

condenser of .0001 between the aerial and the aerial terminal have any effect?

A.: It is an expert's job to make any adjustment to an a.c. set. We should imagine that there is trouble in the bias resistors of the r.f. valves. Placing a condenser in series with the aerial will not have the desired effect.

2. Would line voltage or current surges cause trouble?

A.: It is most unlikely.

3. Have you any other idea as to what the trouble may be?

A.: Other than the bias resistors and the valves themselves there is little we can suggest. The set should be overhauled with a modern fault-finding instrument.

P. N. (Hokianga): Is my diagram showing how to add an extra stage of screen grid r.f. in order?

A.: The valves would be better transformer coupled as we described this week for the Outspan Five.

2. Should the coils and valves be separately screened?

A.: The cans should be screened with an inverted can, and the valves only if oscillation cannot be controlled by other means.

Is it necessary to have the coils a minimum definite distance from the screen?

A.: About 2in. would be ample.

4. Should the secondary coils have the same number of turns?—Yes.

5. C plus connected to A plus, is this correct?

A.: It is done with some sets, but the usual practice is to connect A minus to C minus.

6. My log comprises 60 stations in America, Japan, New Zealand, and Australia. Is this satisfactory?

A.: Yes; it is excellent.

7. With the addition of a second screen grid valve, would the set be more selective?—Yes.

S. G. (Masterton): I have an American neodyne set in which I have four valves that are not American. My second radio and detector 2 minus A615, and I

have a four and a half "B" battery with B605.

A.: In these older American sets particularly it is not advisable to use anything but American valves, at least in the radio and detector sockets. It would have been better had you used 201A's or 221A's in these stages where you have 615's. The 615 is an excellent valve as a detector, but it is not possible, especially in a set of your type, always to get good results when two are used. Your "C" battery should be increased to nine volts.

COILS (Eketahuna): Can a short-wave a.c. receiver be constructed using valve base coils? Where can I obtain a circuit?

A.: It could certainly be made, but would need special care. We do not have a suitable circuit, though a four-valve one will appear in the "Guide."

E. W. D. (Invercargill): Is an output filter of any advantage over an ordinary direct-coupled speaker?—No.

2. What value of choke would I need for this?

A.: About 30 or 40 henrys.

2. How many turns of wire would I take to make this choke?

A.: 5000 turns of 36 s.w.g. on a core 4in. square. No gap.

3. Why does my set give an annoying growl when coming into oscillation?

A.: This sounds like threshold howl. Shunt a 200 ohm potentiometer across the "A" battery leads to the detector and take the centre arm to the grid-leak, as shown in the diagram in the next column.

4. Should I be able to receive American stations on my set with an aerial 80 feet and 30 feet high?

A.: This depends upon your location.

5. Could I use one stage of transformer-coupled audio with a stage of r.e.c. following?

A.: It would be better with one stage of r.e.c. with a transformer following.

POWER (Christchurch): I have made two chokes as described in the "Radio Record" twelve months ago.

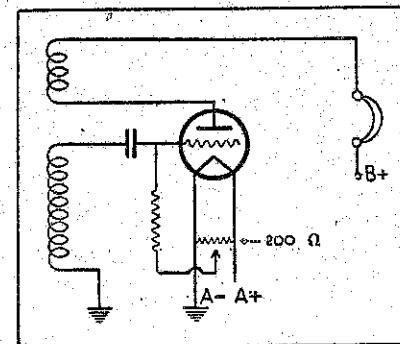
Could these be used instead of the chokes specified in the description of the L.W.?—Yes.

2. I wish to run two 245's in parallel and a 280 rectifier. Would this be satisfactory?

A.: Yes. We publish on page 14 the amended diagram of this circuit for your information.

TRICKLE CHARGER (Khandallah): What is the most satisfactory power valve or valves for the Loftin Four?

A.: A single 245 will give quite a reasonable output, but if you are not



impartial to high tones you would find that one of the pentodes an excellent one.

2. Would 1250 turns be correct for a single 245 valve with a transformer core dimensions of 1½ by 1 3/8 as described in the "Radio Record" on December 5?

A.: No. For full-wave rectification 3500 turns centre-tapped are required.

F. B. (Hokianga): My set has developed a loud crackling noise.

A.: It sounds like a defective transformer, a broken speaker cord, or a broken-down condenser. If your set is a commercial one send it in to an agent to have it attended to.

2. I get a shock when I touch the speaker terminals.

A.: This is quite in order as there is very high voltage floating about them.

3. A friend of mine has a set similar to my own, but the switches work in opposite ways.

A.: This is probably, in order, the indication being that in assembling either yours or his, the switch has been turned upside down.

9XYZ (Timaru): Could I use a frame aerial and connect one wire to the aerial and one to the earth?

A.: No; a frame aerial must be connected in a special way to the grid and filament return of your set which takes the place of the first coil.

LITTLE WILLIE (Timaru): I have a seven-valve American set which has decreased in volume and is distorting on all stations. What is the matter?

A.: How is your bias battery? Is it up to full strength? Have your valves tested.

2. My speaker has developed a rattle on the high notes.

A.: This sounds something like grid bias being at fault.

3. What is the height of poles from which the best reception is obtainable?

A.: 40 to 50 feet is ample.

A. J. H. (P.N.): What is the best valve combination for my five-valve American set?

A.: Four 221's and one B605.

CONTACT (Nelson): We recommend the American valves that you name for replacement in your set.

Would a combination of valves of different makes give me better results than if they were all of the one make?

A.: Valves should be all of the one make, with generally the exception of the last valve, which is not so important.

3. Who are the General Electric Co. and what make and tube is the improved valve they are bringing out?

A.: The General Electric Co. are one of the highest electrical manufacturers in the U.S., and for that matter in the world. We have no further details of the valves than have been published.

4. Would a resonator be a useful adjunct to my set?

A.: In all probability yes.

5. Is a similar piece of apparatus already embodied in it?—No.

PROSPECT (Mount Eden): The valves of my set are enclosed in a can of tin. Do you consider that a shield of aluminium would be better?

A.: For the valves, no.

2. Have any people in N.Z. installed the Pearce earth, and what have been their results?

A.: We have heard from quite a number of readers who have had great success with this system.

"SPOOKY" (Dunedin): Is there any means of attaching headphones to a seven-valve all-electric?

A.: Yes. Use a special output transformer. An audio transformer would be quite all right, the output being connected to the primary, and the headphones to the secondary. Otherwise a variable resistance shunted across the headphones would give you the desired result.

"ELECTRIC" (Dunedin): Why does my nine-valve a.c. set give purer reception on the harmonic than on the actual frequency of a station. Reproduction on the latter sounds distorted.

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| LOFTIN-WHITE AMPLIFIERS | Stewart Hardware Ltd., |
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