



Questions and Answers



Neutralisation Difficulty.

I HAVE a five-valve Browning-Drake with impeda formers in the amplifier. Frequently reproduction becomes fuzzy and the set goes into oscillation. A temporary cure can be effected by flicking the tickler coil half a turn or interrupting the "B" supply, states "Stator" (Christchurch).

A.: The set is not neutralised, and back coupling is taking place between the radio frequency coils. Examine the neutralisation system for defects, and try reversing the connections to the primary or to the neutralisation condenser. If possible, try substituting this for another one.

Two-Valve Set.

IN the Guide there is a circuit for a crystal set with valve amplifier employing the double grid valve, states "Beginner" (Napier).

1. Can a valve be substituted for the crystal?

A.: Make up "Round-the-World" Two using the broadcast coils and employing the double grid valve in the last stage.

2. What type of speaker does the set work best with? Would it work a "Baby Grand" or a home-made exponential speaker?

A.: Neither of these are suitable for a set so small, especially as it employs only 22½ volts. Use a very light cone. According to our tests the small "M.P.A." should be suitable.

Logging the Americans.

WHY cannot I receive the American stations on my eight-valve A.C. set? asks "S.H.B." (Auckland). I have a good aerial and a good ground.

A.: Most of the American stations are received by sets using regeneration, and it is possible for the operators to heterodyne the station. This gives some indication where the station is. In your case the only way is to dial very carefully and listen attentively for any suggestion of a station. Watch the "D.X." columns to ascertain which stations are coming in well, and at what time.

Logging Cards.

COULD you supply me with a card for getting stations? asks "J.F.T." (North Canterbury).

A.: You require a call-book in which all particulars about the stations received in New Zealand are given. At present there is not a complete list, but in May we propose publishing a very full list which should help greatly.

Short-wave on Broadcast.

LAST week I received a short-wave amateur well down on my tuning dials. Why? asks "Radio Friend" (Bl-tham).

A.: Unless the amateur was transmitting on the broadcast band, it is very difficult to say. We suggest, however, that the high frequencies were striking some nearby object and being re-radiated at the natural frequency of that object. You would then pick them up on your band.

2. My dials do not appear to match on the higher frequencies, but come into resonance at about 2BL's frequency. Why so?

A.: Have you read the article on aerials in last week's "Radio Record"? It is quite likely that the capacity of your aerial system is adding to that of your aerial circuit, and putting an unequal amount of capacity into that circuit. Consequently the readings do not agree. When, however, the capacity in the aerial circuit is increased by turning in of the condenser, that in the aerial circuit becomes more or less negligible and the readings agree. However, it is quite likely that either the condensers or the coils are not matched. As you suggest, taking a turn off the tickler end of the secondary might improve matters.

3. When the aerial tuning is below 30 degrees, a continual howl is noticed. Should this be?

A.: No, the set is not neutralised. Try adjusting the neutralising condenser and see if this howl can be cut out; if not, reverse the connections to the primary. It may even be necessary to readjust the number of turns on this coil.

"Round-the-World" Two.

I HAVE constructed "Round-the-World" Two, and cannot get results, states "Carborundum" (Wellington).

1. I am using an aerial 150 feet long, and cannot get the set to oscillate in tuning on shortwave.

A.: Your aerial is far too long. Reduce it to 50 feet. The very long aerial is introducing damping and preventing the set from oscillating.

2. Should the radio frequency choke be home or factory made. I have one made from 1000 turns on celluloid.

A.: Your choke should be 100 to 150 turns on celluloid for shortwave. You are using a broadcast choke.

3. 2YA comes in all over the dials with the broadcast coils, and also with the shortwave coils.

A.: This is the result of an aerial that is too long. In any case, you will not be able to eliminate Wellington on the broadcast band without a wave-trap. It is asking a little too much. However, it should not worry you on the short-waves.

A Noisy Set.

I HAVE a seven-valve A.C. all-electric set, and for several months it has given good results, but I have had to change the detector and now the set does not work properly. It is very noisy past a certain point.

A.: We regret that it is impossible to give you much help. Amateur servicing of factory-made sets is not the task for an amateur. We advise you to contact a reliable service man. Had you given us your address we could have recommended one in your district.

What More?

I GET splendid results from 1YA and 2YA on "Pentode's" crystal and valve, states "O.M." Auckland. Reception from 2BL, Sydney, is rather distorted, and there is nothing from 2FC. How can I improve my reception?

A.: You are really very lucky to get Australia on a crystal set. Possibly your crystal is not a good one.

Wiring "Round-the-World" Three.

"F.R.D." (Greymouth) asks regarding "Round-the-World" Three.

1. What gauge wire should be used in wiring Round-the-World Three?

A.: It is immaterial providing it is not less than 20 gauge. Use glazite or similarly covered wire, to make the neatest and most efficient job.

2. Is the amperite not necessary in the extra stage?

A.: Not if six-volt valves are used; with a six-volt accumulator or with a four-volt valves with four-volt accumulator. If, however, you are using five volt valves, put a six (or lower) rheostat in the circuit, and keep it well advanced.

Condensers for Round-the-World Three.

COULD I use .0005 variable condenser for "Round-the-World" Three, as I intend to use broadcast coils only, asks "R.E.R." (Wanganui).

A.: Yes, you must use one coil only and that of 60 turns of 20 D.C.C. wire on a 3-inch former.

2. Could I use a twin-wire aerial to feed two sets providing each wire was separated from the other?

A.: Yes, provided the wires were about 6ft. apart. No damage would be done if they were closer, but you would not get as good results as you should.

Transformer Trouble.

I HAVE a regenerative set using three general purpose valves and a power

valve in the last stage. I am continually burning out the second stage audio transformer, states "G.R.W." (Rodney).

A.: In all probability, biasing the first audio valve would cure your trouble. This valve needs 4½ volts when 90 volts are used on the plate.

2. Could I replace last stage with two stages of resistance capacity coupling?

A.: Yes, but if you are using only dry batteries you would be raising both "A" and "B" current consumption to no purpose. The tone might be improved slightly, the volume would be increased a little, and the cost would be greater. You would need the materials indicated in a sketch in last week's issue, omitting, of course, the push-pull stage.

Various Points.

I AM using a Rathen as a rectifier, and wish to know if the voltage in it drops as the drain upon it increases, "A.M.P." (North Otago).

A.: We have not made these measurements ourselves, and cannot obtain any authentic figures. Experience has shown, however, that for drains up to 100 milliamperes the voltage is fairly constant.

2. What A.C. voltage must I arrange to keep the rectified output at 300 volts?

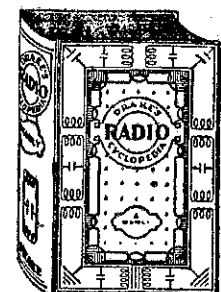
A.: About 350 volts.

3. In the amplifier I intend to use English valves, and have decided on Marconi P625 for push-pull. Is this obtainable in New Zealand?

A.: Yes, we believe so. Try Amalgamated Wireless, Wellington. If not, its exact equivalent Osram P625 is readily obtainable from most dealers.

4. In selecting the first audio valve I believe that I shall have some trouble in

New Enlarged and Completely Revised Edition



DRAKE'S RADIO CYCLOPEDIA

A big, complete, authoritative and up-to-date book, just off the press. 870 pages, 985 illustrations.

1700 subjects arranged alphabetically, gives the scientific theory and practical application in clear language for Service and Repair Men, Dealers, Salesmen, Experimenters, Owners, Designers. A fine book, bound in Art Buckram. Price 35/-.

JAMES JOHNSTON, LTD.,
Publishers, Dunedin.

Please send me the latest edition of Drake's Radio Cyclopaedia for five days' free inspection. If I keep it I shall send 35/- in full payment.

Name.....

Address.....

R2

25% to 50% OFF New RADIO SETS SACRIFICED

PAGE, Model No. 10, 6-Valve	Usually	£20/0/0
	Now Only	£12/0/0
PAGE, Model No. 11, 6-Valve	Usually	£25/0/0
	Now Only	£15/0/0
PAGE, Model No. 12, 6-Valve	Usually	£31/0/0
	Now Only	£19/10/0

All First-grade; Guaranteed for Tone, Distance and Performance. This offer is for first buyers. Call or write early.

WATERWORTH'S LIMITED

WELLINGTON, AUCKLAND, CHRISTCHURCH.