Questions and Answers

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.0001 condenser in series with your .00035 variable condenser, and then construct coils such as those described for the Diff. series, or those described for the Sellens Shortwave Set, for controlling reaction of .00035 would be satisfactory for broadcast, although for shortwave the control would not be fine enough, and again you would have to reduce the capacity by a .0002 condenser.

2. I have made a one-valve set, but it oscillates when the station comes in loudest. Why is this?

A.: A station always comes in loudest when the set is oscillating, but the signals are very rough and unpleasant tao listen to. Furthermore, you are annoying your neighbours.

3. Can I alter the capacity of .00035 condensers to .00025 and .0005 respectively?

A.: You can reduce .00035 to .00025 by connecting a .001 condenser in series with it. You can bring it up to .0005 by connecting a .00015 condenser in parallel, but this is unwise because you will find that the condensers will not cover the tuning range correctly. This is because you cannot get down below a minimum capacity of about .0002.

SHORTWAVE (Marton).—What should be the proper dimensions of the coils for the Diff. Two

A: They were given in the article, but if you wish to make a very efficient broadcast coil you should increase the diameter to 2in.

2. Is there a wave trap described in the 1931 "Guide"? If there is, I have not located it.

A.: A wave trap is a rejector. Perhaps this makes things clearer. (See page 61.)

3. Using a .00035 tuning condenser for the "Night Hawk" you specify 28 d.s.c. wire for the coil, while in the Diff. series you specify 30 gauge. Which is really the better?

A.: There is little or no difference, but the 30-gauge makes a slightly smaller coil, and for broadcast purposes this would be better. For shortwave the wire can be larger.

H.M.S. (Waihi).—When I turn my set on, it does not operate until I disconnect the C. The set is very heavy on "A" battery. Some time ago there was trouble with the set, and one of the resistances burned a little.

A.: Something has burned out within the set and is partially short circuiting your battery. Better get someone who knows something about the set to look to it.

W.A.R. (Martinborough): I constructed a battery version of the superheterodyne short-wave adapter. Grid return was taken to a potentiometer across the "A" battery. The set then oscillated, but I could get no stations. I was using the 1875 k.c. coil.

A.: The coil for the 1875 k.c. is to cover the 160 m. band and actually spreads from about 120 m. to 200 m., but there is little to be heard on this band. In the d.c. version the grid return should be taken to a potentiometer across the "A" battery. In the absence of a potentiometer a return should be made to A+.

2. What is the value of C3?

A.: .0005 mfds. fixed.

3. Is the choke a short-wave or broadcast? I am using the latter.

A.: The choke should really be a short-wave one, but a good broadcast choke will usually operate satisfactorily.

4. Should the adapter howl when brought into resonance?

A.: It should not howl unless the receiver is oscillating. This trouble can almost invariably be cured by adjustment of the B voltage on oscillator and first detector. Reduce these progressively until the howl ceases. Where a potentiometer is used for grid return an adjustment of this will often effect a cure.

5. Could you make the windings for L2, 3 and 4 more clear? I have wound the coils for the 60 to 100 metres band. Results have been splendid. I later wound coils for the 7500 k.c. band, but results were poor.

A.: Since the 80 metres coil is operating so well, copy the connections exactly for coils for the other band. The coupling coil L2 sometimes requires variation when an oscillator valve having an unusually high or low output is used. So try varying the number of turns on this.