



Questions and Answers



"SPARKS" (Christchurch) is intending to rebuild his set, and wishing to incorporate a wave trap, asks if this need be shielded.

A.: Yes, you may have difficulty in eliminating the local station if the wave trap, when situated near the coils of the set, is not shielded.

2. Would it be an improvement if I shielded the last stage from the second?

A.: No. Not unless you are getting audio frequency howl because of the design of the transformers.

3. I am using 5-volt valves, and a 6-volt accumulator. What number ampere must I use?

A.: You have not stated the name of the valve you are using. For each different valve there is a different ampere. Ask your dealer to supply the appropriate ampere for the valve you are using.

"C.L.F." (Dannevirke) has built the Browning-Drake 3-valve set, but can get only very weak signals. The radio dial has very little effect upon the tuning.

A.: Bring the aerial in to the fixed plates of the detector valve (if these are connected with the grid, otherwise the moving), and compare the signal strength with that when the aerial is connected to the aerial terminal. In all probability you will find that the strength has improved. This will indicate that the fault is in the radio stage, and you will have to undertake a very systematic search. You say you have tested the voltage, and each valve is being supplied with the correct voltage. Check up the radio stage again and make quite certain the voltage is getting to the plate of the valve, as an open circuit in the primary of the regenerator is one of the most common causes of weakness in this type

of set. The vanes of the R.F. condenser may be touching or the dial not moving the vanes. There may be dry joints, the spring of your valve may not be contacting, you may have made a wrong connection. If the signals do not improve when brought to the detector condenser, your systematic search will have to be in both stages. So far as we can see, from your description and diagram, everything is correct.

"E.L.W." (Auckland) wishes to build a powerful set, and has decided that the 5-valve Browning-Drake is his mark. He wishes to know, however, if this circuit can be employed without the shielding.

A.: Not without great inconvenience, and spacing the coils to prevent feedback would introduce further troubles that were not bargained for. Shielding is employed because the reaction makes the circuit made very sensitive, and is close to the oscillation point. The absence of the action, although it does away with the need for shielding, lessens the sensitivity of the receiver.

2. Would a formica panel do equally as well as a metal one, and would it entail any alteration in the wiring?

A.: The formica panel would quite well be used, but you will have to be careful to see that any returns that are taken on to the panel are connected to their respective destinations.

"B.D." (Dunedin) submits a plan suggesting the application of the screen-grid valve to the 4-valve Browning-Drake. He wishes to make the set more selective and a little stronger on distant stations.

A.: The proposed alteration has very many defects. It is well known that the screen-grid valve, to realise its intrinsic value, must have a specially-

designed circuit. You are merely placing a screen-grid valve in the old circuit. Furthermore, one stage of S.G. is notoriously unselective. We think, therefore, that your suggested alteration is not wise. If you want greater sensitivity add another stage of radio frequency.

"C.C.H." (Auckland) has a set which developed cracking noises like static. This noise persists when

broken-down condensers. Furthermore, it may be due to the age of the valves. Twelve months is long enough for any valve. Give the set a dusting.

"E.E.D." (Pahiatua) has a six-valve factory-made receiver with resistance coupled audio. He is using a pentode in the last stage. Until recently this combination worked splendidly. Now when the set nears oscillation point, it breaks into a terrific howl. The valves and resistances are O.K.

A.: Probably a fixed condenser has broken down. You can test the condensers by the 'phones and cell method, fully described in the "Radio Guide."

"J.A." (Palmerston North) has a five-valve B.D. with R.C. audio. Reception leaves much to be desired. General purpose valves are used in all stages except the second and third audio, where B605 and A615 respectively are used.

A.: General purpose valves should be used in all stages except the detector and the last stage. Use 615 as detector, and 605 in the last stage.

2. Is it feasible to fit a pentode in the last stage?

A.: Yes, the auxiliary grid is merely connected to B+, but much disappointment has resulted from the use of this valve.

3. Would you advise two transformers in place of three stages of R.C.?

A.: There would be very little difference in volume, although if you substituted the last two impedance transformers with transformers and making one stage of R.C. and two transformers you might have better results.

4. What is the correct way to neutralise this set?

A.: It has been fully described in the 1930 "Guide." Select a station about the middle of the dial, and advance the reaction condenser until the set oscillates. Adjust the neutralising condenser until this whistle loses its intensity and takes on a loud breathing sound. The set is then neutralised for that particular wavelength.

5. I have a B and C eliminator and there is only one grid bias tap. Would

Questions and Answers

READERS of the "Radio Record" who are in difficulties about reception or set construction are invited to write to our "Questions and Answers" department for help. We particularly wish to assist those who know little about radio, as very often there is some very slight trouble which spoils completely one's enjoyment of the programmes.

Correspondents are asked to observe the following courtesies:

1. Write legibly.

2. Make your questions brief and to the point; do not make apologies for writing, and, where possible, tabulate.

3. Do not ask for a reply by post unless a stamped and addressed envelope is enclosed. Even in these circumstances, we reserve the right to answer any question through our columns.

4. Do not ask us to design circuits or send detailed lay-out diagrams; but we can offer advice regarding circuits.

5. Address all technical correspondence: "The Technical Editor, P.O. Box 1032, Wellington."

the aerial and earth are disconnected. The valves and set are 19 months old. There is an amount of dust in the set.

A.: Quite a number of causes of crackling are dealt with in the 1930 "Radio Listeners' Guide." The vanes of the condensers may be touching, a noisy grid leak, or resistances, or

3 BIG RADIO SNIPS at Waterworths' Sale

1 Only "PAGE" Model 12 (6 valves), all-electric set. Usually £45. NOW Only £32/10/0

1 only "PRIESS" 8-Valve Set, originally £45. NOW Only £25

"PRIESS" 9-valve, new, popular set. Splendid on distance-getting. Usually £47. NOW Only £27/10/0

The "PRIESS" Sets are converted from indoor-aerial to outdoor aerials. SEE OUR OTHER BIG RADIO BARGAINS.

Waterworths

Wellington, Christchurch,
:: Auckland. ::

The BEST is the Cheapest

Do not think it costs a lot of money to get the BEST results from your Radio.

The FARRAND INDUCTOR DYNAMIC SPEAKER

will enable your set to give you that PURE NATURAL TONE you have desired, and the price is exceptionally reasonable.

Sole Agents **L. M. SILVER & CO. LTD.,** Tory St., Wellington