

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.



PUSHPULL (Auckland).—I intend using an ordinary audio transformer as input to a pushpull stage. Will you show how the grid bias is to be connected?

A.: The two resistances are used across the secondary, as was shown in the "Diagnosis" a short time back. The other connections are then the same; you merely regard the centre tap of the resistance as the centre tap of the transformers and the two ends, of course, are the same as when a transformer is used.

EXPERIMENTER (Dunedin).—We have no technical data concerning the speaker you mention.

2. Where can I obtain the paper to make the cone?

A.: Any well-known dealer could obtain it for you.

3. I have a four-valve B.D. with a 245 in the last stage; 180 volts are used on the plate. Will this be suitable to operate a dynamic speaker?

A.: With 180 volts only you would be better to use a valve of the P265A class, and work this at maximum.

ELECTRO ((Kelso).—Is the Loftin-White, with E443 as output sufficient to work a dynamic speaker? It will overload a cone, but when I connect it to a dynamic, the field current of which makes very little difference, the volume level falls considerably.

A.: There is something wrong with your speaker or field supply. The Loftin-White will give you excellent volume from the ordinary dynamic speaker. When you connect the field coil you should notice a decided step-up in volume. Have you tested your accumulator with a meter when it is on load?

2. The power transformer is 60 watts and does not overload. Would this be sufficient to supply the field current of a high voltage dynamic speaker?

A.: No; the field coil takes a fairly heavy load, and your transformer does not have a great deal of power to spare.

FAN-1927 (Napier).—I have an old battery set with R.C.C. amplification. What valves do you suggest with a view to economy in running?

A.: Use 221's in all stages except the last, where you can use one of the high-gain power-valve type valves.

2. What values of resistance are usually used?

A.: The resistances in the plate circuit are generally 100,000 ohms. Those in the grid circuit 250,000 ohms.

3. Could s.g. valves be used, and if so, how?

A.: S.G. valves could be used, but the change would be uneconomic. The set would have to be completely redesigned on the radio side.

T.K.B. (Cambridge).—Are PM3, and PM4 suitable valves for the "Kestrel Three"?—Yes, but M4D is a better detector than PM3.

2. Are details of an a.c. version of the "Kestrel Three" available?

A.: Not at the present time. We hope to have them ready shortly.

SUPER SIX (N.P.).—Will the super six be more powerful than the "Outspan Five"?

A.: Considerably so, but it must be used from a loop antenna, and this will offset, to some extent, the abnormal sensitivity of the receiver.

2. Will it be single dial control, and when will it be out?

A.: It will have two dials, and we hope will be out next week.

3. What will be the cost, including the valves?

A.: Somewhere in the vicinity of £14.

A.S.C. (Christchurch).—Why do I blow out so many valves?

A.: Your voltages are too high, due, probably to an incorrect number of turns on the primary winding. Your best plan is to communicate with the agents who sold you the set and get their service man to put a meter in the circuit.

B.B. (Gisborne).—What is the solution used in a hulkite electrolytic charger?

A.: Sulphuric acid specific gravity 1200. 2. Should I use 201A valves in my set?

A.: You can use them in all stages except the last, where we should advise you to use one of the high gain power valves.

3. Would a wavetrap separate the local stations from 22W?—We think so.

DX72W (Wellington).—When I switch on my set a loud plop comes from the speaker, and then the music is heard. At other times when the set is switched on the items come through without the plop.

A.: This may be due to your set oscillating, or to a defective transformer, or valve.

J.B.C. (Petone).—I have a five-valve set, but when I put the speaker on

the cabinet a loud whine is heard in the speaker.

A.: This is caused through a microphonic valve. Place a leather cap or a cocoa tin inverted over the detector.

2. If I wish to build the "Outspan Five" could I do so by using R.C.C. amplification?

A.: Yes, the "Outspan" would be quite suitable for resistance capacity coupling to the audio, but you would have to use three valves instead of the two we specify for transformer coupling.

NOISE (Christchurch): Refer back to a short article in the "R.R." a couple of weeks ago, in which it is pointed out that when the dual wavetrap was first described a wire was left out of the layout diagram.

2. Is it possible to charge an "A" battery from the generator of a motor-bicycle?

A.: Yes, but watch the charging rate. It should not be more than 4 or 5 amps.

3. What is the method of connection?

A.: Disconnect the two wires now going to the accumulator on your motor-bicycle and take them instead to the "A" battery. Start the engine running and leave it on until the battery is charged. It will possibly be a rather expensive method of charging an accumulator, but otherwise it should be satisfactory. Adjust the charger to a high rate and set the motor-bicycle running slowly.

C.T.H. (Dennistown): Is the pentode valves better than the make I mention, and if so could they be used in my American a.c. set?

A.: You do not give us very many particulars about your receiver. We presume it is one of the a.c. type. You cannot use a pentode in it, and must replace

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(3) We do not design circuits, but accept suggestions for feature articles