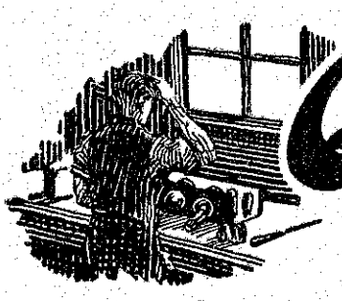

Questions and Answers

WIRELD (Wellington): I can pick up Wellington only faintly on the Differential Two, very much fainter than I did with the one-valver.

A.: If you had it going well on the one-valver you may be quite certain that it is a wrong connection, a defective transformer, or valve. Have your transformer tested and check your wiring from the diagram of the "Night Hawk" published last week.

2. The differential condenser does not affect this set.

A.: Did it not affect the one-valver? If the trouble was there in the smaller set it should be eradicated before a two-valver is contemplated. In our experimental model we experienced the same difficulty and traced it down to a wrong connection in the coil. Check over your coil very carefully, and, if it is still at fault, take it along to a dealer who builds these receivers and ask him to try it out in one. The set as we describe works splendidly, and if you have followed the directions carefully and have efficient components it is impossible to encounter difficulty.

3. I am using HL610 as detector and PM6 as audio. Is this combination satisfactory?—Yes.

CURIO (Dunedin): I have had my set for 18 months, but lately the local station has been coming in all round the dial.

A.: It seems as though your valves want renewing.

2. Do you think a wavetrap can be operated with the set?

A.: It should not be necessary with two stages of r.f.

3. Could you give me a diagram for an efficient wavetrap? I have not had success with any yet.

A.: You have been very unlucky. Wavetraps published in the "R.R." have worked splendidly, and the most recent one contributed by a country listener is particularly efficient.

PLIO (Devonport): My set has a considerable a.c. hum. Kindly supply some probable causes and cures. It is an 8-valve a.c.

A.: Experience has shown us that it is pure folly for us to attempt to direct anyone into the intricacies of an a.c. set, consequently we advise you to take your set to a dealer and ask him to put it in first-class order.

PETER (Auckland): I can receive N.Z. and Australian stations on the long-wave, but can only get a few N.Z. short-wave amateurs. The set is a three-valve all wave.

A.: If you used a special detector you might do better. Why not try the 3-valve differential circuit that we shall be bringing out shortly?

NUCHUM (Nelson): Is my set in order when the speaker leads spark when coming into contact with the metal part of the cabinet? The two last valves lit up brightly when this happened.

A.: It is quite in order for the speaker to spark when brought into contact with the frame. We cannot understand your valves lighting brightly without burning out. It seems as though B— is connected to A+ and A— connected to the frame. If A— is to the frame, see that A— and B— are connected together.

2. Could you name a good combination of Radiotron valves for my set?

A.: The best combination would be five 221A's and the 171A. The 221's are rather hard to obtain, and you may have to use 201A's.

E.B.C. (Auckland): What is the best length of aerial for a short-wave receiver?

A.: Thirty to forty feet. As high and short as possible.

2. What is the advantage of the aerial Cop?

A.: The aerial Cop is a splendidly designed lightning arrester. It can be installed outside, is absolutely impervious to the weather, and if affected by lightning the fuse can be replaced.

3. If I encase the condensers to keep out moisture will the stability of tuning be affected?—No, the idea is quite good.

4. How can eliminator hum be overcome?

A.: In the 1931 "Guide" we shall have quite an amount to say about this problem. It is possible generally to overcome hum on short-wave by using an extra choke coupled by a large capacity condenser in the detector lead. An efficient transformer immediately following the detector is essential.

P.W.B. (Wanganui): What would be the best Mullard four-volt valve combination for my B.D. Three?

A.: PM3, 4DX, and PM4.

2. Why is it that I can receive some of the Australian stations better than 1YA?

A.: This is due probably to your location.

3. Would it harm a new 45-volt block to put it in series with one whose voltage is down to 39?—No.

H.A.P. (Taihape): My Daniells charger is not functioning properly. The battery has gone down since it was connected, the zincs have eaten away, and crystals of bluestone are forming on both sides of the porous pot.

A.: The reason for the zinc to eat away and the crystals to be formed on the porous pot is that the solution is too strong. Add a little more water to the sulphuric acide solution and scrape the crystals off the porous pot. Keep the charger continuously on the battery and make sure that the lead coming from the copper is connected with the positive terminal of the battery.

A.E.A. (Auckland): We are affected by passing motor-buses whose ignition system causes severe interference.

A.: Complain to the manager of the bus company and ask if it is not possible for the ignition system to be bypassed with condensers. This is not expensive and would be indeed effective. Failing this communicate with the District Radio Inspector. It might be as well to check up with other listeners along the bus route and see if they experience the same trouble. Two complaints will always be more effective than one. If necessary we could supply a diagram showing how condensers should be connected across the ignition system.

2. Does a tiled roof have the same capacity effect as an iron one?

A.: Not so long as it is dry, but immediately it becomes wet it provides a fairly good path to earth.

3. Is my present installation a good one?

A.: Not particularly. The aerial should be higher and the lead-in brought directly to the set, instead of having to climb round the inside walls. The fact that it is only 7ft. from the ground at one end is really quite inefficient. A better aerial would be on the chimney and down the side of the house to the set.

K.V.D. (Rotorua): What are the correct valves to use in my American six-valve set?

A.: Five Radiotrons 221's or 201A's and one power valve of the 171A type which is not necessarily Radiotron. See from the carton that accompanies the valve that it is biased correctly.

2. Where could I procure an instruction book for the set?

A.: Write F. and A. Odlin, Wellington.

3. I have a five-valve commercial set. How can I add a stage of screen-grid r.f.?

A.: With a commercial set it is not worth while to try to incorporate one of these valves.

4. Would 221's be better than 201A's?

A.: The 221's would be better, but they are probably difficult to obtain.

5. What power valve should I use?

A.: Any make of power valve and one of the 171A type.

4. Can I make the amperite for a detector valve and a rheostat for the audio stages?

A.: As you are using a six-volt valve as detector you will not need an amperite. If, however, you change over to a five-volt valve you will have to use an amperite in the detector stage and

CORRESPONDENTS 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 Vales .....

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.