

Questions and Answers



In Brief.

S.A.M. (Hamilton). Your case is one of unusual dimensions and within the next week or so we shall give it close attention.

Amplifier.

J.B. (Christchurch) asks the probable cost of the A.C. amplifier described in our special issue.

A: The cost could be computed by reference to any of the advertisements. It would be somewhere about £12 if the constructor made his own transformer.

2. Would this arrangement be satisfactory with Pentode's moving coil speaker, which I have made and which is giving excellent results?

A: Perfect results should accrue and if the amplifier is carefully made there should be practically no hum.

A.C. versus D.C.

IS there any difference between an A.C. and a D.C. set? asks "Argument" (Napier) as far as tone, volume, and sensitivity is concerned.

A. The characteristics of modern A.C. valves are equal if not better than many of the D.C. types, and thus the all-electric receiver is equal, if not superior, to the battery set. Valve for valve efficiency can now be obtained. The extra valve in the A.C. set is employed only because there is more power available. The superiority of a seven-valve all-electric over a six-valve D.C. can be exemplified by reference to our D.X. columns. Reception of American and Japanese stations with the all-electric Neutrodyne are now quite common occurrence, where

as in the days of six-valve Neutrodyne they were less common.

2. Does the variation in "A" current cause any notable results?

A: With the indirectly heated cathode type of valve, where the internal construction is such that small fluctuations in temperature have little effect, the result of temperature variation is almost negligible. However, in very many sets automatic line voltage control is provided as a safeguard.

Valves for a Small Set.

I HAVE a three-valve set, but find that although the volume is still good, tone has fallen off considerably, writes "F.W.W." (Ellerslie). The valves are twelve months old. I have been using special valves for each position. Is this satisfactory?

A: You have been using a good combination. We suggest that the grid bias battery has not received the attention it might have. You appear to have strengthened your "B" batteries and neglected the "C," with the result that tone is impoverished.

An Aerial Problem.

IF I raise my aerial another 10 to 20 ft. at the high end, would I be able to get further afield? asks "Listener" (Southland).

A: It is not the height at the higher end that counts; it is that at the lower. If the aerial were raised at this end, an improvement should be noticed.

Valve Combination for a Reflex.

CAN I improve my valve combination in a Roberts' Reflex, as "D.H.R." (Christchurch).

A: An improvement should be apparent if PM4 in the first audio stage is replaced by PM3, and the detector C509 replaced by A415 or PM4D. This valve as detector is unsatisfactory from the point of view of consumption of "B" battery. The transformers become saturated when a power, or semi-power valve, is used in anything but the last stage.

Aerial Covering.

"R.R.P." (Christchurch) states that he has a double aerial, one side of each being separate lengths, one covered and the other insulated. Should they both be bare?

Questions and Answers

OUR Question and Answers Department are always prepared to give consideration to the problems of our readers. This service is gratuitous, but a few courtesies are asked.

1. All technical correspondence should be addressed Technical Editor, "Radio Record," Box 1032, Wellington.

2. Be brief, do not make apologies for writing, and where possible, set out the questions in tabular form and state name.

3. When diagrams to be returned or a query of a nature that is not suitable for discussion in the columns is sent, include a stamped and addressed envelope.

4. In general we cannot undertake to discriminate between competitive trade apparatus.

5. If you prefer to use a nom-de-plume keep the same one if writing again. This helps in the entering of the queries for future reference. All letters must be signed with full address. Initials will be used in answering.

A: The question is a little vague. The meaning of double aerial being ambiguous. As for the covering, there will be very little difference whatever the combination.

Coil Design.

WHAT are the number of turns, spacing, and gauge of wire required on a 2-inch former to between 15 and 100 metres?—Mack (Johnsouville).

A: Four coils are necessary, built up of 18 gauge wire, double spaced, with tuning condenser .0001.

Metres.	Secondary.	Tickler.
100 to 65	28	10
65 to 45	17	8
45 to 30	9	6
30 to 15	4½	5

Experiment with the number of tickler turns may be necessary, as the values are approximate only.

2. Will a Philips Trickle charger charge Megohms "B" batteries eight in a row?

A: Philips have several trickle chargers, and it is necessary to know which one is intended. To charge eight in a row the output voltage would have to be sixteen volts. The best plan is to series parallel them, arranging them so that the voltage is equal to that delivered by the charger, but the amperage that of the numbers of rows in parallel plus amperage of an individual coil.

3. Who are the New Zealand agents for the Ward and Goldstone Alterno Rectifier?

A: Extensive inquiries have failed to locate the agents.

Improving the Browning Drake.

I HAVE a 4-valve Browning Drake, writes "Brownie" (Stratford), and I would like to know which of the following will give me the best results. The addition of a screen grid as H.F., parallel feed, adding another stage of R.F., or another stage of audio.

A: The result of any one of these additions will rest largely with the ability of the constructor, but adding another stage of triode R.F. should be the most effective. Both radio stages should be parallel fed. Two audio valves could quite well be used, but no more than this if transformer coupled, unless, of course, push-pull is used in the last stage.

2. Would a short-wave adaptor work satisfactorily from this set?

A: Yes, providing the adaptor itself is satisfactory.

3. Why can I not get 2YB, which is about 25 miles distant, when I can get 4QG, 7ZL, etc.?

A: It appears that the inductance of your tuning coil is too high—take off a few turns of the secondary.

Note: All queries should be addressed to the Technical Editor.

Strengthening the Browning-Drake.

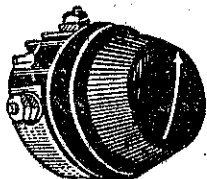
I WISH to strengthen my Browning-Drake, says "Screen Grid" (Ngalo). Which is the best way to do so—using the screen grid booster or building the five-valve Browning-Drake?

A: Building the five-valve Browning-Drake, but see the reply to the above correspondent.

2. Could I use my present .0005 condensers for tuning and use 3in. coils?—Yes.

3. Is it necessary to use a short aerial if the screen-grid booster is used?

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