



Questions and Answers



Deviating from Specifications.

I FIND that I shall have to deviate slightly in the specifications given for the laminations and the spool ends for the transformer for the 250 power pack. Will this be in order?—"R.A.M." (Auckland).

A.: The deviations you have mentioned will be quite in order.

"B" Battery Trouble.

MY "B" batteries having run down, were renewed, but on connecting them up, I found three valves had been blown out. What was the cause of this? asks "W.T." (Frasertown).

A.: It is hard to say, but we should imagine that in connecting up the new batteries, you have either made a faulty connection, or drawn two wires into contact so that the "B" supply found its way into the "A." We could not imagine the increased voltage arising from the new batteries to cause the trouble. A condenser may have broken down and thus allowed the "B" supply to get into the "A." In installing new batteries, it is wise to look to the connecting cord and its junction with the terminal strip, for it is possible for frayed copper ends to cause an arc between two terminals and thus cause trouble. The movement of the cord which is occasioned by moving the batteries might cause the short-circuit. If in doubt at any time a torch bulb should be connected across the filament terminals of the valve sockets. The voltage of this should be slightly less than that of the valves to be used.

Condenser Shorting.

I HAVE an all-electric set, but on turning the dial to a certain point the set starts to squeal and become un-

controllable. What is the matter? asks "L.B." (Te Puke).

A.: It appears that when a certain point on the dial is reached, the condenser vanes touch the fixed ones, causing a short circuit, which would give the symptoms complained of. Examine all the condensers carefully, and it will probably be noticed that one of the end moving plates has received a slight jar and sent it inwards.

Faulty Eliminator Block.

I SHOULD like to have a circuit diagram of the "B" eliminator part of a certain factory-made receiver, asks "A.G.R." (Greytown).

A.: We regret we cannot supply specifications of the factory-made sets. Apply to Spedding, Limited, Auckland.

2: I am building a neutrodyne and thought of incorporating the binocular type of R.F. transformer. Could you give me the specifications?

A.: This type of R.F. transformer has gone out of date, and we would not advise you to try and incorporate it in your set. Use ordinary solenoid coils on a small former.

Set Noisy.

MY new 8-valve screen-grid receiver makes a "honking" noise when heating up. We have tried changing the valves, but to no avail, states "J.McD." (Palmerston North).

A.: This seems a case for the dealer who sold you the set rather than for our query column. Get into touch with him.

A Milliammeter Problem.

I HAVE bought an English milliammeter, and find that when it is connected in the plate circuit of an amplifier valve, that I get a reading of 8 mills., irrespective of where I have the biasing resistance. When I connect this in the plate circuit of the 171 in the final stage, I cannot get a reading, although the set functions perfectly. I am using an output filter, writes "W.A.D." (Christchurch).

A.: The fact that you do not get a reading for the 171 is probably because you are connecting the meter between the output filter and the speaker, through which passage current does not flow. The meter should be connected between the filter and the plate of the valve, or between the "B" supply and the output filter. The fact that the resistance does not alter the reading need not concern you, unless you are using less than 135 volts on the plate. This valve correctly biased with more than 135 volts will draw upwards of 6 milliamps, of current, but if less than this, the milliammeter reading 8 will indicate that the biasing resistance is not working, in which case repairs will be needed.

Shortwave Coils.

I AM building the screen-grid short-wave four, and am using .001 tuning condensers with a .00035 or .00025 condenser for reaction. What will be the necessary numbers for the coils using valves bases for formers and with 26 DSC wire for all coils except the tickler? It will be 30 gauge DSC.—"E.W.C." (Kilbirnie).

A.: For best results we should advise you to follow the coil specifications given by "Megohm" in "The Radio Listeners' Guide." The following approximations, however, should just about fit your case, but some adjustment may be needed when the set is

toms Street East, Auckland, who will give you full details.

2. My valves are American with a non-American as power valve. How would you advise me to renew them?

A.: Exactly as they are in the original set, except for the power valve, which might be any good one on the market.

Trouble with "Round-the-World" Two

I HAVE built "Round-the-World" Two, but cannot receive anything but Morse signals. I followed the descriptions except that I used a .00025 condenser instead of a .002. The set oscillates smoothly and I am using a 201A as detector, writes "J.K." (Lincoln).

A.: It appears that you are not tuning on the right bands. Put a .00005 condenser in series with the tuning condenser, or take a turn or so off the coil. Try removing the neutralising condenser from the aerial.

Various Points.

COULD you enlighten me on the following, asks "J.B." (Longford):

1. Which takes the greater amount of "B" current, DEL610 or 201A?

A.: According to the manufacturer's curves, if both are correctly biased and 135 volts is used on the plate, 201A will draw 3 milliamps, and DEL, 6 milliamps.

2. Where can I obtain information for building a 250 volt "B" accumulator with the series parallel connection to charge from a 6-volt dynamo.

A.: In our issues July 29 and August 5, 1927, "Megohm" gave full details for building a wet "B" battery to give 112 volts, but more cells may be added to give 250 volts. To charge these from an "A" charger about 50 small cells may be connected in parallel and three of these groups connected in series (if a 4-volt charger is used) or four in series if a 6-volt is used.

3. Would "Jelectrin" be suitable for electrolyte in these cells?—No.

4. Can I use a 6-volt 10 amp. accumulator to charge a 6-volt accumulator at 3 amps. if I carry the current over 25 chains.

A.: No; there will be a voltage drop which must be made up for at the charging end. You could charge a 4-volt accumulator allright.

ON no account connect up an eliminator without reading the manufacturer's directions carefully, or serious damage may be caused by wrong connections.

ALWAYS avoid a joint in the aerial wire if possible, but where it is unavoidable arrange to solder the joint. Otherwise trouble will certainly develop, due to high resistance at this point.

Questions and Answers

READERS of the "Radio Record" who are in difficulties about reception or set construction are invited to write to our "Questions and Answers" department for help. We particularly wish to assist those who know little about radio, as very often there is some very slight trouble which spoils completely one's enjoyment of the programmes.

Correspondents are asked to observe the following courtesies:

1. Write legibly.
2. Make your questions brief and to the point; do not make apologies for writing, and, where possible, tabulate.
3. Do not ask for a reply by post unless a stamped and addressed envelope is enclosed. Even in these circumstances, we reserve the right to answer any question through our columns.
4. Do not ask us to design circuits or send detailed layout diagrams; but we can offer advice regarding circuits.
5. Address all technical correspondence: "The Technical Editor, P.O. Box 1032, Wellington."

working: 12 to 28 metres, primary 4, secondary 5, reaction 4; 28 to 38 metres, primary 5, secondary 8, reaction 6; 38 to 60 metres, primary 5, secondary 18, reaction 9; 60 to 100 metres, primary 4, secondary 30, reaction 15. These are for coils built with the wire unspaced. We consider the .00025 to be the better condenser for reaction.

Neutralisation Difficulty.

WOULD you advise me how to neutralise a factory-built receiver? I had this done, but in bringing it from the dealer the neutralisation was affected, and now the set is as bad as ever, writes "R.G." (Hawke's Bay).

A.: Communicate with the New Zealand agents, Abel Smeeton Ltd., Cus-

Radio Literature

Largest Stocks South of the Line for Amateurs and Broadcasters. "Radio Manual," published price 25/-, postage 1/-, "Radio Amateur's Handbook," latest edition, 5/3 posted. Write us.

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