

Questions and Answers



In Brief.

"A. J." (Tauranga). The resistance lamp required for the charger is made by Philips Lamps, and is numbered 329. If unobtainable locally, it may be had from Philips Lamps, N.Z., Ltd., Hope Gibbons' Buildings (Wellington).

"C. R.W." (Rodney). The dampness will probably affect the speaker unit. It will be safer inside.

"C. R.W." (Oha). The second R.F. valve is not neutralised. The neutralisation process has been fully described in the "Listeners' Guide," but if you do not feel competent enough to do this, take it to a dealer. You are losing a great deal of signal strength as well as quality.

"C. H." (Karori). We shall describe an amplifier such as you require in a forthcoming issue of the "Radio Record."

"P. V.P." (Auckland). Your request for an additional audio stage will be dealt with in a future issue of the "Radio Record."

"E. G.F." (Gore). Your case is rather unfortunate, and it seems that unless you use a counterpoise nothing can be done in the way of interference elimination. However, when the opportunity offers, we shall devote some space to the question of interference elimination.

R.F. Booster.

"G. B." (Waikato), in sending a diagram of a R.F. booster, using the parallel feed method of applying voltage to the plate of the R.F. valve, asks:

1. Would this be suitable with any type of three-valve receiver?

A.: By employing the parallel feed, the objection to the original booster does not hold. The set may be earthed to the primary without the danger of blowing the valve. It would not be suitable if the three-valve set already comprised a stage of radio, a stage of audio should be added.

2. Would it be improved by using a tapped aerial inductance instead of a R.F. transformer?

A.: Signal strength would be improved but selectivity impaired.

3. Could I use a .001 variable condenser in the aerial?—"Yes."

4. Would a choke of 500 turns be O.K. in the booster?—"Yes."

Two-Inch Coils.

WHAT will be the number of turns and size of wire for the Browning Drake coils if wound on 2-inch formers? asks "W.S." (Whangarei).

A.: Two-inch formers are rather unsatisfactory for the Browning Drake.

A very large number of turns has to be wound on in order to get the requisite inductance. In this manner, too much resistance is introduced, and the point of maximum efficiency is passed. Two and a half-inch formers are a satisfactory compromise between the 2 and 3-inch formers. The aerial coil will comprise 86 turns of 20 standard wire gauge spaced, with the tap at the twenty-seventh turn. The radio frequency transformer when tuned with a .00035 inductor requires 80 turns of 20 swg. spaced wire, for the secondary. The primary will comprise about 22 turns jumble wound.

2. Will a series condenser affect the number of turns on the coils?

A.: No; it will affect capacity—that is, it will alter the reading of the tuning condensers.

3. Will a choke comprising 1000 turns of 36 enamelled wire in ten slots be suitable for this receiver?—"Yes."

4. What is the possibility of using two 112 valves in parallel in lieu of one 171A as last stage amplifier? What "B" and "C" voltages would be necessary?

A.: Used in parallel two 112A's would not be the equivalent of one 171A, but used in push-pull they would give slightly better results. 150 volts plate and 18 volts grid bias are necessary.

This correspondent has made suggestions which will appear in a future issue of the paper.

Screen Grid and Pentode.

"W. G.W." (Napier) asks:

1. As an all-wave set, will the S.G. detector pentode combination give better results on short wave than the two audio and detector using ordinary valves?

A.: This type of set gives excellent results if carefully made and used, but here difficulties present themselves, and unless the correspondent is an experienced constructor he would be advised to use the detector and two audio, with a pentode in the last stage if he wishes.

2. Is it possible to sue A.C. on the filament of the last valve, and D.C. on the filaments of the other valves?

A.: A slight ripple will probably be present, and the correspondent would have to decide for himself whether this will impair the quality of the signals. If he has the facilities, he could do no harm by making the experiment, as there is no risk to the damage of the filament providing the A.C. voltage is the same as that required under D.C. conditions. Operating the last valve from A.C. would be quite satisfactory as far as the broadcast bands are concerned.

Adaptation to Short Wave Set.

"A. D.P." (Hastings). This correspondent in constructing the short-wave adapter described in the "Radio Listeners' Guide," finds that he could not procure the formers and bases as illustrated, so he has resorted to the five pins and sockets, as in the last year's short-wave set. He sends a diagram, and asks us if the corrections are correct? Unfortunately, this latter is none too clear, and we cannot advise him definitely either yes or no. The correspondent's idea as far as we can judge appears to be correct.

2. Does it matter which way the reaction coil is connected to the choke and condenser?

A.: It is advisable to reverse the connections to see which is the better. No harm can be done, and the experiment is nearly always worth while. The correspondent states that he cannot get life in his speaker. This, of course, points to a wrong connection. If he still cannot get the coils to function correctly and sends fuller details with a larger, clearer lay-out sketch, we may be able to help him further.

A Grid Bias Problem.

"J. J.W." (Ranunga), who is using a factory made neutrodyne with five

201A's and a 171A in the final stage with 180 volts on the plate, states that he can get splendid results without distortion by disregarding his "C" batteries. As soon as these are connected up, distortion immediately becomes evident.

A.: 171A to be worked at its maximum efficiency requires 40 volts grid bias, with 180 on the plate. It appears that the grid bias battery has been reversed, and a positive bias has been applied to this valve. Try reversing the connections on the small battery, and if results improve, increase the bias to 40.

Two R.F. Browning Drake.

WHERE is the best place to put the 2000 ohm resistance specified for the Two R.F. B.D.? writes "A.B." (Wadestown).

A.: In such a position that the plate leads are shortest and clear the grid leads.

2.: Could the two dials be replaced by a single drum dial?

A.: Yes, and if balancing condensers are used, very little sensitivity will be lost.

Designation of Terminals.

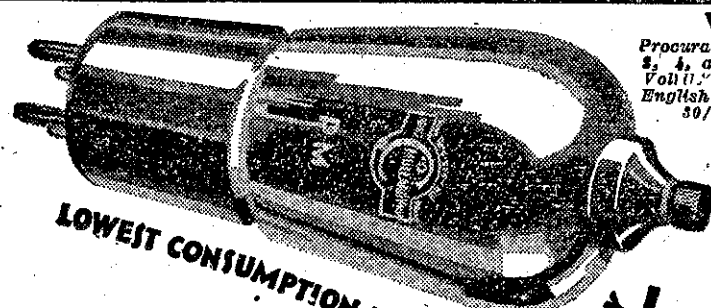
"C. M." (Clevedon) has had to deviate from specifications in the construction of an amplifier owing to his transformer differing from that shown. He asks:—

Is the terminal "G" on my transformer the same as "G.B." on the Ferranti?—No. It corresponds to "grid," and "P" corresponds to "grid bias."

Can I use AF3 in this set?—Yes.

I am using PM4. Is this O.K.?—Yes, but PM3 would give greater amplification.

(Concluded on page 30.)



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