" (Hatton).
 8.21: Selection—The Band, "Le Domino Noir" (Auber).
 8.28: Tenor solo—Mr. J. Hinton, "Mountain Lovers" (Squire).
 8.32: Waltz—The Band, "Love and Life in Vienna" (Komazah).
 8.39: Bass solo—Mr. Arthur Woodward, "Hope, the Hornblower" (Ireland).
 8.41: Hymn—The Band, "Abide With Me" (Monk).
 8.47: Tenor solo—Mr. Harry Gill, "Oh! for the Breath of the Moorlands" (Whelpsley).

(Whelpsley). 8.50: Recital-Mr. J. J. Flewellyn, "Tony Weller's Advice to His Son"

(Dickens).
8.54: Cornet solo, with band accompaniment—Mr. Fred. Fox, selected.
8.59: Male voice quarter—Cathedral Male Voice Quartet, "A Red, Red Rose" (Roberts).

(Rober

God Save the King.

4YA DUNEDIN (463 METRES)—MONDAY, DECEMBER 12. SILENT DAY.

#### Tuesday, December 13th

1YA AUCKLAND (333 METRES)-TUESDAY, DECEMBER 13.

p.m.: Afternoon session-Selected Studio items.

4.0: Literary selection by Mr. Culford Bell. 4.30: Close down.

6.0: Children's hour-Uncle Leo and pupils of Mrs. Bartley-Baxter.

Close down.

7.15: News and information session, 7.45: Close down.

8.0: Chimes.

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