



# Questions and Answers



**W. MACA (Heretaunga).**—Can a six-volt battery charged be used as an "A" eliminator for four-volt valves?  
A.: Yes, you will need to incorporate a 30-ohm rheostat.

**ALL Electric (Auckland).**—How many turns will be required on a standard six pin former tuned with a .00025 condenser to cover the broadcast band?  
A.: You will require 72 turns of 24 gauge d.s.c., with 25 turns tickler, which should oscillate quite well on the broadcast band.

**A MATEUR (Wanganui).**—How many turns of 26 d.s.c. would be needed on a 1 1/2 in. former with a .00035 condenser?  
A.: Secondary 75, primary 25.  
2. How many turns of the same wire using a .00025 condenser?  
A.: Secondary 120, primary 40.  
3. Using 32 d.c.c. s.w.g. for the primary 26 d.s.c. for the secondary, and 36 enamelled for the tickler? Secondary on a 2 1/2 in. former.

A.: Taking it that you will be using a .00025 condenser, secondary 100, primary about 40, but it will vary according to the valve used, and the tickler about 35.

4. My set is not as sensitive as it was when I bought it, and the tone becomes harsh and screechy.

A.: It sounds as though the valves want renewing. A set of valves should last 1000 hours.

5. The earth wire is very long.  
A.: A long earth is sometimes more of a disadvantage than an advantage. Remove it, and see if the set goes better, otherwise try to shorten the lead.

**CONDENSER (Hamilton).**—I am not having success with my shortwave set. I can receive only amateurs and four or five stations.

A.: Are the amateurs on telephony? If they are Morse, then you do not have the knack of tuning your set, which must not oscillate when telephony is required.

2. I am using a 201A valve, 45 volts on the plate.

A.: Perhaps one of the special detectors in the A415 class would be better. Try removing the earth.

**A.H.H. (Otakiri).**—Can a listener calibrate his dials?

A.: Yes, it can be done by a herodine wavemeter or more simply by plotting a graph. Take a piece of squared paper, choose suitable units for metres and dial settings, and plot points for the stations you receive. You must, of course, know their wavelength, and the dial setting. By connecting these points, the wavelength for any particular dial setting can be found by tracing the line representing that setting through to the curve, and from that point, down, to the wavelength.

2. From where can the diagram of the Ultimate Receiver be obtained?—Radio Limited, Anzac Avenue, Auckland.

**J.S. (Wellington).**—I cannot receive the American stations. Why?

A.: You are probably shielded by nearby hills. It has been the writer's experience that the city of Wellington varies remarkably as far as reception is concerned. American stations can be received quite well in one point, while



Mr. Leon de Mauny,  
Conductor.

## FINAL CONCERT OF THE Wellington Symphony Orchestra

1930 SEASON

will be relayed from the  
WELLINGTON TOWN HALL  
SATURDAY, NOVEMBER 1.  
Commencing at 8 p.m.

### Part 1

*Flying Dutchman Overture* ..... Wagner  
*Symphony in D Minor* ..... Cesar Franck

### Part 2

*Nut-cracker Suite* ..... Tchaikowsky  
*Variations Symphoniques* ..... Cesar Franck  
*Berceuse* ..... Jarnefeldt  
*Praeludium* ..... Jarnefeldt  
*William Tell Overture* ..... Rossini

in another a mile or so away they cannot be heard.

2. Is the enclosed sketch of aerial and earth correct?

A.: Your sketch is very difficult to decipher, and it appears that you have a very long earth. Your best plan would be to drive a pipe into the garden as near as possible to the window.

**W.S. (Dunedin).**—How many turns are required on valve base coil using 24 gauge d.c.c. for primary and secondary and 30 gauge for the tickler? The condenser .00025.

A.: Primary 80, secondary 180, tickler 75, but the coil will be a bad shape. Use finer wire.

**SWITCHBOARD (Gisborne).**—I have rigged up a switchboard to use several speakers. When two of the three are shut off and the third one in operation I can still hear signals in those two faintly.

A.: This is quite in order. If strong signals are available it will often be noticed that signals can be received faintly by connecting only one terminal.

2. What is the most suitable length of wire to be stretched from pole to pole in my aerial, which is 30 feet high?

A.: About 70 feet.

**R.B. (Port Chalmers).**—Some time ago I wrote you, but did not receive a reply. Do you know anything about the machine?

A.: We are sorry about your reply: you are recorded as having been replied to, but we cannot trace this in the paper. We do not know anything about the machine and advise you to consider, if you are buying, one of the more widely-known makes.

2. Is an aerial 100 feet long, 50 feet high, too long?

A.: Yes. Your selectivity would be poor. Try the effect of a series condenser .00025.

3. Is an insulated lead-in resting on the window still detrimental?—No.

4. Is there a list of distant stations published?

A.: Yes, the 1930 "Guide," but if you do not have one you will have difficulty in obtaining one. Lists of Australian and New Zealand stations have been published in the "Radio Record."

5. Would it cost very much to alter the machine to screen grid?

A.: It would not be worth while.

**J.H. (Auckland).**—What would be the gauge of wire, number of turns, and the size of core required for a 1 to 1 output transformer?

A.: Your better plan would be to make a choke capacity output such as described in the 1930 "Guide."

2. Could an "A" eliminator be successfully built by an amateur? Is one likely to be described in the "Record"?

A.: The essentials were given in the 1930 "Guide," but because this has been sold out the "A" eliminator will be re-

described in the "Record" within the course of a week or so.

3. I am using a home-built eliminator which hums badly on the local station. There is a silent background on all other stations, and the hum disappears when the station closes down.

A.: That is the carrier wave and not a defective "B" battery eliminator. The station hum from local is always more pronounced than from distant stations.

4. What is the remedy for a microphonic ring?

A.: Change the detector valve with another of the same kind, otherwise use a lead cap on the detector and shift the speaker to a greater distance.

**CARBORUNDUM (Wellington).**—I am contemplating making a battery of 90 Daniell cells to drive three valves for seven hours a week. What is your opinion of the suitability, approximate size of the containers, and the electrolyte?

A.: See the article by "Hard-up" which appeared in the "Radio Record" dated June 6. The most suitable "B" battery you can make is a Leclanche type using the centre portion of torch cells, as described in the article. Daniell cells would not be an economical proposition. The electrolyte should be saturated.

**M.E. (New Plymouth).**—I wish to attach a short-wave adaptor to my set. Can you recommend an expert?

**LISTENERS** must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington). Questions arriving without it are likely to go astray or be delayed.

Name of set .....

Number of Valves .....

Name .....

Address .....

Nom de plume .....

To be kept in subsequent inquiries.

Date .....

Please Note:—

- (1) Be specific and brief, tabulating, if possible.
- (2) Write legibly, and on one side of the paper.
- (3) We do not design circuits, but accept suggestions for feature articles.

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