

DJB is working up to better strength and in the course of a week or two should be well heard round 9 p.m. At 10.45 p.m. signals were R6, QSA5.

JVT, 44.4 m. Talk in Japanese. Signals R7, QSA5, at 9.15 p.m.

VK3ME, 31.55 m., with usual programme of records at good speaker strength, R8, QSA5, 10.5 p.m. Steady signals.

PK1WK, 85.96 m., very weak to-night.

YDA, 49.02 m., R4, QSA4, at 10.55 p.m.

PWY, 58 m. R4, QSA3 at 11 p.m. Lady heard speaking.

## Questions and Answers

(Continued from page 47.)

detaching the aerial if the noise ceases, the trouble is in the set or batteries. If the former, the most likely causes are a poor connection or a defective transformer winding, while if the latter are badly run down, they would cause the crackling noise of which you complain.

2. My aerial is 165 feet long and 30 feet high. Would I get better reception if I reduced the height and kept the same length?

A.: No, certainly not. If possible try and increase the height—do not decrease it. Your aerial is rather long, but provided your set is selective enough for you, it is quite satisfactory. It would probably be worth while to have the set realigned for the aerial you are using.

V. H. (Dargaville): You could listen in to short-wave stations on your set by using a short-wave adaptor or converter, preferably the latter.

2. Last year I changed my three-volt valves for the new two-volt types. Now

there are dead-spots over the tuning band. What is the cause of this?

A.: Did you have the set re-neutralised when the new valves were put in? If not, this should be done. Also, if you are using the same "A" supply as before, have you made provision for reducing the voltage across the filament terminals of each valve socket in the set to 2? If not, then the emission of your present valves will not last long.

N. C.P. (Cambridge): My set frequently makes an extremely loud buzzing noise, on which the volume control has no effect whatever. It can be stopped by tapping the tone control, or one of two valves.

A.: There is a poor connection or an intermittent short-circuit somewhere, most probably in the tone control circuit. A careful inspection of the wiring would no doubt soon reveal the fault.

2. What is the correct method of adjusting the trimmers on my set?

A.: Tune in to a station coming in at about 350 metres; then adjust the trimmer on the detector section of the condenser gang for best results. Next proceed to the third section of the gang, then the second, and so on, obtaining a peak on each. If one of the trimmers screws either right in or right out without a peak in volume being obtained, then screw the other trimmers a turn or two in the opposite direction and commence again.

S. G. (Auckland): To cure incomplete oscillation in my "Tiny Tim," I have moved the reaction winding closer to the secondary winding for all coils, until now both windings are touching. Is this all right?

A.: Yes, as long as the insulation on the winding holds. If there is a short from the reaction to the grid winding your "B" battery will be flattened in no time. A better solution would be to replace the .0001 mfd. fixed condenser you have in the aerial with a midget pre-set condenser of .00005 mfd. capacity, setting this for best results. If reaction is still not satisfactory, connect the .0001 mfd. condenser in parallel with your reaction condenser.

2. What should be the range of each of the short-wave coils?

A.: From approximately 16 to 30 metres, 30 to 50 metres, and 50 to 80 metres. If you add 2, 4 and 6 turns to the grid windings of the 20, 40 and 80-metre band coils respectively, this should give you the coverage you want.

3. How could I employ automatic grid bias?

A.: Disconnect the "B—" lead from the "A+" and connect it to one side of a 2000 ohm resistor. Take a lead from the junction of the "G.B." terminal on the audio transformer. The other end of the resistor should be connected to earth.

P. O. (Poverty Bay): I intend moving shortly to a district supplied with electricity. Would it be possible to convert my superhet portable for a.c. operation?

A.: The change-over, while possible, would be a very expensive one, and we do not advise it. By far your best plan would be to use a "B" eliminator to take the place of the "B" batteries.

MR. T. L. DANKS (ZL3BK), of Christchurch, was the donor of the prize in a contest held by the Radio Society of Christchurch (Inc.) for the most improved operator. It was won by Mr. H. Henderson, of Christchurch.

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