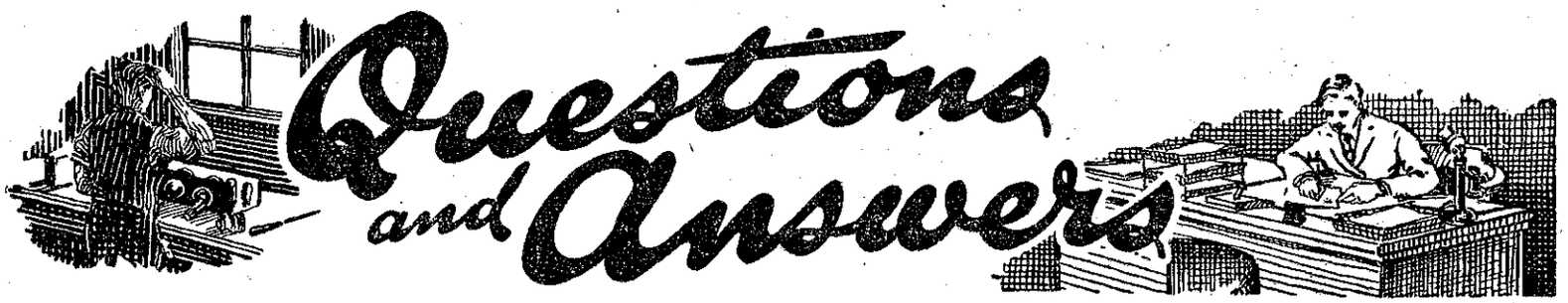

SPARKS (Christchurch): Can a transformer which reduces 230 volts to 12 be used for charging a 6-volt battery or otherwise supply a power pack for 6-volt valves?

A.: If enough current at 12 volts could be supplied it could be rectified and smoothed to supply the power for six-volt valves. You would need a resistance of 6 ohms to regulate the voltage. The smoothing apparatus would consist of a choke such as that described in this week's "Record," and a 2000 mfd. electrolytic condenser.

2. Which is the better for a shortwave adapter—the one in the 1929 "Guide" or the detector stage of "R. the W 2"?

A.: There is very little difference. The one from the "Guide" would be possibly easier to construct, but omit the 1mfd. by-pass condenser between the plate and earth.

3. How can hand and body capacity be stopped?

A.: The best way to ensure that there will be no body capacity is to have all moving parts of the condensers earthed to a metal panel. This means that a separate coil must be used for reaction.

MACA (Heretaunga): I have incorporated a 30 ohm rheostat between my battery charger and set as you recommended, but get a noise loud enough to spoil reception.

A.: We took it for granted that you would be using smoothing devices betweeen your charger and your set. Evidently you did not do this. Try a 2000 mfd. electrolytic condenser across the charger, and if hum still persists use a choke such as described in the "Record" this week. This will be followed by the resistance, and it would be advisable to have a voltmeter permanently installed across the smooth output to check up on the voltage.

FRANK (Mercer): On two occasions my set of valves has blown out when the set has not been turned on.

A.: As yours is a commercial set you should contact with those who sold it to you, for undoubtedly there is something wrong. A fuse between the "A" and "B" battery would prevent this re-occurring.

2. Would the H.R. or B.D. set give better results than a 5-valve neutrodyne?

A.: Yes, either of these should be better than a neutrodyne.

3. Can you recommend anything better than either of these sets for selectivity distance getting and tone?

A.: Yes, we propose to describe the two stage screen grid B.D. very shortly, and this should be an improvement on either of these two models.

4. Do you recommend four or six-volt valves?

A.: Six volt are more sensitive, but if you have a set of four volts it would not be wise to change them until they are done.

5. Where can I obtain detailed descriptions of the two sets in question?

A.: The B.D. was described in the 1929 "Guide" and the H.R. in the 1930 edition.

6. I have an earth of tinned copper wire, 80 feet long. Is this all right?

A.: If at least 70 feet are coiled and buried in the earth—yes. The coil should be kept damp.

F.M.K. (Waitanguru): Where can I obtain advice concerning the Daniel cell charger?

A.: It is being described very fully this week.

2. Where can I obtain scrap zinc?

A.: A foundry should be able to supply it to you. You could write to one of the big city newspapers who may have some old blocks they would be only too pleased to dispose of.

KRAND (Khandallah).—Will you supply details of valve base coils for use with a .0003 moving condenser?

A.: Reduce the capacity to .00015 by a .0003 fixed condenser in series with the tuning condenser, and wind the coils described in the Questions and Answers page recently.

REVAL (Morrinsville).—The lower frequencies on my set are received very weakly. Can they be improved?

A.: Some sets bring in the low frequency stations not as well as the high, and this evidently is what is happening in your case. You cannot do anything to overcome it providing everything is in order. It might be worth mentioning to your dealer.

KAURI (Whangarei).—I cannot get Japan on my set. Can you suggest a better combination of valves?

A.: No, but your valves may need renewing; other than that we are at a loss to make a reasonable suggestion. If you are not satisfied with the results you are getting you should write A.W.A., Nimmo's Building, Wellington.

YZ (Palmerston North): I have recently purchased a short-wave adapter for my set, but cannot hear the stations strongly enough when the set goes out of oscillation. Can a stage of radio be added?

A.: A stage of radio is not a practicable proposition. Try altering the grid leak—it should be as high as 10 megohms for short-wave—and increase the detector voltage.

FOXY (Hokitika).—Can I make a shortmove adapter for my set, and would would be the price?

A.: A super heterodyne adapter was described in last week's issue, and an ordinary adapter has been described in the 1930 "Guide." In neither case should the cost exceed £5, and it is probable that it would not be as much. We do not publish blue prints.

O.J.C. (Auckland).—What stations other than the New Zealand and Australian should I be able to receive on my six-valve set? Can I receive stations after midnight?

A.: As so much depends upon locality it is difficult to say whether or not your results are good. Your valve combination appears to be a good one, though perhaps if you replace the PM.6 in the last stage with a PM.256 you would do better. See the DX club notes for hours of reception of different stations.

2. A month after I purchased the set one of the valves burnt out.

A.: Without investigating the set we cannot tell you why this happened unless the valves were at fault.

3. Would a burnt-out transformer cause a howl when the set is turned on to six valves.

A.: Quite probably the transformer is at fault.

SIGNAL (Dunedin): Can I add another valve to my Midget set?

A.: No, the set is designed for the number of valves now operating, and an increase would not be economical.

E.F.B. (South Dunedin): I have a detector and two audio stages, using g.p. valves. Could I obtain better results by using different valves?

A.: If you wish to continue using Philips use 215 as detector, 209 as first audio, and B205 in the last stage. The B.G.E., 31-37 Taranaki Street, Wellington, were the New Zealand agents.

2. I wish to receive 2FC, 2BL, or 4QG with sufficient volume for dancing. How can I do this?

A.: By using your detector to feed a power amplifier, but even then you are ambitious. You really need a set with high frequency amplification.

3. Why can I not receive 3AR or 7ZL?

A.: These are on low frequency, and evidently your set will not go down to those frequencies.

4. What is the correct C voltage?

A.: For B205 with 90 volts, about 9.

5. My set is variometer tuned. Is this efficient?

A.: Yes, but not as efficient as condenser tuned.

6. Could I receive Morse on extra coils?

A.: Yes, but it would be difficult to design the coils, and then you would only get commercial stations.

D.X. (Dunedin): On a four-valve set should I be able to get 2YA without interference from 4YA, and 3YA without interference from 4ZM or 4ZL?

A.: It is most unlikely that you will receive these stations without interference, as one stage of screen grid is not selective.

2. The tuning is very broad. How can I make it sharper?

A.: By using a wave-trap, by incorporating loose coupling in the aerial circuit, or by using a shorter aerial.

3. The set will not oscillate below 315 meters. I am using 18 volts on the detector.

A.: Your detector is not high enough. Try 45, or if that causes instability, 22½.

4. Would .0003 reaction condenser be too big or too small for the job?

A.: It would be the right size.

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.