

QUESTIONS: ANSWERS

FRANK KEE

The Technical Editor will, through these columns, be pleased to help readers experiencing trouble with their sets. Queries are limited to three—for more than this a shilling fee is charged, and a similar fee is payable for queries answered by post. Supplying layouts, circuits and solutions of intricate theoretical problems is beyond the scope of this service.

A coupon must accompany all requests for information. Non-appearance of the coupon in any issue cannot be regarded as a reason for its not being used.

Address all queries, The Technical Editor, Box 1032, Wellington.

R.A.S. (Christchurch): We are sending you under separate cover full particulars of the DX Club.

2. The numbers on my dial go from 0 to 100. How can I find out the kilocycles and metres they represent?

A.: It is very difficult to do so from a dial that is reading from 0 to 100. Your only plan is to prepare a list of the stations you get and their frequencies. Then, for stations in between those you have already listed, you can more or less estimate the frequencies. There is no direct way of telling unless you plot a curve.

3. The distant pole of my aerial is 40 feet high, the lead-in 30 feet. The total length, including the lead-in, is about 90 feet and crosses an iron roof most of the way. Would it improve matters if I shortened the aerial 10 to 16 feet and avoided the roof?

A.: Theoretically, yes. Whether it would be any better in practice is another story. It would certainly be well worth trying.

P.A.B. (Auckland): I wish to build a one-valve amplifier and have 201A's and power valve. Are these suitable?

A.: Yes. Use one of the 201A's.
2. I have a 6-1 ratio transformer. Is this suitable?

A.: Yes. We do not happen to know the transformer, however, and cannot tell you the markings. Your sketch is correct.

VOLTAGE (Otago): Would I get better results if I used a pentode in the last stage and coupled it to an inductor dynamic speaker?

A.: It is very hard to say whether you would get better results or not. If you use a specially matching transformer you certainly would get better results. If you didn't use this transformer the chances are that your results would not be any better than they are at present. The pentode is a wonderful valve, but needs to be specially matched to the speaker to get the best out of it. An article on matching the pentode to a speaker appeared in the "R.R." a few months ago. You could have a specially-coupled transformer made to your requirements. The inductor dynamic speaker will give you better tone than the one you are using at present.

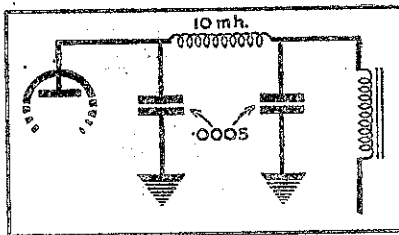
GRATEFUL (Oamaru): I have recently constructed the "Outspan Five" and have had good results with it. In the last stage I am using P625. Is this O.K.?

A.: P625 is the equivalent of UX245. If you have available 250 volts you are

getting the best out of your set. If not, the value is far too big P625A would be better.

2. I am troubled with a whistle.

A.: This is due probably to coupling between the stages. Use a choke and by-pass condenser in the lead to the plates of the r.f. valves. The circuit we show here for a filter in the detector circuit will possibly eliminate some of the



trouble. You use two small condensers on either side of the existing choke.

3. How could I even up my dials? Dunedin comes in at 90 on the 1st and 2nd dials and at 80 on the next.

A.: You need a few more turns on the third coil. Try five turns extra. You could make a soldered joint; there is no need to rewind the coil.

BANJO (Hawera): I have an American set using A615 first and second r.f., and detector A609, first a.f. B605 output. Could you suggest a better combination to bring in more volume and distance?

A.: Your combination is really quite good, providing your set can be neutralised with A615 in the first and second r.f.'s. If you can do this then you are getting the maximum from your set.

RADIO (Bay of Plenty): Why cannot I get stations under 330 metres? 2YA comes in all right, and also 1YA, but no others.

A.: It seems as though when you turn below 330 metres the vanes of your condensers touch and consequently short-circuit. Examine the condensers, turning them so that the dial reads below and above 330 metres, and note what happens. The valves you are using in the audio stage are quite satisfactory, and it would be hard to suggest a better combination.

ONE DIFFERENTIAL (Oamaru): I wish to construct the Differential One for short-wave. Where could I get a description of same? What would be the total cost?

A.: Build the "Sparrow Hawk One" described in the 1931 "Guide," using a .0001 tuning condenser (this is for short-wave only). The total cost with accessories would be £6 or £7.

MO (Pieton): What is the best combination of valves for a B.D. 4, working on an eliminator d.c. supply of approximately 90 volts?

A.: We can only give you the type, you must choose the individual valves yourself. Use type 221 in the r.f. and first

audio stages. A special detector of the 615 class, and as audio, a valve of the 605 type.

2. A slight hum at times comes from my d.c. eliminator.

A.: If it is only spasmodic, it is due to something on the line. You can try only an extra filter choke and condenser. We would advise you to look up the articles on the d.c. eliminator which were published in the "Radio Record" some time back.

KOOKABURRA (Napier): I wish to convert the "Sparrow Hawk One" into a short-wave adapter for an eight-valve super-heterodyne. What circuit could I use?

A.: You could use the parts of the super-heterodyne circuit described in the 1931 "Guide."

PUZZLED (Wellington): I cannot get the "Differential One" to oscillate when using an indoor aerial. Results are quite unaffected by the reaction condenser.

A.: This sounds like trouble in the condenser itself. Use the phones and cell method and test for short circuit between either of the two fixed plates and the moving plate. Also make quite certain that your connections are made to the right terminals.

2. Could this set pick up some of the Wellington amateurs, using an indoor aerial?

A.: Indoor aerials are not particularly satisfactory. You may, however, be able to pick them up.

3. If you substituted a grid leak and condenser for the crystal, we think you would do better. However, the circuit is not a good one. Why not build up a circuit such as the all-wave "Sparrow Hawk," and then you would be more certain of results.

Information Coupon

(To be used with all requests for information.)

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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