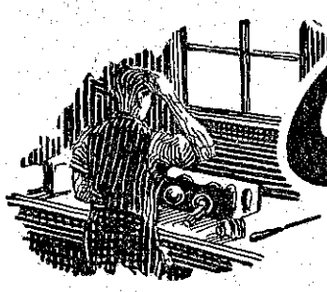

Questions and Answers

NOVICE (Dunedin).—Would two wires 70 feet long and 30 feet high be better for an aerial the same height and length?

A.: Yes, providing the wires were at least 6 feet apart, and separated by non-conducting spacers.

K. V.W. (Dunedin).—How many turns would be required on a two-inch former using 00035 condensers for the aerial and secondary coil of the Browning-Drake described in this year's "Guide"?

A.: You will not need an aerial coil for the B.D. if you use the usual circuit. The aerial coil is really a taped secondary coil. For this and the secondary of the r.f. transformer you will require 77 turns of 24 d.s.c. wire.

2. Where shall I tap the aerial coil?

A.: At about the twenty-third or twenty-fourth turn.

3. Where will I tap the secondary coil?

A.: As we have explained, aerial and secondary are not both used for the B-D.

4. Can I use 30-gauge d.s.c. wire for primary and tickler? Yes.

5 How many turns will I require on the primary to match A409?

A.: 13 turns.

J. H. (Wellington).—Can you help me in tuning in outside stations? Where would I expect to find some of the Sydney stations? I give the readings of several of those already received.

A.: It would be a long and a difficult task to give you the approximate readings for each of the three dials. They are very nearly matched, and you should get some of the other stations quite easily by comparing their frequencies with the frequencies and the dial readings of those you already have. You could make a graph for yourself such as was used to illustrate the response of the Atwater-Kent receiver reported on in our issue of January 4, 1930.

WOULD correspondents refrain from using the noms de plume, "Novice," "Puzzled," "Reader," or "Subscriber." A record is kept of each inquiry, and when many correspondents use the same nom de plume, matters become complicated. Rather use initials. There are still a few not using the coupon.

W. L. (Napier).—I am troubled with a.c. hum, and am using an eliminator and grid bias unit. This seems to be picked up from the power transformers by the first audio transformer.

A.: You must completely shield one from the other by an iron screen which should be earthed. Introduce a little more capacity in the grid bias unit by shunting a two m.f.d. condenser between the terminal and earth.

2. The set is inclined to get out of control if worked by an inexperienced person. If the compensator is turned too far, the set will oscillate. There appear to be no grid condensers in the radio circuit.

A.: Probably neutralisation is carried out by grid suppressors, and these are evidently cut down to a minimum, so that when the set is forced, it bursts into oscillation.

3. Does a 200 A valve distort due to its high amplification factor?

A.: Not if it is worked in circuit, the grid return of which is negative.

4. The set tunes rather broadly, and the locals have double setting, usually some ten metres different. Is my aerial too long?

A.: The double setting on locals is due probably to overloading. There comes a point when your set can handle no more and if forced past this point the signals become much weaker and appear stronger when the point is passed. It may be due to reflection though this is unlikely. If you are using a series condenser in your aerial, it is probably not that which is causing the trouble.

IN DOUBT (Lower Hutt).—What is the meaning of the two sets of specifications for tuning coils in R. the W. Three?

A.: The smaller numbers are the regeneration coils.

2. What is the correct combination of, firstly, Philips, and secondly, Star valves?

A.: Philips for quality, det. 615, audio 609, second audio 605. For sensitivity use 609 biassed by 4½ to 9-volt accordingly to the plate voltage in the last stage. Star valves are probably American type, and you would use three 201A's.

ACE (Kakahi): I am using a four-valve regenerative set which has the habit of bursting into oscillation which cannot be prevented until the dials are moved.

A.: Have you tried reducing the detector voltage, substituting the grid condenser and grid leak and reversing the connections to the tickler. It may be due to lay-out of the set. The one used in the 1930 "Guide" is probably the best for the h.r. receiver.

NOVICE (Auckland): I have bought a trickle charger, but there are no instructions. I have a two-volt accumulator and want to know something about charging.

A.: If we remember rightly there are four terminals on this charger. One is marked—and the one nearest to this is for two volts. If it is not marked you must take this one and the negative for your purposes. The negative is connected to the — terminal of the battery and the + to the + terminal. Keep the accumula-

LISTENERS must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington). Questions arriving without it are likely to go astray or be delayed.

Name of set .....

Number of Valves .....

Name .....

Address .....

.....

.....

Nom de plume .....

To be kept in subsequent inquiries.

Date .....

Please Note:—

(1) Be specific and brief, tabulating, if possible.
(2) Write legibly, and on one side of the paper.
(3) We do not design circuits, but accept suggestions for feature articles.

Solving trouble, as different from advice, is difficult by correspondence and while letters are given every consideration, answers are not necessarily correct—they are only our opinion based on the matter supplied, which may be quite inadequate. Intricate and involved specifications cannot be supplied without a specialist's fee.