Programmes Continued

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8.20: Baritone solo—Mr. Bert Rawlinson, "Drake's Drum" (Lennard). 8.25: Pianoforte solo—Mr. Gordon Findlay, "Ballade No. 1, Op. 10, Andante in D Minor" (Brahms).

8.30: Soprano solos-Mrs. D. Carty, (a) "Eileen Alannah"; (b) "Flight of Ages" (Bevan). 8.36: Guitar duct-Messrs. Sheehy and Campbell, "Coral Sauds of My Hawaii" (Heatney).

8.39: Bass solos—Mr. Neil Black, (a) "My Old Shako" (Trotere); (b) "Two Eyes of Grey" (McGeogh).
8.46: Pianoforte solo—Mr. Gordon Findlay, "March a La Turque" (Bect-

hoven).

8.49: Contralto solo—Miss Flora Williamson, "Friend o' Mine" (Sanderson).
8.53: Baritone solos—Mr. Bert Rawlinson, (a) "The Floral Dance" (Moss);
(b) "The Wolf" (Shields). 9.0: Guitar duet-Messrs. Sheehy and Campbell, "Lay My Head Beneath a

9.6: Soprano solo-Mrs. D. Carty, "The Song that Reached my Heart" (Gor-

don). 9.11: Weather report and forecast.

9.12: Relay of dance music from the Savoy. 10.0: Close down.

Saturday, February 25th!

1YA AUCKLAND (333 METRES)—SATURDAY, FEBRUARY 25.

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

Literary selection by the Announcer. 4.30: Close down.

6.0: Children's hour, conducted by Cinderella. 7.15: Talk on "Motoring," by Mr. Geo. Campbell.

7.30: News and reports.

8.1: Relay of orchestral overture from Strand Theatre-Eve Bentiey conducting.

8.16: Vocal quartet—The Lyric Four, "The Jolly Roger" (Lewis).
8.20: Tenor solo—Mr. Herbert Richards, "A Border Ballad" (Cowen).
8.24: Humour—Mr. Allan McElwain, "Setting a Hen."
8.29: Vocal quartet—The Lyric Four, "The Pilgrims' Chorus" from "Tannhauser" (Wagner).

8.34: Relay of orchestral interlude from Strand Theatre. 8.49: Bass solo—Mr. Ernest Thomas, "The Sword of Ferrara" (Bullard). 8.53: Humour—Mr. Allan McElwain, "The Vicar's Presentation" (Kershaw). 8.58: Tenor solo—Mr. Arthur Ripley, "Oft in the Stilly Night" (Moore). 9.3: Vocal quartet—The Lyric Four, "Night Winds Gently Flow" (Calkin).

Weather forecast.

9.9: Relay of dance music from Dixieland Cabaret by The Internationals, under Mr. Clyde Howley. 11.0: A thought.

11.2: God Save the King,

2YA WELLINGTON (420 METRES)—SATURDAY, FEBRUARY 25,

3 p.m.: Chimes of the General Post Office clock, Wellington.

1: Selected gramophone items.

6.0: Children's hour—Aunts Gwen and Dot. Gramophone selection, march.
Birthday greetings. Piano duets and solos and Phyllis and Ruby,
"Country Dance" (Quilter). Miss Phyllis Bates, stories and entertainment for the Children, Piano solo, Cousin Phyllis, "The Question" (Elkin". Pian-Militaire" (Schubert). Piano duet, Phyllis and Ruby, "Second Marche

Militaire" (Schubert).

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

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

8.1: Overture—"The Skaters' Waltz" (Waldteufel).

8.4: Vocal quartet—Melodic Four, "They Kissed" (Molloy).

8.8: Hawaiian trio—E. J. Palmer's Hawaiian Trio, "Palekiko Blues."

8.14: Tenor solos—Mr. Frank Bryant, (a) "I Don't Suppose" (Trotere); (b)

"Who Knows?" (Ball).

8.20: Instrumental trio—Symons-Ellwood-Short Trio, "Trio in G Major, First

Movement" (Reissiger).

8.30: Vocal quartet—Melodic Four, "Lay My Head Beneath a Rose" (Falkenstein).

8.34: Hawaiian trio—E. J. Palmer's Hawaiian Trio, "Hilo March." 8.40: Tenor solo—Mr. Sam. Duncan, "Oft in the Stilly Night" (traditional

1rish air).

8.45: Baritone solo—Mr. R. S. Allwright, "Mother o' Mine" (Tours).

8.50: 'Cello and pianoforte duet—Messrs. George Ellwood and Gordon Short,

"Andante" from "'Cello Sonata" (Grieg).

8.58: Vocal quartet—Melodie Four, "Drifting and Dreaming" (Van Alstyne).

9.2: Weather forecsat.9.3: Relay of Chas. Dalton's Columbian Solo Six Orchestra from the Columbian Cabaret, Kilbirnie.

3YA CHRISTCHURCH (306 METRES)-SATURDAY, FEBRUARY 25.

6 p.m.: Children's hour-Uncle Sam and Aunt May. Bedtime stories and birthday greetings.

7.30: Sports results. 8.0: Chimes. Relay of orchestral selections from Liberty Picture Theatre Orchestra, under the conductorship of Mr. Ernest Jamieson. 8.15: Soprano and tenor duct-Miss Mabel Thomas and Mr. David McGill,

selected. 8.19: Banjo Band-Beresford Banjo Band, "Minstrel Melodies, Part I" (Darc). 8.24: Songs at the piano—Mr. E. A. Sargent, (a) "Spring, Spring, Glorious Spring" (Gill); (b) "And the World Went Very Well Then" (Spurr).

8.29: Banjo Band—Beresford Banjo Band, "Fun and Frolic" (Kennedy). 8.34: Soprano solo—Miss Mabel Thomas, Jewel Song from "Faust" (Gou-

8.38: Instrumental trio—Christchurch Broadcasting Trio, "Finale from Trio in C Minor" (Mendelssohn).
8.50: Humorous talk—Mr. Sydney Comfort, "Sydney Speaks to Himself."
8.55: Tenor solo—Mr. David McGill, "Doloroso"—(Phillips).

8.59: Weather forecast.

9.0: Relay of orchestral selections from Liberty Theatre.
9.15: Banjo Band-Beresford Banjo Band, "What Good is Good Morning?" (Santley).

9.20: Songs at piano—Mr. E. A. Sargent, (a) "Bahrem Bem Borem" (Kirby);
(b) "Two Little Irish Songs."

9.25: Instrumental trio-Christchurch Broadcasting Trio, (a) "To a Fairy Boat" (Hope); (b) "Scherzo from Trio in E Flat" (Reissiger).
9.36: Soprano and tenor duct-Miss Mabel Thomas and Mr. David McGill,

9.39: Banjo Band—Beresford Banjo Band, "Minstrel Melodies, Part II" (Dare).
9.44: Soprano solo—Miss Mabel Thomas, "I Passed by Your Window" (Brahe).
9.47: Instrumental trio—Christchurch Brodcasting Trio, (a) "Reverie" (Ganne);
(b) "Gypsy Song" (Bizet).
9.54: Humorous talk—Mr. Sydney Comfort, "Sydney Once Again Speaks to

Himself."

9.57: Banjo Band—Beresford Banjo Band, "Merry-Go-Round" (Folkestone).
10.2: Tenor solo—Mr. David McGill, "Heart of Gold" (Manney).
10.6: Banjo Band—Beresford Banjo Band, "Bonnie Scotland" (Kennedy).

10.11: Dance music until 11 p.m. God Save the King.

4YA DUNEDIN (463 METRES)-SATURDAY, FEBRUARY 25.

7.15. p.m.: News session.

7.30: Address on "Interior Decoration," by Miss Marguerite Puechegud. 8.0: Town Hall chimes.

8.1: Relay of orchestral music from the Empire Theatre, under Mr. Chas. Parnell.

8.11: Mezzo-soprano solos—Miss Mollie Vickers, (a) "The Harvest of Sorrow" (Rachmaninoff); (b) "He Shall Feed His Flock" from "The Messiah" (Handel).
8.18: Cornet solo—Mr. D. J. Robertson, "Il Bacio" (Arditi).
8.23: Tenor solo—Mr. Dan Fogarty, "Oft in the Stilly Night" (Moore).

8.11: Contraito solos—Miss Flora Williamson, (a) "Rest at Midday" (Hamilton); (b) "Four by the Clock" (Makinson).

8.17: Hawaiian guitar duct—Messrs. Sheehy and Campbell, "When it's Love-time in Hawaii" (Heatney).

8.27: Violin solo—Miss Eva Judd, "Gavotte in E" (Bach-Kreisler).

8.27: Violin solo—Miss Eva Judd, "Gavotte in E" (Bach-Kreisler).

8.27: Planoforte solo—Miss Edith Morrison, "Waltz Song" from "Tom Jones" (German).

8.37: Planoforte solo—Miss Muriel Caddie, "Ballad No. 1" (Brahms).

(German).

8.37: Pianoforte solo—Miss Muriel Caddie, "Ballad No. 1" (Brahms).

8.41: Humorous song—Mr. Percy James, "Fellow Travellers" (Wells).

8.47: Orchestral relay from the Empire Theatre.

8.57: Mezzo-soprano solo—Miss Mollie Vickers, "Till Dawn" (Loewe).

9.0: Pianoforte solos—Miss Muriel Caddie, (a) "Sonata in A" (Scarlatti);

(b) "Romanza" (Schumann).

9.5: Cornet solo—Mr. D. J. Robertson, "Break of Day" (Hume).

9.10: Tenor solos—Mr. Dan Fogarty, (a) "A Red Rosebud" (Gibbs); (b)

"Believe Me If All Those Eudearing Young Charms" (Moore).

9.17: Violin solo—Miss Eva Judd, "Ballet Music" from "Rosamond" (Schubert-Kreisler).

bert-Kreisler). bert-Kreisler).

9.22: Soprano solos—Miss Edith Morrison, (a) "On the Banks of Allan Water"; (b) "I've Been Roaming" (Horn).

9.28: Pianoforte solo—Miss Muriel Caddie, "The Lark" (Glinka).

9.32: Cornet solo—Mr. D. J. Robertson, "Largo" (Handel).

9.38: Lgiht vocal solos—Mr. Percy James, (a) "Kind Regards" (Barrett); (b) "Prodigai Daughter" (Kent).

9.46: Violin solo—Miss Eva Judd, "Cavatina" (Bohm).

9.52: Orchestral music from the Empire Theatre.

10.0: Close down.

Sunday, February 26th

1YA AUCKLAND (333 METRES)-SUNDAY, FEBRUARY 26.

3 p.m.: Afternoon session-Selected Studio items. 4.0: Literary selection by the Announcer.

4.30: Close down.

Children's service, conducted by Uncle Leo. 6.55: Relay of evening service from Baptist Tabernacle. Preacher, Rev. J. Kemp; organist and musical director, Mr. Arthur E. Wilson.

Specil Studio Concert.
8.30: Vocal quartet—St. Andrew's Quartet, "Holiest, Breathe" (Old Italian).
8.34: Contralto solo—Miss Phyllis Gribben, "The Lord Is My Light" (Allit-

8.39: Instrumental trio-Bosworth-Hemus-Towsey Trio, "Trio, Op. 25-Finale" (Bache).

Finale" (Bache).

8.49: Bass solo—Mr. Arthur Colledge, "Within These Sacred Portals" (Mozart).

8.53: Vocal quartet—St. Andrew's Quartet, "Quando Corpus" (Rossini).

8.57: Tenor solo—Mr. Robert Peter, "The Soft Southern Breeze" (Barnby).

9.1: Violin and piano duct—Miss Ina Bosworth and Mr. Cyril Towsey, "Sonata for Violin and Piano in F Major—Allegro and Finale" (Grieg).

9.11: Vocal quartet—St. Andrew's Quartet, "I Will Lay Me Down in Peace" (Galsby). 9.15: A thought.

9.17: Close down.

2YA WELLINGTON (420 METRES)-SUNDAY, FEBRUARY 26.

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 choral director, Mr.

H. Temple White. 8.30: Mezzo-contralto solo-Miss N. Coster, "Like to the Damask Rose" (Elgar).

(Elgar).

8.35: Vocal quartet—Ariel Singers, (a) "The Ash Grove" (Welsh air, arr. by Crampton); (b) "Sleep, Gentle Lady" (Bishop).

8.43: Instrumental quartet—Symons-Eliwood String Quartet, "Andante Cantabile" from "D Major Quartet" (Tschikowsky).

8.48: Tenor solo—Mr. Roy Hill, "Praise Ye the Lord" (Bantock).

8.52: Vocal duet—Miss N. Coster and M. J. M. Caldwell, "Love Divine" from "The Daughter of Jairus" (Stainer).

8.57: Vocal quartet—Symons-Ellwood String Quartet, (a) "First Movement from G Major Quartet" (Mozart); (b) "Minnetto" (Boccherini).

9.3: Soprano solo—Miss Jeanette Briggs, "The Willow" (Goring Thomas).

9.8: Vocal quartet—Ariel Singers, "The Winds" (Cympson).

9.14: 'Ceilo solo—Mr. Geo. Eliwood, "Air with String Accompaniment" (Bach).

9.20: Tenor solo—Mr. Roy Hill, selected.

9.25: Bass solo—Mr. J. M. Caldwell, "The Windmill" (Nelson).

3YA CHRISTCHURCH (306 METRES)-SUNDAY, FEBRUARY 26.

5.45 p.m.: Children's song service, conducted by Uncle Sam, assisted by the East Belt Methodist Sunday School.
7.0: Relay of evening service from St. Andrew's Presbyterian Church. Anthems, (a) "I Was Glad When They Said Unto Me" (Elvy); (b) "The Sun Shall Be No More" (Woodward). Preacher, Rev. N. L. D. Webster; organist, Mr. R. E. Lake; choirmaster, Mr. J.

After the church service, the following concert will be given from 3YA Studio :-8.15: Baritone solo—Mr. Francis Jones, "Thou Art Passing Hence, My Brother" (Sullivan).

Soprano solos—Mrs. Frank O'Brien, (a) "At Dawning" (Cadman); (b) "Light Has Sent Me Many Roses" (Lohr).
Clarionet solo—Mr. M. E. Withers, "Scena ed Aria" (Bergson).
Contralto solo—Miss Nancy Bowden, "O, Rest in the Lord" from "Elijah" (Mendelssohn).
Baritone solos—Mr. Erneis Longs (c) "Naganata" (Canada) (d) "A

Baritone solos—Mr. Francis Jones, (a) "Nazareth" (Gounod); (b) "A Song of Sleep" (Somerset).

Soprano solo—Mrs. Frank O'Brien, "Rumanian Night Song" (Lohr).

Clarionet solo—Mr. M. E. Withers, "Ave Maria" (Schubert). Contralto solo-Miss Nancy Bowden, "Creation's Hymn" (Beethoven) God Save the King.

4YA DUNEDIN (463 METRES)—SUNDAY, FEBRUARY 26.

5.45 p.m.: Children's song service, conducted by Big Brother Bill.
7.0: Relay of evening service from Knox Church. Preacher, Rev. Tulloch
Yuille, B.D., M.A.; organist, Mr. W. Paget Gale. 8.15: Studio concert.

9.15: Close down.

If sulphuric acid from an accumulator is spilt on a floor or a carpet, it will rapidly "eat it away," unless the sulphuric acid is neutralised. This can be done by ammonia, or ordinary washing soda, or even bicarbonate of soda, if applied freely, and at the fullest possible strength.

Did you know that when a set slowly builds up an oscillation (or howl), the trouble is generally due to the fact that the loudspeaker is too close to the set, or is pointing directly towards it?

In home-made wet "B" batteries (high tension accumulators), it is necessary to insulate each cell from its neighbour, otherwise, instead of voltage, you will get trouble.

When a wire is joined to one side of when a wire is joined to one side of each of two condensers, and another wire to the other sides of both, they are said to be in parallel, and their capacity as a total will be the sum of the separate capacities. For instance, a .0002 mfd. and a .0003 mfd. condenser connected in parallel would give a total capacity of .0005 mfd.

It is generally the obvious troubles.

It is generally the obvious troubles, such as the use of a piece of broken flex, or a valve, which is making faulty contact with its valve holder, that get overlooked longest. Always attend to the obvious first, after which the various conditions of the parts can be attended to.

A New South Wales listener writes to the Melbourne "Listener-In": "I have noticed that 2FC and 3AR are practically free from static, and when I tune down to 2BL, static is much more intense, and practically blots all the lower wave-length stations out. 2GB and 5DN seem to be practically on the one wave-length, but on a night fairly free from static 2GB comes in very plainly, with just a slight heterodyne whistle. 2FC is received here very plainly, but fades occasionally. 4QG used to be a second stationary of the companion of the state of the second stationary and the state of the state of the stationary of the state of th used to be very good, but now comes in very distorted, like 7ZL. My set is a 5-valve Browning Drake."

The old broadcasting station at Soro, Denmark, has been closed, and its place has been taken by a new and improved one at Kallundborg. new station relays the Copenhagen service on the same wave-length that Soro used, but uses a nower of seven kilowatts, as compared with only one kilowatt at Kallundborg.

A good rough-and-ready test for os-cillation is to wet the finger and touch the aerial terminal with it. If a loud the aerial terminal with it. If a loud "click" is heard every time the finger both touches and leaves the aerial terminal, you can be certain the set is oscillating and causing interference with other literature. other listeners.

When working on the short waves the aerial coil should be coupled loosely, or the set will refuse to oscillate.

The call sign of the Siberian short-wave broadcast station is RFM. This station was installed by Carl Madsen (NU.9.EEO), of the Westinghouse Flectric and Manufacturing Co. of America. The power used is 20-000 watts, and the working wavelength 60 metres, but there is also a very powerful harmonic the working wavelength 60 metres, but there is also a very powerful harmonic or a duel wavelength on 30 metres. The installation is crystal controlled and the modulation is remarkably good. The location of this station is Khabarovsk, Siberia, U.S.S.R. (United States of Soviet Russia). This station works nightly between 10.30 p.m. and midnight, and transmits some very good music, both orchestral and vocal.

The capacity of the average 100-foot broadcast listener's aerial is in the neighbourhood of .0002 or 0008 mfd.

Liege (Belgium) is already arranging for its second International Broad-casting Exhibition, which will be held in the Palace of Arts from March 10 to March 25 this year, and is expected to comprise representatives of all important countries of the world.

Always place your accumulators on an old magazine or a piece of wood, as there is a lot of loose acid about as there is a for of loose acid about at a charging station, and, however carefully the cells are roped, there is a possibility that a very fine film of acid may be left. Salphuric acid is extremely corrosive, and it does not take match of it to run a carpet or damage the inside of a radio-set calbinet.

By abolishing the usual grid leak and condenser in favour of an audio transformer, whose secondary is connected in series with the grid leak and the .0005 condenser, which is placed across the A.T. coil, clarity of production will be increased exactly tion will be improved greatly. This is a new idea which now appears in a number of American circuits.

The Sydney Trades Hall broadcast station, 2KY, will shortly be building new studios in some central place in the city, announces Mr. Beaver, manager of that station. Present arrangements are unsuitable, and it is hoped to have completed the arrangements shortly. Their present studios are situated in the Trades Hall, in Gonlynn Street Sydney. burn Street, Sydney.

Signals which have passed around the world in the reverse direction from transmitter to receiver, or have passed more than once completely around the world, are known as radio echoes, lucause they make themselves manifest in the receiver as echoes make them-selves manifest in acoustic phenomena. Echo signals not only have intense scientific interest, but with the advent of more and more stations in the very high frequency bands, have become of very great practical importance, because of their disastrons effects upon reception at certain times. It is amazing that these each signals which have ing that those echo signals which have been photographically recorded, after having passed approximately two and one-half times around the world, are of sufficient intensity to cause very serious interference.

The presence of the grid leak makes no difference to the voltage applied to the grid provided that the valve is properly biased, for it is not until carrent flows that a resistance in series will cause an apparent voltage drop, and as no current should be allowed to flow between the filament and grid of the last valve, there is no loss of voltage in the circuit.

The broadcast of a Punch and July show in London recently met with great success. The average listener probably knows nothing of the history of this famous character who actually lived. He was a hunch-backed Italian actor, whose performances became so famous that the puppet-show for which Italy is so famous, instated and perpetuated him in the show which still makes the whole world laugh.

Next Christmas should prove ingresting if certain proposals by the B.B.C. eventuate. It is suggested that an Empire Christmas party be broadcast from London, and the following we'llknown personalities have approved of the idea—so we hope to hear more later:—Mr. Rainsay MacDonald, P.C., M.P.; Lord Danesfort, president of the British Empire Union; Sir Godfrey Langden, K.C.M.G., K.B.R., vice president Royal Colonial Institute, and of the African Society; H.H. The Malia-rajah of Rajpipla; Miss Pauline I'se-derick; the Right Hon. J. H. Thomas, M.P.; Colonel Harry Day, M.P.

Now that PCJJ has been dismantled and re-erected at Milversum, a brief review of its work may not be amiss, for it has certainly made radio history. It began by working on 30.2 metres when Australia spoke very well of its signals. Then on May 20, 1927, it had the audacity to relay Daventry, its signals being well received in Australia, New Zealand, India, and South Africa.

Dr. A. Hoyt Taylor, superintendent of radio at the Bellevue Naval Research Laboratories, U.S.A., defines the quartz crystal as a plank in the League of Nations—capable of avoiding internation disputes by reason of its preciseness in controlling the assigned wavelengths of transmitting stations the world over. The Bureau of Standards rates this mineral more valuable than diamonds and gold-it being so relatively rare and precious as to precipi-tate a struggle between certain contending force the triumph of either fac-tion meaning a monopoly of this mas-ter key to successful, interference-iree radio broadcasting.