

place, if the connections other than the filament are correct. Now reduce the number of turns by, say, three, and note the result.

Double Grid Valves.

WILL a double grid valve be suitable for the crystal and valve with 3-valve performance, writes "E.T.D." (Petone). If so, will it be equal to an ordinary H.F. valve with 90 volts on the plate?

A.: Use "A441" and results should be found to equal that of the ordinary valve of 90 volts on the plate for a one-valve amplifier.

2. The set refuses to oscillate.

A.: Put more turns on the reaction coil.

3. I am now using a short aerial. What difference will it make to the coils?—None.

Interference from Generator.

"G.R." (Takaka) complains that his generator, driven by a Pelton wheel, causes interference with his wire-

less receiver. He asks how this may be overcome.

A.: Connect in series with the leads to the lighting system H.F. chokes comprising three or four hundred turns of 22 gauge wire. Try the effect of a little caustic soda on the commutator.

Short-Wave Adapter.

CAN an A.C. short-wave adapter be applied to a 7-valve all-electric receiver, writes "A.A." (Avondale).

A.: At this stage of radio evolution A.C. short-wave adapters have not come into general being. For the best results it will be necessary to use D.C. Such a D.C. adapter could quite well be used with an A.C. set.

Shortwave Problems.

"H.W.Y." (Herekino), asks the following questions:

1. Is it normal for both rheostats to work only when just open? Past this point a strong howl sets up.

A.: No, there is too much reaction. Remove a little wire from the tickler coil.

2. Why is it necessary, to keep the set oscillating, to have sometimes to reduce the coupling between the aerial and secondary coils?

A.: This is done to reduce the damping of the aerial, which varies frequently.

3. I connected a fixed condenser to a choke and incorporated this in the set, but found it would not oscillate.

A.: This was probably in parallel with the existing condenser, so that a very large capacity was introduced rendering regeneration impossible.

4. With both variable condensers all in I can turn the reaction coil full out and the only sound heard is the steady rushing sound? Is this normal?

A.: It appears as if in this position, the fixed vanes are touching the moving vanes, also try another grid leak.

Your other problems are being dealt with by the technician who designed the set.

Supply of a "B" Eliminator.

WOULD a Phillips "B" and "C" eliminator supply enough current to run a screen grid two 201's and two 171A's

in push pull, or would I get better results by using semi-power valves in the last stage.

A.: This eliminator will supply 30 milliamps. at 150 volts. This would not be sufficient for two 171A's in push pull. Try the new "B405's" in push pull.

2. Do two power valves in p.p. take exactly twice as much plate current as one?

A.: Yes, unless they are double biased, in which case they take the amount of one.

S.G. Browning-Drake.

"SELECTIVITY" (Kelburn) has constructed a 5-valve screen grid Browning-Drake, but cannot neutralise it correctly. He states that the set is not shielded, and complains that selectivity is poor. He adds that a good number of stations were logged while the valves were new, but now he has noticed a background of noise, and cannot get the same number of stations.

A.: There are a number of factors to be considered. A 5-valve set using the

2. Could an eliminator be made to provide 180 volts at 40 to 50 milliamps. from the 32 volt battery?

A.: No, for this reason. Voltage can be stepped up only by means of a step-up transformer. The principle of this is that if two coils are connected by their

magnetic fields only and an alternating or pulsating current fed into one of them, current will be induced up in the other at a voltage in direct proportion to the windings. This step-up can take place only with pulsating current. The induced current momentarily opposes to

RADIO DIRECTORY

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CITIES

AERIAL MASTS Domestic Radio Co., Ltd.,
300 Queen Street, Auckland.

ALTONA & HAMMARLUND-ROBERTS SETS. Johns, Ltd.
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CROSLEY SETS Lewis Eady, Ltd.,
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DAYTON All-Electric Radio ... Superadio, Ltd.,
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EMMCO RADIO PRODUCTS Johns, Ltd.,
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Thos. Ballinger & Co., Ltd.,
Victoria St., Wellington.
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LOUDSPEAKER AND TRANSFORMER REPAIRS A. E. Strange,
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MULLARD VALVES All Radio Dealers.

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138-140 Queen St., Auckland.
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185 Manchester Street, Christchurch.

WILCOX ELECTRIC RADIOS Royds-Howard Co.,
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COUNTRY TOWNS

CROSLEY RADIO J. C. Davidson,
Main Street, Pahiatua.

CROSLEY SETS F. H. Jellyman, Ltd.,
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CROSLEY RADIO D. A. Morrison & Co.,
Victoria Avenue, Wanganui.

MAJESTIC, ATWATER-KENT AND APEX ELECTRICAL SETS. Also Bremer-Tully, Radiola and Browning-Drake Radio House, Hamilton.
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PHILIPS VALVES AND APPARATUS All Good Radio Dealers.