Questions and Answers

E. B. (Devonport): As your set takes ¾ of an ampere it would not be a practical proposition to attempt the Daniells Cell charger. Full instructions appeared in the "Radio Record" of November 7, 1931.

R. L. (Christchurch): I cannot get a power detector to work. Why?

A.: Can you test the voltage on the plate? It will be necessary to use a high resistance meter, owing to the high resistance in the plate circuit. Try the effect of a choke and two .0005 condensers—one on either side of the choke, and between this and earth in the circuit. To get the power detector working satisfactorily it is necessary to put a heavy signal on the grid, and as you do not appear to be doing this it is not altogether surprising that you do not have the stage working.

2. I purchased an alleged 25,000-ohms resistor, but appears to be 21,000 ohms. Will this affect the working conditions? —No.

3. Used as a power detector, approximately what voltage should be on the plate of the 227, and what approximate m.amps. should it draw?

A.: There should be about 180 volts on it, and it should draw less than 1 m.amp.

ENVOY (Timaru): What value of coupling resistors or chokes should be used to give the greatest gain consistent with good quality in the circuit I enclose? The valves are 224 coupled to 227.

A.: In the plate circuit 100,000 ohms, in the grid circuit .5 megs. Actually these are not the optimum values for coupling a screen-grid valve to a 227, but as you are using grid-leak detection, and in consequence will be drawing a relatively fairly high current for the plate, it is impossible to put the optimum resistance in the plate circuit because the necessary voltage would never be developed on the grid. Were you using power detection, you could increase the value of the plate resistance to somewhere between ½ and 1 megohm, which would give you a better load resistance.

2. Yes, you can use the circuit, though it is doubtful that it would be as effective as the ordinary resistance coupled stage.

3. Please criticise the converter I have depicted. In operation there are no repeat points. The B.C. Set is a super-het.

A.: Your circuit is quite satisfactory, but you would get better results if you used an r.f. stage ahead of the detector. Are you quite certain that the set will oscillate on the lower frequencies. It may be necessary to reduce the resistance in the B+ lead. Decreasing the value of the .01 condenser may bring about more ready oscillation.

W. J.D. (Reefton): Is there any cure for loud hiss in a super-het. receiver? I am using one which was designed for a 119 valve, but am using other six-volt valves. This hiss is very pronounced.

A.: It would probably be reduced if you used a 199 in the oscillator position. You can decrease the filament voltage by inserting a suitable resistance in series with one of the filament prongs.

74W. (Wellington): 2YA comes in over ten degrees, blotting out 5CL, 4QG and an American, and when 2YA is approached a loud crackling noise is heard. Could this be my aerial, which is 40 feet high and 100 feet long, and the lead-in coming down outside two electric light wires?

The broadness of tuning may be due to your condensers being out of alignment, or a faulty resistance in the detector circuit. However, it would be necessary for a serviceman to make adjustments. It is unlikely that the crackling is being picked up through your lead-in. You would notice it on all outside stations. Probably you are overloading your set with the heavy signals from 2YA. Possibly your proximity to 2YA is giving you trouble. It would not be a bad plan to cut down your aerial. Certainly you would lose volume, but that cannot be helped.

WHIZBANG (Frankton Junction): I added another valve and transformer outside my Cossor Melody Maker, but when the "C" battery is connected volume is decreased. I have noticed that the valves and transformer are not connected as described in "Questions and Answers."

A.: Evidently the stage is not connected correctly. The diagram in "Questions and Answers" was prepared specially for the Cossor Melody Maker, so check them over and see that they are the same, and you will certainly get better volume, but take the 220P to the last stage and put in a general purpose valve where the 220P was, cutting out the bias on that valve, or at the most reducing.

GREBE (Tauranga): I have my set grounded to an oil drum which I keep filled with water sunk about three feet down, properly connected. Would reception be improved if I installed a further ground connection by gas or water-pipes sunk, say, six feet away and connected to one another by a ground wire?

A.: An elaborate ground, particularly in districts where the earth connection is not particularly good, is generally worth while, particularly if a battery set is used. Under these circumstances we think you would get decidedly improved results by making the change.

G. M. (Christchurch): See this month's "Radio Times" for a circuit of the Loftin White, using a pentode valve. We are hoping to incorporate this circuit in a high-class local station receiver to be described in the near future in the "Times."

AERIAL (Hokitika): The combined "A" and "B" current must flow through the ½-ohm resistance before the battery is reached, and as the set was no doubt designed for 201A's this current amounted to approximately 1¼ amperes, and so would result in the development of approximately .6 of a volt.

(Continued on page 22.)

Information Coupon

(To be used with all requests for information.)

Name of set .....

Model .....

Name .....

Address .....

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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.
(4) We do not design circuits.
(4) Limit three questions, unless 1/- is enclosed.