



Questions and Answers



"INQUIRER" (Wellington) has a tandem condenser (.00035) with trimmer, and desires to know the number of turns space wound on each coil, necessary for the construction of a 4-valve single-dial control B.D.

A.: The aerial and the secondary coils require 68 turns on a 2½-inch former using 24 D.S.C. wire unspaced. If you space it, wind on 60 turns, but spacing is not necessary when silk or cotton covered wire is used. Tap the aerial at the twentieth turn, and wind 15 turns on the primary.

2. Which wire do you advise, D.S.C. or enamelled?

A.: D.S.C. would be very much easier to work, and give equally as good results.

"A.C." (Wanganui) wants the details of a cone speaker unit.

A.: We do not recommend amateurs to try to construct the units. They cost very little, and are not worth the trouble they involve in manufacturing. Purchase

a unit and then make up a speaker, such as was described by "Megohm" a short time ago.

"R.V." (Auckland) has read our article on the Loftin-White system, but "cannot get hold of the theory well enough to answer for myself the following questions":

1. How does one arrive at the values of current and voltage for different points of the set for different valves?

A.: It is most involved, and we do not recommend constructors departing from the specifications. Almost all manufacturers make valves with the same characteristics as those recommended. Use these.

2. Could this system be worked with D.C. or batteries?

A.: Yes, but it will take a frightful amount of experimental work to evolve a really good set of resistances. If you feel fit to tackle this, we wish you the best of luck.

3. Could you manage to give another article explaining these points or publish a diagram of the resistances for other valves?

A.: We will probably follow up with further articles on the Loftin-White. We cannot promise that we will experiment with D.C. The principals in America have given no details in connection with D.C. valves. They consider D.C. a thing of the past.

"B.D." (RANGIWAHIA) asks the following points concerning the two R.F. B.D.

1. Which coils would give the best results, 2½in. diameter or 2in.?

A.: You wouldn't be able to detect the difference between them.

2. How many turns of D.S.C. wire will be required in either case for the .00035 condenser?

A.: 2in. diameter, 98 turns; 2½in. diameter, 68 turns.

3. How many primary turns will be required for A409?—15.

"SUBSCRIBER" (Wairoa) asks if a 4-volt battery can be charged from a 6-volt charger.

A.: Yes; use a 3 ohm variable resistance in series and adjust until the right charging rate is secured.

2. Which is the best all-wave set, detector and two audio, or a screen grid four, all wave?

A.: For short-wave and all-wave work the screen grid valve has been successful. Probably the S.G.4 would be the better.

3. Can a screen grid set, and a 3-valve set be worked satisfactorily from a "B" eliminator?

A.: Recent experiments have shown that an eliminator may be used on short-wave. There may be a slight ripple, but nothing much to worry about.

4. What is the best aerial length for an all-wave set?

A.: About 60ft.

"H.E.C." (Wellington) stated that "H. when his set is cold a piercing whistle keeps up for 30 seconds or more.

A.: It sounds like a microphonic valve. When the set is working commence by giving a sharp tap on the detector valve. This will produce a ringing sound. Wait until this dies down, and tap the next valve in the amplifier, and so on. The one which produces the ring will then be found. If the same ring is produced when the valve has been

changed, have a .1 to 15 megohm resistance placed across the secondary of that transformer, thereby limiting the input to the last valve. Excessive input will produce similar noise. The speaker will cause vibration if the amplifier is too close. A lead cap placed over the valve will stop the vibration when anti-microphonic sockets are used. Use rigidly-fixed sockets in the amplifier.

"BEGINNER" (Gisborne) has a screen-grid four battery set, but cannot get anything on short-wave.

A.: Increase the detector voltage until the set oscillates. The terminal is usually marked B+ or HT. The three-post-

fusing. 220 cannot be used as detector. Are you sure you haven't make a mistake?

"A.J.M." (Kelburn) asks if two eliminators giving the same output can be coupled in series to give double the output.

A.: In volts, yes. You may need to reverse the primary connections of one of them. The primaries, of course, are connected in parallel, that is, both adaptors are plugged in A.C. sockets.

2. Where can I obtain a thermo-galvanometer, and what would be the approximate cost?

A.: Carrick-Wedderspoon, Wellington, can supply them. We do not know the cost.

3. What current does the "C" valve 3006 in a Philips eliminator 3003, give?

A.: .6 milliamps. Its function is to provide voltage, not current.

4. Could I get say 200 volts 18 milliamps from the above eliminator?

A.: Yes.

"A.E." (Feilding) asks for particulars for valve-bias coils for "Round-the-World" three to tune over the broadcast band.

Secondary	Tickler	Band
54	24	300
130	35	300/500

Use 26 gauge enamelled wire without spacing.

J.G.A." (Stratford) wishes to know if a Tungal charger can be used as a battery eliminator with an electrolytic condenser and choke?

A.: Yes, you are not allowing anything for voltage drop in the choke. This, of course, will be very little, but it would be better to use a 4-volt valve with a resistance. We see you have noted a remark made in these columns that the positive of the charger became the negative of the eliminator.

This was an unfortunate slip, for the positive of the battery charger becomes positive of the eliminator.

"C.E.L." (Kilbirnie) asks if 3-inch formers can be used for the coils of "Round-the-World" Three.—Yes.

2. The terminal strip shown on the diagram is blurred. What should they be

A.: In this order: A—, B+, detector, B+, amplifier, C—, A+, B: max. Note that A—, B—, and C+ are connected together.

3. Kindly give particulars of an "ABC" eliminator for this set?

A.: A suitable eliminator was described in the 1929 "Radio Listeners' Guide," and an "A" eliminator may be made from the specifications of the battery charger and choke given in year's "Guide."

"A.S." (Blenheim) asks if the far end of the aerial were to make good contact with the earth would the R.F. valves burn out if the machine was running all out on distant stations.

A.: No, the valves are not in danger while the aerial is shorting to the earth.

"M." (Napier) asks if a Pilot push-pull impedance is suitable for a Loftin-White instead of an output transformer?

THE RADIO BOOKSHOP

(Te Aro Book Depot, 62 Courtenay Place, Wellington.)

"Thermionic Vacuum Tube" (Van Der Bijl) 26/6.

"Radio Amateur Handbook"

(Handy's) 6th edition, Reprinted May, 1930. 5/3 posted. To arrive July:

"Radio Amateur Call Book."

(World stations' calls), 5/3 posted.

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