Full Programmes for Next

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NEWS AND NOTES

(By "Switch.")

Mica is one of the most efficient in-sulators known to science. If it requires 100,000 volts to puncture porcelain 1 centimetre in thickness, mica of the same thickness would require 1,000,000 volts to pierce it.

All home-builders of crystal sets should try placing a small fixed con-denser between the two phone terminals. This generally results in rather stronger reception. A fixed condenser of .001 microfarads will, as a rule, prove

One stage of radio frequency amplification will greatly increase the range of a receiving set. A signal which is too weak to operate the detector valve cannot be amplified by audio-frequency

Never hold a lighted match near the top of a wet battery. The gas given off by a wet battery is highly inflamable as it comes straight from the battery, but when it mixes, or is diluted with air, it becomes harmless.

A good make-shift "earth" can be fixed up by country dwellers who can-not obtain the use of a waterpipe, and is often in demand. A few yards of wire-netting, buried flat-wise about two or three feet below the surface will make a good earth. The ground should make a good earth. The ground should be kept moist, and the wire running to the earth terminal of the set should be firmly soldered to the wire-netting. The latter should be placed right underneath the aerial if possible, but this is not at

When using galena as a crystal detector the cat's whisker wire may also be of silver or brass as well as copper. If you want something more aristocratic use iron pyrites, which requires a cat's whisker with a gold point. Galena and a silver wire, however, take a lot of

beating for sensitivity.

Cheap celluloid batteries should be shunned. After a little while celluloid oatteries of the cheaper type commence to froth inside, and when on charge the froth comes out of the top so that the liquid is lost and this needs replenishing each time.

The effectiveness of an aerial is reduced if the resistance is high. Highfrequency or radio-frequency currents flow on the surface of a conductor, largely, and therefore the surface area of an aerial should be as large as possible. Therefore use a stranded aerial in preference to a single wire.

It is wise to purchase a wet battery larger than appears necessary. It is better practice to fit an accumulator of ample size than one which has to be driven to its utmost capacity. The former can be kept in perfect condition by numerous small charges, whereas the ander-powered battery will always have to be recharged to its full capacity and with great frequency.

The inverted L type of aerial is to be preferred to the T aerial, as it gives a greater effective length for the same amount of wire. The effective electrical length of an aerial is the distance from the farthest point of the aerial wire to the place where the lead-in is attached, plus the length of the lead-in itself. With the T type of aerial the lead-in wire should be attached to the very centre of the aerial.

The aerial wire and the earth act is two plates of a condenser, and the if between them is electrically stressed whenever currents surge up and lown the aerial. If the earth connection is poor, therefore, little energy absorbed from the wireless waves.

A great advantage in using a variometer for the tuning device of a crystal set is that there are no 'dead-end' effects in the variometer. No tappings or inductances are recessary; there is also smooth and infinite adjustment between minimum and maximum positions, and the and the rariometer is a robust mechanism.
But get the correct-sized variometer or most efficient results

The purpose of a small fixed con-enser across the 'phones of either a rystal or valve set is to improve the mality and strengthen the volume of eception. The condenser is charged nd discharged periodically with the ulsating currents rectified by the deector. It likewise discharges periodically into the 'phones. This rrangement gives a smoother note han could otherwise be obtained.

Field strength measurements made in he eighth radio district of U.S.A. by Radio Supervisor S. W. Edwards ave revealed the now oft-confirmed act that location is of as great im-ortance as aerial power in determining he service area of a broadcasting sta-ion. The most serious factor which revents equal radiation in all direc-ions from a radio aerial is the shadow ffect of large surrounding masses of oth conducting and non-conducting naterials. As the cost of transmitting estallations goes up, portable transmitters wil lie used to determine the haracteristics of any transmitting point efore a station is erected. It appears at irregularities in transmission charcteristics, due to location, can be an-lysed with a portable low-power transnitter and that great increase of power oes not change the general nature f shading effects. It is not unusual of find that a broadcasting station of onsiderable power may serve only fifty eventy-five miles in one direction, at is easily heard four or five hundred

Sunday, October 16th

1YA AUCKLAND (333 METRES)—SUNDAY, OCTOBER 16.

6.55 p.m.: 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 music from Auckland Town Hall. Organist, Mr. Maughan Barnett.

9.30: A thought. 9.31: Close down.

2YA WELLINGTON (420 METRES)-SUNDAY, OCTOBER 16.

6.55 p.m.; Relay of evening service from the St. Gerard's Roman Catholic Church, Hawker Street. Preacher, Rev. Father Campbell. Choirmaster, Mr. F. G. Oakes.

8.15: Relay of the band concert of the Port Nicholson Silver Band from the Grand Opera House.

3YA CHRISTCHURCH (306 METRES)—SUNDAY, OCTOBER 16.

5.45 p.m.: Song service from 3YA Studio, by Uncle Sam.
(30: Relay of evening service from Sydenham Methodist Church (Sunday School anniversary). Preacher, Rev. H. J. Odell. Conductor, Mr. G. Rawlinson. Organist, Mr. L. G. Rickard.
Vocal solo—Miss Ada Anderson, "But the Lord is Mindful of His Own," Mendelssohn, Organ solo-Mr. L. G. Rickard.

Vocal solos, duets, and concerted items by the scholars of the school. 8.15: Rebroadcast 2YA, Wellington, conditions permitting.

4YA DUNEDIN (463 METRES)—SUNDAY, OCTOBER 16.

6.30 p.m.: Relay of service from Knox Church. Preacher, Rev. Tulloch Yuille, Organist, Mr. W. Paget Gale.

Studio concert.

Monday, October 17th

1YA AUCKLAND.—SILENT. 2YA WELLINGTON (420 METRES)-MONDAY, OCTOBER 17.

3 p.m.: Gramophone recital and relay of Manuel Hyman's Exhibition Band

from the Adelphi Cabaret.
3.30: Mr. C. R. Stevens, "Household Devices and Comforts."
3.50: Gramophone recital.

Close down.

6.0: Children's hour-Aunt Jo.

7.0: News session and market reports
 7.40: Lecturette—Mr. J. W. Collins, Secretary of Industries and Commerce Department, "A Visit to the Bureau of Standards, Washington, TYCA"

8.0: Chimes of the General Post Office clock, Wellington.
8.1: Instrumental—Studio Orchestra, selected.
8.11: Mezzo-soprano solo—Miss Dorothy Dudson, "Lieti Signor" (L'Hugenots),

Meyerbeer (Boosey). 8.15: Piano quartet—Mrs. Flora Peyton, Misses Dorothy Tighe, Gwen Shepherd, and Mr. Clement Howe, "Valse Brillante," Moskowski

(Augener).
8.20: Baritone solo—Mr. Harry Wilson, "Onaway, Awake, Beloved," Cowen (Oliver Dilson).

8.24: Instrumental-Studio Orchestra, selected.

8.34: Instrumental—Studio Orchestra, selected,
8.34: Contralto solo—Mrs. Philip Clarke, "O Mio Fernando" (La Favorita),
Donizetti (Boosey).
8.38: Cornet solo—Mr. W. J. Kay, "Sweet Spirit, Hear My Prayer," arr. by
Weide (Wright and Raines).
8.42: Tenor solos—Mr. Roy Hill, Old English songs, (a) "My Lovely Celia,"
arr. by Lane Wilson; (b) "Phyllis Hath Such Charming Graces"
(Roosey)

arr. by Lane Wilson, (")
(Boosey).

8.47: Violin solo—Mr. Allon Carr, selected.

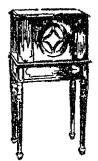
8.52: Elocution—Mr. Stanley Warwick, "King Henry at Agincourt," Shake-speare; "The Secret of the Machines," Kipling.

9.3: Instrumental-Studio Orchestra, selected.

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9.13: Lecturette—Lieut. Gordon Burt, "Dangerous Experiences in and amongst the Ice Around Franz Josef Land; Shipwrecked amongst Uncharted Rocks and Homeward Bound."

9.28: Mezzo-soprano-Miss Dorothy Dudson, "Ah! se tu Dormi Svegliati,"

Vaccai (Boosey).

9.32: Piano quartets—Mrs. Flora Peyton, Misses Dorothy Tighe, Gwen Shepherd, and Clement Howe, "March No. 1, Op. 51," March No. 6, Op. 40," Schubert (Augener).

9.36: Baritone solos—Mr. Harry Wilson, (a) "I Love You Truly," Carie Jacobs; (b) "A Little House," Bond, Aylward (Fred. Harris-Collard and Montrel).

9.40; Violin solo-Mr. Allon Carr, selected.

9.44: Contraito solo-Mrs. Philip Clarke, "Habanera" ("Carmen"), Bizet

(Boosey), 9.48: Cornet solo—Mr. W. J. Kay, "The Holy City," Stephen Adams (Boosey), 9.54: Tenor solo—Mr. Roy Hill, "Where My Caravan has Rested," Coates (Chappell).

9.58: Instrumental—Studio Orchestra, selected.

3YA CHRISTCHURCH (306 METRES)-MONDAY, OCTOBER 17.

3 p.m.: Afternoon concert session.

6.0: Children's session, by Uncle Jack. 7.15: News and reports.

7.30: Talk—Mr. E. J. Bell, "Books."
8.0: Chimes. Studio concert by Band of 1st Canterbury Regiment Infantry, under conductorship of Licut. C. H. Hoskins, and assisting 3YA

8.1: March—Band, "Fernando," Greenwood (Richardson). 8.4: Mezzo-soprano solo—Miss K. Doherty, "Oh! Mistress Mine," Quilter

8.8: Fantasia—Band, "Country Life," Le Duc (Wright and Round). 8.15: Mezzo-soprano solo—Miss R. Lucas, "Play Make-Believe," Webs'er

(Schirmer).

8.19: Polk—Band, "Besses o' the Barn," Clements (Boosey).
8.23: Mezzo-soprano solo-Miss Bessie Stallard, "Wait," d'Hardelot (Chap-

pell).
8.27: Valse de Triumph—Band, "A Pacon of Victory," François (Boosey).
8.33: Talk—Captain Findlay, of Wigram Aerodrome, "Future Prospects of

Flying, With Special Reference to New Zealand" (third of series).

8.48: Selection—Band, "Empireland," Douglas (Feldman).

8.56: Vocal duet—Misses R. Lucas and N. Penberthy, "Twilight," Nevin (Ditson).

(Ditson).

9.0: Relay of orchestral selectious from Strand Picture Theatre String Quartet, under conductorship of Mr. Harry Ellwood.

9.15: Pianoforte solo—Miss K. Doherty, "Shepherds Hey," Grainger (Schott).

9.19: March—Band, "Hanoverian," Schultz (Hawkes).

9.22: Mezzo-soprano solo—Miss R. Lucas. "The Dawn Has a Song," Phillips (Chappell).

9.26: Selection—Band, "Gipsy Love," Lehar (Chappell).

9.32: Mezzo-soprano solo—Miss Bessie Stallard, "Advice," Carew (Chappell).

9.36: Grand march—Band, "King's Bodyguard," Hume (Boosey).

9.40: Vocal duct—Misses Lucas and N. Penberthy, "Farewell to Summer," Johnson (Gould and Boulter).

Johnson (Gould and Boulter).
9.44: Mezzo-soprano solo-Miss Bessie Stallard, "For You," Montague (Dit-

son). 9.48: Overture—Band, "The Silver Star," Greenwood (Richardson).
9.52: Mezzo-soprano solo—Miss K. Doherty, "Farewell," Liddle (Boosey).
9.56: March—Band, "Rauparaha," Lithgow (Lyons).
10.0: God Save the King. Close down.

4YA DUNEDIN-SILENT.

Tuesday, October 18th

1YA AUCKLAND (333 METRES)-TUESDAY, OCTOBER 18.

3 to 4.30 p.m.: Afternoon session—Selected studio items. 6.30: Children's session—Aunt Betty.

7.15 to 7.45: News and information.

8.0: Chimes.

8.1: Relay of overture from Majestic Theatre. Mr. J. Whitford-Waugh, conductor. 8.10: Quartet—Lyric Quartet, "O, Peaceful Night."
8.18: Humour—Mr. Alan McElwain, "Nell."
8.23: Tenor solo—Mr. Herbert Richards, "The Hawk."
8.27: Quartet—Lyric Quartet, "On Wings of Song," Mendelssolm; "De Sandman," Parker,
8.35: Dust Moses Themse and M. Fleric "The Control of the Sandman," Sandman," Parker, "Increase and M. Fleric "The Control of the Sandman," Sandman, "Parker, "The Sandman," Sandman, "Parker, "The Sandman," Sandman, "Parker, "The Sandman," Sandman, "Sandman," Sandman, "Sandman, "Sa

835: Duet—Messrs. Thomas and McElwain, "The Gendarmes," Sorel (Boosey). 3.40: Tenor solo—Mr. A. H. Ripley, "Mifanwy," Forster (Boosey). 3.44: Bass solo—Mr. E. Thomas, "Off to Philadelphia," Haynes.



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