

Fox-trot—Paul Godwin's Dance Orchestra, "Incidental Flirtation."  
11.0 : God save the King.

## 2YB, NEW PLYMOUTH (1230 KILOCYCLES)—SATURDAY, JULY 18

2.50 to 4.30 p.m. (approx.): Sports relay.  
6.30 to 7.30 p.m.: Children's session  
7.30 to 8.0 p.m.: Sports results and talks.  
8 to 10 p.m.: Concert and dance programme, with sports results.

## Sunday, July 19

### 1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, JULY 19.

3.0 : Chimes. Selected recordings, and relay from the Auckland Town Hall of portion of Organ Recital by the City Organist, Mr. Maughan Barnett.  
6.0 : Children's Song Service, conducted by Uncle Bert.  
7.0 : Relay of Divine Service from the Pitt Street Methodist Church. Preacher: The Rev. W. T. Blight. Organist and Choirmaster: Professor W. A. Moor.  
8.30: Parlophone Salon Orchestra, "La Source Ballet Music" (Delibes, arr. Weninger) (Parlo. A4255).  
Mezzo-soprano—Miss Joyce Seth-Smith, "The Old Refrain" (Kreisler). Instrumental—The Moore Sisters, Trio, "Valse Lente" (Chopin); Violin solo, "Andante Cantabile" (Tschaiakowsky).  
Tenor—Mr. Roger Errington, "Open the Gates of the Temple." Band with male quartet—Polydor Wind Orchestra, (a) "Stille der Nacht"; (b) "Lieb'st's was Die Welt Durchzieht" (Willich).  
Evening weather forecast and announcements.  
Mezzo-soprano—Miss Joyce Seth-Smith, (a) "The Perfect Hour" (Hahn); (b) "To Spring" (Gounod).  
Flute—Mr. David Whisker, (a) "Barcarolle" (Catherine); (b) "Badinerie" (Fonthon).  
Chorus—State Opera Chorus, Berlin, (a) "Hail to the Day" (from "Fidelio") (Beethoven); (b) "A Night in Granada" (Kreutzer).  
Piano—Mr. Cyril Towsey, "Nocturne and March of Dwarfs" (Grieg).  
Tenor—Mr. Roger Errington, (a) "Just for To-day" (Seaver); (b) "Be Thou Faithful Unto Death" (Mendelssohn).  
Instrumental—The Moore Sisters, Trio, "Traumerel" (Schumann); Cello solo, "Einleitung" (Becker); Trio, "Minuet" (Beethoven).  
Male chorus—De Svenske (Swedish Male Choir), (a) "Dalvisa"; (b) "Domaredansen" (arr. Olsson) (Poly. 90070).  
Flute—Mr. David Whisker, (a) "Nocturne," Op. 15, No. 2 (Chopin); (b) "The Red Sarafan" (Steckmest).  
Selection—Band of H.M. Royal Air Force, "Songs of Britain" (Trdtl).  
10.0 : God save the King.

### 2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JULY 19.

8.0 : Afternoon session of selected gramophone recordings.  
6.0 : Children's Song Service, conducted by Uncle George, and assisted by the Petone Church of Christ Children's Choir.  
7.0 : Relay of Evening Service from St. John's Presbyterian Church. Preacher, Rev. J. R. Blanchard. Organist and Choirmaster, Mr. O. W. Kerry.  
8.15 (approx.): Relay of band recital by the Port Nicholson Silver Band from the Grand Opera House (Conductor, Mr. J. J. Drew).  
God save the King.

### 3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, JULY 19.

8.0 : Gramophone recital.  
5.30: Children's Song Service by Children from Anglican Sunday Schools.  
6.15: Chimes from studio.  
6.30: Relay of Evening Service from St. Mary's Anglican Church, Merivale. Preacher, Rev. F. B. Redgrave. Organist and Choir Conductor, Mr. Alfred Worsley.  
7.45 (approx.): Musical recordings from studio.  
8.15 (approx.): Relay from Waimate of Concert by Waimate Silver Band, under conductorship of Mr. H. F. Vincent.  
10.0 : God save the King.

### 4YA, DUNEDIN, 650 KILOCYCLES)—SUNDAY, JULY 19.

8.0 : Selected gramophone recordings.  
5.30: Children's Song Service, conducted by Big Brother Bill.  
6.15: Instrumental recordings.  
6.30: Relay of Evening Service from Hanover Street Baptist Church. Preacher, Rev. E. S. Tuckwell, B.A. Choirmaster, Mr. H. P. Desmoulins.  
7.45: Selected recordings.  
8.15: Relay of concert programme from Station 3YA, Christchurch.  
10.0 : God save the King.

### 2YB, NEW PLYMOUTH (1230 KILOCYCLES)—SUNDAY, JULY 19.

6.0 to 6.45: Children's Sunday Service.  
8.15 to 10.0 p.m.: Concert programme.

## Questions and Answers

(Continued from page 15)

pass condensers you should get over the trouble quite well. Between the bottom of the primary and "A," insert a .006 condenser. Between the bottom of the secondary coil and the filament return there should be a bias battery, and across this put a fairly big condenser, say .5mfd. The bias should not be very high; about 1½ volts would do splendidly. Check up your wiring for closed loops—filament wires that are a few inches apart which run parallel to one another. In general keep your plate and grid wires well apart, but with filament wires bunch them together. The judicious use of chokes in plate leads, and also in the screen leads,

coil with a condenser shunted across it. It must be a very good set to get all N.Z. stations.

S. N. (Hammer Springs).—I have built the D.C. eliminator from the "R.R." of October 30, and am using it with my set, but while it is giving good results as far as smoothness and volume are concerned, stations lower than 3YA cause the set to oscillate.

A.: We suggest reducing the voltage on the detector valve as coupling is taking place between this and the remainder of the circuit.

TRICKLE CHARGER (Wellington): Part of a mains operated relay intended making (for automatic switching purposes) is a solenoid which is to function only for about 15 seconds each time the amplifier is switched on. An iron core is to be so arranged that when the mains current is switched on it will be drawn into the solenoid moving a distance of between 1 and 2 inches in 10 or 15 seconds (due to its operating a small train of clock wheels and governor). Then the circuit is automatically broken. The core is part of an old car sparking core, and consists of 24-gauge wire bound together. It is circular, about 3in. in diameter and 3in. to 4in. long. Could you give me particulars of the solenoid to use?

A.: We would not attempt to estimate the size of solenoid necessary without knowing the magnetic condition of the core and the exact load to be drawn in. So much depends on these factors. We would advise you to get into touch with a consulting electrical engineer.

CURIOUS (Hawke's Bay): My set employs a full-wave rectifier, which, though it has been in operation only five months, lights bluish.

A.: The valve has not been properly evacuated. There is gas in the tube, and this is ionising when you turn on the current. So long as it functions it will be all right, but if you notice any defect in your set, such as volume falling off, you can attribute it to this cause.

R. W. (Wellington): How many turns would be required for a valve base coil to tune the 600 metre band?

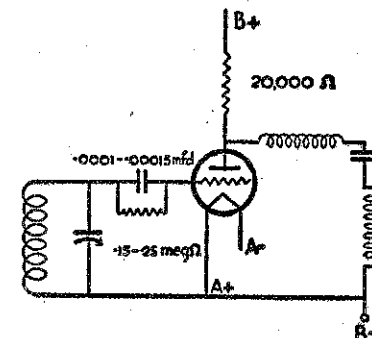
A.: Valve base coils would not be suitable to tune this band. You would need a 3in. former, and upon this wind 200 turns of about No. 26 gauge d.s.c. wire.

2. What would the r.f. choke need to be wound on and how many turns are necessary?

A.: This was fully described in the 1930 "Guide," and reproduced in the "R.R." some time ago. As another question has been raised on the same subject we are reproducing again this piece about chokes, and trust it will be what you are requiring.

3. What ratio a.f. transformer would be used in the 1st stage to give best results?

A.: If you are using more than one audio stage, the ratio of the transformer should not exceed 3½—1. If there is one stage only you could use a 5—1 or even a 7—1, but the use of high ratio transformers is fatal if there are more stages than one.



if necessary, with adequate by pass condensers should enable you to overcome the trouble.

2. Could you give me a diagram of a tuned anode coupling for the first stage, also the value of the coupling condensers, etc.

A.: Yes; we reproduce a suitable diagram on page 15.

D. K.S. (Papakura).—What additional apparatus would be necessary to change my set to all-wave? It is a det. two audio.

A.: It is not quite clear to us how your coils are arranged. Where is the primary connected? Your best plan would be to take the det. audio stages from the Kestrel Three, for you have all the specifications for primary and tickler coils. You could bring the aerial into the grid of the secondary coil through a neutralising condenser.

2. What causes a blank space on long-wave where there is no oscillation?

A.: That is due to a dead spot which you can shift by using a condenser in the aerial. It is due to peculiarity of your aerial or valve.

PUZZLED (Timaru).—In a school magazine there is a description of a crystal set which is no more than a coil connected to a crystal and phones. The aerial comes in at the mid point of the coil, yet the writer states that he can get all N.Z. stations on it. How does he tune it?

A.: It is tuned by altering the inductance by controlling the space between the numbers of turns on the coil. They are arranged on pieces of string, and you either extend the coil or contract it. Undoubtedly this way of tuning is a compromise, and is not so good as laying a fixed

There is a JEWELL Measuring Instrument for every type of Radio and Electrical Requirement. If unable to obtain, write direct to—



Factory Representatives for New Zealand:  
ABEL, SMEELEON, LTD., Customs Street East, Auckland.